

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of)
Ohio Power Company for Authority to)
Establish a Standard Service Offer) Case No. 16-1852-EL-SSO
Pursuant to R.C. 4928.143, in the Form of)
an Electric Security Plan.)

In the Matter of the Application of Ohio)
Power Company for Approval of Certain) Case No. 16-1853-EL-AAM
Accounting Authority.)

**DIRECT TESTIMONY
OF
JAMES D. WILLIAMS**

On Behalf of
The Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485

May 2, 2017

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ATTACHMENTS

Attachment JDW-1	List of Previous Testimony Filed at the PUCO by James Williams
Attachment JDW-2	Ohio Utility Rate Survey (February 2017)
Attachment JDW-3	AEP Ohio Disconnection Report
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Attachment JDW-5	Map the Meal Gap 2016
Attachment JDW-6	AEP Ohio Response to OCC INT 1-247
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Attachment JDW-12	AEP Ohio Response to OCC INT 2-149 and 150
Attachment JDW-13	AEP Ohio Response to OCC INT 2-365

1 **I. INTRODUCTION**

2

3 ***Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.***

4 ***A1.*** My name is James D. Williams. My business address is 10 West Broad Street,
5 18th Floor, Columbus, Ohio 43215-3485. I am employed by the Office of the
6 Ohio Consumers' Counsel ("OCC") as a Senior Utility Consumer Policy Analyst.

7

8 ***Q2. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATION AND***
9 ***PROFESSIONAL EXPERIENCE.***

10 ***A2.*** I am a 1994 graduate of Webster University, in St. Louis, Missouri, with a Master
11 of Business Administration, and a 1978 graduate of Franklin University, in
12 Columbus, Ohio, with a Bachelor of Science, Engineering Technology. My
13 professional experience includes a career in the United States Air Force and over
14 20 years of utility regulatory experience with the OCC.

15

16 Initially, I served as a compliance specialist with the OCC and my duties included
17 the development of compliance programs for electric, natural gas, and water
18 industries. Later, I was designated to manage all of the agency's specialists who
19 were developing compliance programs in each of the utility industries. My role
20 evolved into the management of OCC's consumer hotline, the direct service
21 provided to consumers to resolve complaints and inquiries that involved Ohio
22 utilities. More recently, following a stint as a Consumer Protection Research
23 Analyst, I was promoted to a Senior Utility Consumer Policy Analyst. In this

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1 role, I am responsible for developing and recommending policy positions on
2 utility issues that affect residential consumers.

3
4 I have been directly involved in the development of comments in various
5 rulemaking proceedings at the Public Utilities Commission of Ohio (“PUCO”)
6 and the Ohio Development Services Agency. Those comments included
7 advocacy for consumer protections, affordability of utility rates, service quality
8 and the provision of reasonable access to essential utility services for residential
9 consumers. I have assisted in the development of OCC policies and positions in a
10 number of proceedings involving the Ohio Electric Service and Safety Standards
11 Ohio Adm. Code 4901:1-10,¹ distribution system reliability standards,² and the
12 provision of utility services and consumer protections for residential consumers,
13 including low-income Ohioans.

14

15 ***Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY OR TESTIFIED***
16 ***BEFORE THE PUCO?***

17 ***A3.*** Yes. The cases that I have submitted testimony and/or have testified before the
18 PUCO can be found in Attachment JDW-1.

¹ *In the Matter of the Commission’s Review of Chapter 4901:1-10, Ohio Administrative Code, Regarding Electric Companies.*, Case No. 12-2050-EL-ORD. *In the Matter of the Commission's Review of Chapters 4901:1-9, 4901:1-10, 4901:1-21, 4901:1-22, 4901:1-23, 4901:1-24, and 4901:1-25 of the Ohio Administrative Code*, Case No. 06-653-EL-ORD.

² Including AEP Ohio reliability standard cases (*In the Matter of the Application of the Establishment of 4901:1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company*, Case No. 16-1511-EL-ESS; *In the Matter of the Establishment of 4901:1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company*, Case No. 12-1945-EL-ESS; *In the Matter of the Establishment of 4901:1-10-10(B) Minimum Reliability Performance Standards for Columbus Southern Power Company and Ohio Power Company*, Case No. 09-756-EL-ESS).

1 **II. PURPOSE OF MY TESTIMONY**

2

3 ***Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS***
4 ***PROCEEDING?***

5 ***A4.*** The purpose of my testimony is to address certain consumer issues related
6 to: AEP Ohio's proposed continuation and expansion of the Distribution
7 Investment Rider ("DIR") and the Enhanced Service Reliability Rider
8 ("ESRR"); parts of the proposed Distribution Technology Rider ("DTR"),
9 including AEP Ohio's proposed replacement of the internal AEP Ohio
10 communications system and security upgrades for AEP Ohio distribution
11 substations; and how the endless addition of new and expanded riders on
12 AEP Ohio's electric bills contributes to a lack of affordability of electric
13 service for many Ohioans.

14

15 ***Q5. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.***

16 ***A5.*** I recommend that the PUCO not approve the continuation and expansion
17 of the DIR and ESRR riders. Both riders are driving up the cost of
18 consumers' monthly electric bills and are contributing to the overall
19 unaffordability of AEP Ohio's electric service. Furthermore, neither rider
20 provides reliability benefits to consumers, the premise that AEP relied
21 upon when seeking the riders. AEP Ohio's reliability is getting worse, not
22 better, since the implementation of these riders. In fact, the Utility made a
23 recent filing seeking to make the electric performance standards it must

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1 meet less stringent, thereby making it acceptable for customers to
2 experience more frequent outages and outages of longer duration.³

3

4 I also recommend that the PUCO not approve separate customer funding
5 for AEP Ohio's internal communications system and the substation
6 security upgrades that it seeks in the newly proposed DTR.⁴ AEP Ohio is
7 obligated to provide safe and reliable service for its customers and this
8 obligation should in no way be contingent upon PUCO approval of the
9 DTR rider. The incorporation of these two projects in particular are
10 troublesome because they indicate that AEP Ohio is unwilling to make
11 even basic investments in its distribution system unless expedited cost
12 collection from customers is guaranteed. This is not how utility regulation
13 in Ohio is intended to function.

14

15 As utilities have done for decades, AEP Ohio can make any investment in
16 its distribution system that it deems necessary including installing new
17 communication systems or additional security measures at its distribution
18 facilities. Collecting the costs of these investments from customers should
19 not occur until after AEP Ohio demonstrates that its costs were prudently
20 incurred and that the investments are used and useful in providing

³ *In the Matter of the Establishment of 4901: 1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company*, Case No 16-1511-EL-ESS, Application (June 30, 2016).

⁴ I defer to the recommendations contained in OCC Witness Alexander's testimony concerning other projects that AEP Ohio included for separate customer funding in the proposed DTR.

1 distribution service to consumers through the traditional ratemaking
2 process.

3

4 **III. AFFORDABILITY**

5

6 ***Q6. WHY IS IT NECESSARY FOR THE PUCO TO PROTECT AEP OHIO***
7 ***CUSTOMERS FROM THE COSTLY INCREASES THAT AEP OHIO***
8 ***PROPOSES?***

9 ***A6.*** Quite frankly, AEP Ohio is doing nothing to moderate the impact of the
10 unreasonable and significant costs on customers through this ESP
11 extension. Just a few examples of separate charges that will be funded by
12 customers making electric bills more unaffordable include: the \$207.50
13 million DTR (over four years);⁵ the \$225 million annually (or \$1.35
14 billion over the term of the ESP extension) DIR;⁶ and the \$223.6 million
15 that AEP Ohio proposes to collect between 2018 and 2024 through the
16 ESRR.⁷

17

18 AEP Ohio has the highest electric rates in the state. According to the most
19 recent Ohio Utility Rate Survey,⁸ AEP Ohio customers in the Ohio Power
20 rate zone pay \$9.03 per month more than the average bill for customers

⁵ Direct Testimony of AEP Ohio Witness Scott Osterholt (November 23, 2016 at 6).

⁶ Direct Testimony of AEP Ohio Witness Selwyn Dias (November 23, 2016 at 14).

⁷ Id. at 17.

⁸ Ohio Utility Rate Survey, February 1, 2017. (Attached herein as Attachment JDW-2.)

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1 served by other Ohio electric utilities. AEP Ohio customers in the
2 Columbus Southern Power rate zone pay \$2.67 per month more than the
3 average bill for customers served by other Ohio electric utilities. These
4 facts make it difficult for the PUCO to carry out state policy of assuring
5 customers are provided reasonably priced retail electric service⁹ and
6 protecting at-risk populations.¹⁰

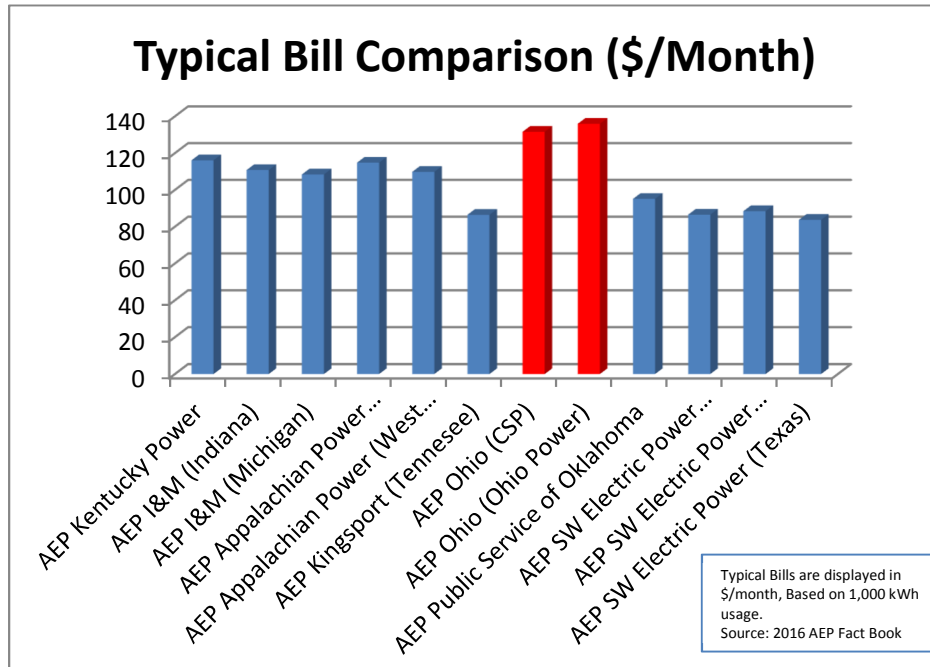
7
8 Customers of AEP Ohio also pay electric bills that are significantly higher
9 than any of the other AEP companies.¹¹ Figure 1 provides a comparison
10 of typical bills for AEP customers in different states. As shown AEP Ohio
11 customers are paying between \$19.87 and \$52.25 more for electric service
12 than customers in other states where AEP provides service.

⁹ Ohio Revised Code 4928.02(A).

¹⁰ Id. 4928.02(L).

¹¹ https://www.aep.com/investors/eventspresentationsandwebcasts/documents/2016EEL_FactBookv2.pdf

Figure 1.



Q7. ARE HIGH NUMBERS OF DISCONNECTIONS FOR NON-PAYMENT AN INDICATOR OF UNAFFORDABLE AEP OHIO ELECTRIC BILLS?

A7. Yes. Between June 1, 2015 and May 31, 2016, AEP Ohio disconnected 135,872 residential customers for non-payment.¹² This represents approximately 10.5 percent of all AEP Ohio customers. This high percentage of disconnected customers is strong evidence that customers are not receiving reasonably priced retail electric service from AEP Ohio. During this same period, AEP Ohio issued over 2.1 million disconnection notices providing additional evidence that large numbers of AEP Ohio

¹² *In the Matter of the Annual Report of Service Disconnections for Nonpayment Required by 4933.123 Ohio Revised Code.* Case No 16-1224-GE-UNC, Ohio Power Company's Notice of Filing Service Disconnection For Non-Payment Report, (June 30, 2016). (Attached herein as Attachment JDW-3.)

1 customers struggle to pay their electric bill.¹³ These numbers leave little
2 doubt that many AEP Ohio residential customers including at-risk
3 customers are not being protected.
4

5 ***Q8. DO YOU BELIEVE THAT AEP OHIO CONSIDERED THE SIGNIFICANT***
6 ***POVERTY IN ITS SERVICE TERRITORY WHEN IT PROPOSED***
7 ***CONTINUATION OF ITS ESP?***

8 ***A8.*** No. Residential consumers in the AEP Ohio service territory live within
9 some of the highest poverty areas in Ohio. For example, AEP Ohio serves
10 customers in Athens County where the poverty rate is 33 percent.¹⁴ AEP
11 Ohio serves customers in at least nine other counties including Adams,
12 Gallia, Highland, Jackson, Morgan, Pike, Scioto, and Vinton where the
13 poverty rate exceeds 20 percent.¹⁵ And AEP Ohio serves customers in
14 many other counties where the poverty rate well exceeds the statewide
15 poverty level of 15.8 percent.¹⁶ Despite this severe poverty, AEP Ohio
16 used its ESP to propose various and new ways to collect more money from
17 its customers.
18

19 Residential consumers can also be harmed by proposed changes in the rate
20 design. While AEP Ohio claims that the changes will lower the electric

¹³ Id.

¹⁴ Ohio Poverty Report, at page 14 (February 2017).

¹⁵ Id.

¹⁶ Id.

1 bills for PIPP customers who use slightly more energy than 1,030 kWh per
2 month on average,¹⁷ the change will likely increase the electric bill for
3 other low-income customers who use less than 1,030 kWh per month.
4 Average residential customer usage for Ohio Power customers was 925
5 kWh in 2015.¹⁸ Therefore, many residential customers including low-
6 income customers will experience higher bills because of changes in the
7 rate design. OCC witness Fortney addresses the proposed rate design
8 changes in more detail.

9

10 ***Q9. ARE THERE HEALTH AND SAFETY CONCERNS FOR AEP OHIO'S***
11 ***CUSTOMERS RESULTING FROM THE PROPOSED CONTINUATION OF***
12 ***ITS ESP?***

13 ***A9.*** Yes. It appears that AEP Ohio is not focused on the large number of
14 Ohioans who do not have secure access to enough food. In a recent study,
15 Ohio ranked 46 in the nation with 45 states having a lower percentage of
16 households living without reliable daily access to enough food.¹⁹
17 Furthermore, 17 percent of Ohioans were living in food insecure
18 households. Almost 25 percent were children and 17 percent were
19 seniors.

¹⁷ Direct Testimony of AEP Ohio Witness Moore (November 23, 2016 at 13).

¹⁸ FERC Financial Report, FERC Form 1, 2015/Q4 (page 304).

¹⁹ Guide to Evidence-Based Prevention: State Policy options to increase food security and access to healthy food, September 2016. (Attached herein as Attachment JDW-4.)

1 Specific to AEP Ohio's service territory, Athens County has a food
2 insecurity rate of 19.8 percent.²⁰ Adams County has a food insecurity
3 level of 18.1 percent.²¹ Scioto County has a food insecurity rate of 18.2
4 percent.²² And the food insecurity rates are hardly better in many other
5 counties served by AEP Ohio.

6
7 Yet, despite the fact that so many of AEP Ohio's consumers are lacking in
8 the most basic of life sustaining needs, the Utility has now proposed to
9 impose more costly and unreasonable charges on the very Ohioans that
10 struggle day to day to feed themselves and their families.

11
12 ***Q10. SHOULD AEP OHIO'S PROPOSAL BE CONSIDERED IN LIGHT OF***
13 ***POTENTIAL REDUCTIONS IN THE AVAILABILITY OF FEDERAL LOW-***
14 ***INCOME BILL PAYMENT ASSISTANCE THAT COULD OCCUR IN ITS***
15 ***SERVICE TERRITORY?***

16 ***A10.*** Yes. There are proposals to eliminate funding for the Low Income Home Energy
17 Assistance Program (LIHEAP).²³ LIHEAP provides bill payment assistance
18 funding for literally hundreds of thousands of low-income Ohioans. While there

²⁰ Map the Meal Gap 2016. Feeding America. (Attached herein as Attachment JDW-5.)
<http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/data-by-county-in-each-state.html?referrer=https://www.google.com/>.

²¹ Id.

²² Id.

²³ https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/2018_blueprint.pdf (at page 22).

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1 are several factors that influence the amount of assistance customers receive, an
2 average benefit in 2015 was \$274.²⁴ LIHEAP also funds a winter and summer
3 crisis program where customers who are facing disconnection can obtain
4 emergency assistance. During a recent year, the average winter crisis benefits
5 were approximately \$316.²⁵

6
7 If the LIHEAP funding is eliminated in the current federal proposed budget that
8 congress is considering, there are several potential impacts on residential
9 customers. First, many low-income customers will no longer have access to bill
10 payment assistance funds to help manage their annual utility charges. The result
11 could be more low-income customers having to enroll in the Percentage of
12 Income Payment Plan ("PIPP"). This net impact would be increases in the AEP
13 Ohio Universal Service Fund ("USF") rider that increases all customer bills.
14 Additional impacts could occur through increases in the AEP Ohio uncollectable
15 riders. Yet, AEP Ohio is ignoring this at-risk population by proposing additional
16 unwarranted and unnecessary charges that drive up the cost of electric bills.
17 There are very few programs available to assist at-risk customers with bill
18 payment assistance.

²⁴ <https://development.ohio.gov/files/is/2015%20State%20Plan%20Final%20to%20Leah%20102214.pdf>
(Appendix D).

²⁵ Id.

1 ***Q11. DO YOU BELIEVE THAT THE LARGE NUMBER OF EXISTING AND***
2 ***NEWLY PROPOSED RIDERS ON AEP OHIO CUSTOMER BILLS ARE***
3 ***CONTRIBUTING TO AEP CUSTOMERS BEING UNABLE TO AFFORD***
4 ***RETAIL ELECTRIC SERVICE?***

5 ***A11.*** Yes. There can be no doubt that the large number of riders are contributing to
6 unaffordable electric service. There are currently 25 various riders on AEP Ohio
7 customer bills²⁶ and many result in automatic and routine increases in customer
8 bills. For example, the DIR rider adjusts quarterly and the ESRR adjusts
9 annually. AEP Ohio has even proposed increases in both riders and an on-going
10 automatic 2.5 percent annual increase in the ESRR rider during the term of the
11 continued ESP.²⁷ Even with all of these existing riders that increase customer
12 bills, AEP Ohio has unreasonably proposed yet another new charge on customer
13 bills in the form of the DTR.²⁸ OCC Witnesses Alexander and Duann address the
14 many flaws in this rider.

15
16 According to the U.S. Census Bureau, the median household income in Ohio is
17 \$49,429 (in 2015 dollars) well below the national average.²⁹ In addition, the Ohio
18 median household income has steadily declined below the national average since
19 at least 2005. Despite the on-going financial despair of many of its customers and
20 the declining median household income, AEP Ohio seeks annual increases in

²⁶ Ohio Power Company Tariff, 13th Revised Sheet No. 101-3D.

²⁷ Dias Direct Testimony at 14.

²⁸ Osterholt Direct Testimony at 6.

²⁹ <https://www.census.gov/quickfacts/table/PST045216/39>.

1 revenues through the seemingly endless array of riders and rider increase requests.
2 Wholesale energy prices have decreased and customers should finally be realizing
3 price reductions in their retail electric bill. Yet AEP Ohio is proposing to increase
4 customers' bills by collecting money from customers for projects that provide
5 little if any benefit to customers. The PUCO should reject such requests.

6

7 ***Q12. CAN YOU PROVIDE AN EXAMPLE OF HOW RIDERS BENEFIT AEP***
8 ***OHIO TO THE DETRIMENT OF CUSTOMERS?***

9 ***A12.*** Sure. I will use the DIR rider as an example. In the AEP Ohio response to OCC
10 INT-1-247 (attached herein as Attachment JDW-6), AEP Ohio claims that
11 customers benefit from DIR because of the avoidance of regulatory lag and rate
12 case expenses. But the rate case process provides for a level of regulatory
13 oversight and comprehensive financial review that does not take place in rider
14 cases. In a rate case, all revenues and expenses are examined and rates are based
15 upon a more holistic and comprehensive review of the Utility financial records as
16 opposed to just a few select line items. There is a level of scrutiny in determining
17 that expenses were prudently incurred and that investments are used and useful to
18 providing distribution service to consumers before customers are asked to pay for
19 the return on and of investments. To the extent that infrastructure investments
20 result in lower maintenance costs, these reduced costs should be flowed through
21 to customers in the setting of just and reasonable rates.

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1 On the other hand, single issue riders like DIR just accelerate the collection of
2 expenses from customers without considering the impact that the investments
3 made to supposedly improve the distribution system may have on reducing
4 expenses. Furthermore, there is no assurance that the investments AEP Ohio
5 collects from customers through the DIR are used and useful or the costs were
6 prudently incurred. According to the AEP Ohio response to OCC RFA 1-067
7 (attached herein as Attachment JDW-7), AEP Ohio admits there are no
8 requirements in the DIR for cost benefit analysis. The rate case expense could be
9 minimal compared to the greater benefits customers could realize in the form of
10 lower rates when both revenues and expenses are examined contemporaneously in
11 a distribution rate case.

12
13 AEP Ohio also claims that customers benefit from paying for capital investments
14 through the DIR rather than base distribution rates because the distribution system
15 is able to provide greater reliability to customers in a more proactive manner.³⁰
16 But there is little incentive for the utility to make prudent investment decisions
17 when the collection of costs from customers is all but guaranteed. Furthermore,
18 there is no assurance that the investment related costs AEP Ohio collects from
19 customers through the DIR are used and useful. According to the AEP Ohio
20 response to OCC RFA 1-067 (attached herein as Attachment JDW-7), AEP Ohio
21 admits there are no requirements in the DIR for cost benefit analysis.

³⁰ Attachment JDW-6.

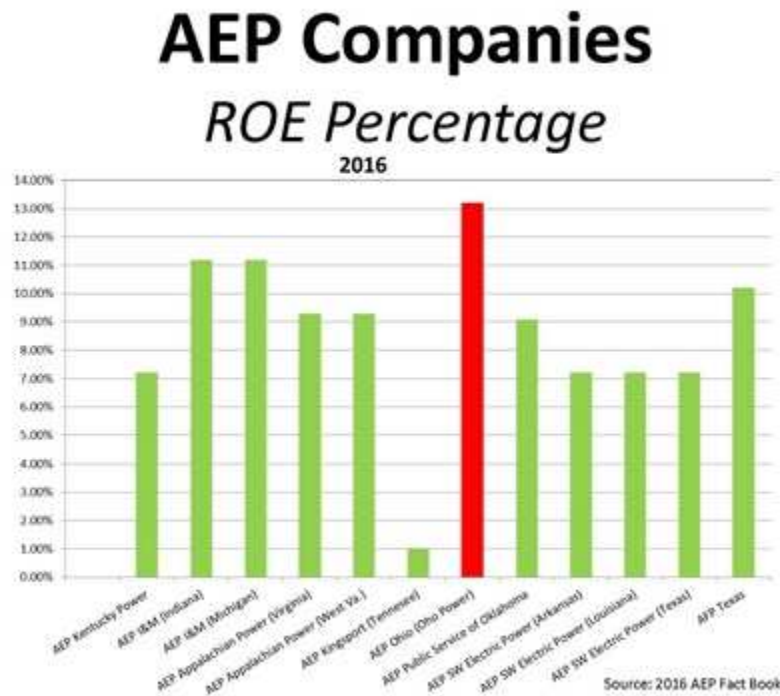
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1 As I explain later in this testimony, AEP Ohio customers are not getting better
2 reliability despite the fact that customers have been paying for the DIR separately
3 on their bill for almost five years. And the avoidance of regulatory lag is not
4 benefitting customers. It means that customers pay for investment sooner than
5 otherwise. In fact, a regulatory lag that includes a base rate case would more
6 likely benefit consumers. That is the extra money AEP Ohio is collecting from
7 customers through all of the riders sooner is ultimately more of a benefit to AEP
8 Ohio and AEP shareholders than its monopoly customers. According to the most
9 recent AEP data, the additional revenues AEP Ohio is collecting through the
10 riders are likely contributing to AEP Ohio having a higher return on equity than
11 any other sister AEP Utility.³¹ Attached in Figure 2 is a comparison of the AEP
12 Ohio return on equity compared to AEP companies in other states. But this is
13 coming at much too high a price to Ohio consumers.

³¹ https://www.aep.com/investors/eventspresentationsandwebcasts/documents/2016EEL_FactBookv2.pdf.

1

Figure 2: AEP Ohio ROE Compared to other AEP Utilities



2

3 ***Q13. IN CONSIDERING REASONABLY PRICED RETAIL ELECTRIC SERVICE,***
4 ***ARE THERE OTHER CHARGES THAT CUSTOMERS WILL BE***
5 ***REQUIRED TO PAY SEPARATELY THROUGH RIDERS THAT WERE***
6 ***NOT INCLUDED IN THE ESP BILL IMPACT ASSESSMENTS?***

7 ***A13.*** Yes. AEP Ohio Witness David Gill provided bill impacts based on
8 November 2016 total bills.³² One example that I'm aware of is the
9 gridSMART Phase II program that was recently approved by the PUCO in
10 February 2017.³³ This one program is estimated to cost \$516 million and

³² Direct Testimony of AEP Ohio Witness David Gill (November 23, 2016 at Exhibit DRG-7).

³³ *In The Matter of The Application of Ohio Power Company to Initiate Phase 2 of its GridSMART Project and to Establish The GridSMART Phase 2 Rider*, Case No. 13-1939-EL-RDR (Opinion and Order February 1, 2017).

1 will be paid for separately by customers through a rider on the bill for at
2 least the next seven years.³⁴ And AEP Ohio can initiate a gridSMART
3 Phase III program at any time.³⁵

4

5 **IV. SPECIFIC ISSUES**

6

7 **A. DISTRIBUTION INVESTMENT RIDER (DIR)**

8

9 ***Q14. CAN YOU BRIEFLY DESCRIBE THE PROPOSED CONTINUATION OF***
10 ***THE DIR RIDER?***

11 ***A14.*** Yes. The PUCO approved an AEP Ohio proposed DIR as part of the
12 modified ESP II Case No. 11-346-EL-SSO. The purpose of the DIR was
13 to allow AEP to recover capital costs for distribution infrastructure
14 investments in order to facilitate improved service reliability. Certain
15 modifications were proposed by AEP Ohio and were approved in Case
16 No. 13-2385-EL-SSO and the DIR was continued for the period June 1,
17 2015 through May 31, 2018. AEP Ohio is now seeking to modify the DIR
18 to increase distribution capital investments for the period 2018 through
19 2024 at an estimated average level of \$225 million annually.³⁶

³⁴ Id at 24.

³⁵ Case 13-1939-EL-RDR, Stipulation and Recommendation (April 4, 2016 at 5).

³⁶ Dias Testimony at 14.

1 ***Q15. DO YOU HAVE AN OPINION ON AEP OHIO'S PROPOSED***
2 ***CONTINUATION OF THE DIR?***

3 ***A15.*** Yes. My opinion is that customers should no longer be separately charged
4 for the DIR rider when the current ESP ends in May 2018. The DIR is
5 having little to no impact on AEP Ohio's reliability. AEP Ohio has spent
6 or has plans to spend almost \$1.5 billion in distribution investments since
7 the DIR was initiated.³⁷ Yet AEP Ohio is now proposing reliability
8 standards that are less stringent and that enable more outages on an
9 average annual basis and for longer durations of time.³⁸ DIR is expensive
10 and is driving up the cost of electric bills to customers during a time that
11 lower energy costs should be reducing electric bills. My opinion is that
12 DIR is a drain on customer wallets that is providing little if any real
13 benefit to consumers and contributes to the overall unreasonably priced
14 AEP Ohio bills.

15
16 ***Q16. CAN YOU BRIEFLY DISCUSS THE RELIABILITY OF THE AEP OHIO***
17 ***DISTRIBUTION SYSTEM?***

18 ***A16.*** Yes. The PUCO rules require each electric utility to establish minimum service
19 reliability standards including a System Average Interruption Frequency Index
20 ("SAIFI") and a Customer Average Interruption Duration Index ("CAIDI").³⁹

³⁷ *In the Matter of the Commission's Review of the Ohio Power Company's Distribution Investment Rider Work Plan for 2017*, Case No. 17-0045-EL-UNC, January 6, 2017.

³⁸ Case No. 16-1511-EL-ESS.

³⁹ Ohio Admin. Code 4901:1-10-10(B).

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1 SAIFI is a measure of the average number of interruptions per customer whereas
2 CAIDI is the average time to restore service following an interruption. The
3 standards do not include outages that are less than five minutes in duration,
4 outages that occur during major events, and outages caused by transmission
5 failures. Table 1 provides a comparison of the AEP Ohio reliability performance
6 with standards for 2013 through 2016.

7

8 **Table 1: AEP Ohio Reliability Standards/ Performance (2013 – 2016)⁴⁰**

Year	SAIFI Standard	SAIFI Performance	CAIDI Standard (Minutes)	CAIDI Performance (Minutes)
2013	1.2	1.03	150	140.97
2014	1.2	1.13	150	146.61
2015	1.2	1.13	150	139.03
2016	1.2	1.08	150	143.45

9

10 As seen in Table 1, while AEP Ohio met the minimum SAIFI performance
11 standard for each year, the SAIFI performance has consistently been
12 worse each year since 2013. Higher numbers mean that the average
13 number of customer interruptions is increasing. In addition, the CAIDI
14 reliability performance has consistently been worse in two of the three
15 years since 2013. Higher numbers mean that customers that experience an
16 outage are waiting longer to have services restored.

⁴⁰ *In the Matter of the Annual Report of Ohio Power Company Pursuant to Rule 10 of the Electric Service and Safety Standards, Ohio Administrative Code 4901:1-10-10, Case No. 14-0517-EL-ESS, March 31, 2014. Case No. 15-627-EL-ESS, March 30, 2015. Case No. 16-0550-EL-ESS, March 31, 2016. Case No. 17-890-EL-ESS, March 31, 2017.*

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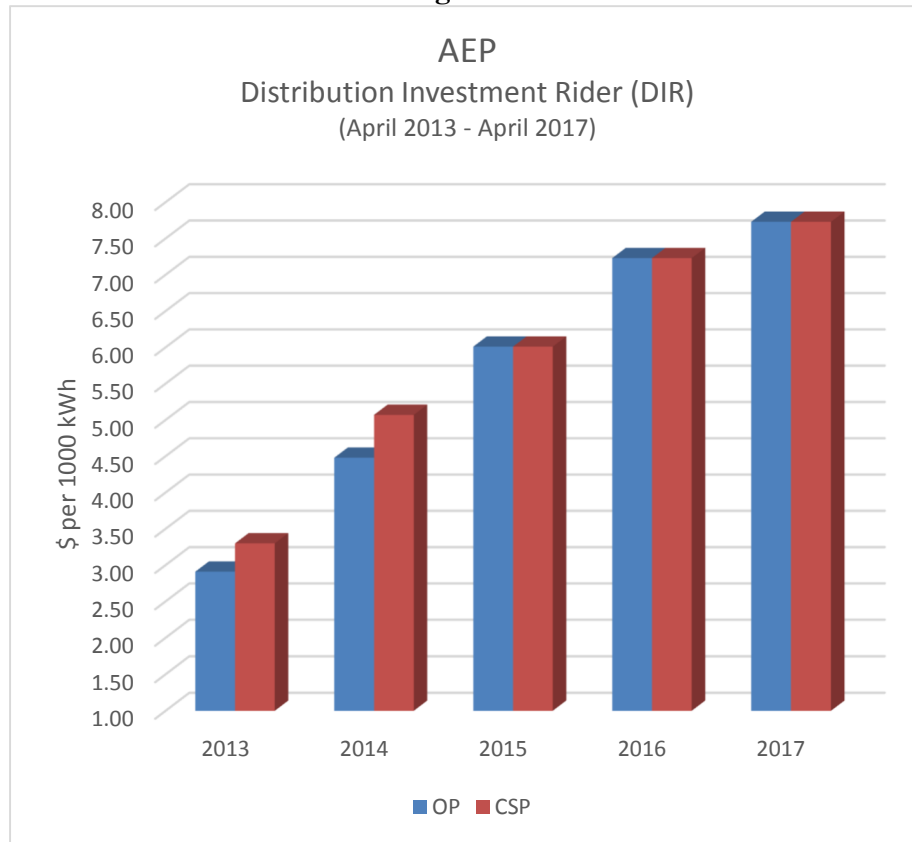
1 Even though reliability has not gotten better, AEP Ohio is collecting from
2 customers over \$750 million between 2013 and 2016 in investments that
3 should be improving reliability but are not. In fact, according to the AEP
4 Ohio response to OCC RFA 1-058 (attached herein as Attachment JDW-
5 8), the Utility has not performed any study or analysis to even understand
6 the relationship between cost and reliability.
7

8 ***Q17. WHAT DOES THE DIR CURRENTLY COST CUSTOMERS ON A***
9 ***MONTHLY BASIS?***

10 ***A17.*** The DIR rider is expensive. Residential customers are currently paying \$7.73 per
11 month for the DIR or almost a hundred dollars per year. AEP Ohio's proposal to
12 continue and expand the DIR will further increase customer bills. Figure 3
13 provides a graphic description of the increases that have occurred in the amount
14 of money that customers are paying for the DIR since 2013.

1

Figure 3.



Source: <https://www.aepohio.com/account/bills/rates/AEPOhioRatesTariffsOH.aspx>
April 2017 and OCC Calculations

2

3

4

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7

Q18. DOES OHIO LAW REQUIRE CUSTOMER EXPECTATIONS

8

CONCERNING RELIABILITY TO BE ALIGNED BETWEEN THE

9

CUSTOMER AND THE UTILITY BEFORE THE PUCO CAN APPROVE

10

INFRASTRUCTURE MODERNIZATION RIDERS LIKE THE DIR?

11

A18. Yes. Ohio Revised Code 4928.143(B)(2)(h) requires the PUCO to examine the

12

reliability of the electric distribution system to ensure that customer and Utility

13

expectations for reliability are aligned before approving an infrastructure

14

modernization rider like the DIR.

1 ***Q19. DO YOU HAVE AN OPINION CONCERNING THE ALIGNMENT OF***
2 ***CUSTOMER AND AEP OHIO EXPECTATIONS CONCERNING***
3 ***RELIABILITY?***

4 ***A19.*** Yes. I do not believe that customer and AEP Ohio expectations for reliability are
5 aligned.

6
7 ***Q20. PLEASE EXPLAIN***

8 ***A20.*** AEP Ohio's expectations concerning reliability appears to be focused primarily
9 on increasing the amount of money collected from customers, not on providing
10 more reliable service to customers. Customer expectations for reliability are
11 clearly more cost sensitive than AEP's and are focused on preventing degradation
12 in the existing reliability. According to a AEP Ohio 2015 Service Reliability
13 Perception Survey (attached herein as Attachment JDW-9),⁴¹ the majority of
14 residential customers prioritized two aspects of their home electric service when
15 asked as series of questions about options that were most important to them.
16 These two priorities included: (1) The cost of electricity (34%); and (2) quickly
17 restoring power when outages occur (32%).

18
19 Residential customers expressed less priority in options that included keeping
20 power outages to a minimum (20%), timely customer service (8%), and having
21 options in paying the bill (4%). AEP Ohio's proposed continuation and

⁴¹ *In the Matter of the Establishment of 4901: 1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company*, Case 16-1511-EL-ESS, Application (June 30, 2016 at Attachment 2).

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1 expansion of the DIR results in customers paying an additional \$1.35 billion
2 between 2018 and 2024 for investments that are increasing costs to customers
3 when customers' most important concern with electric service is the cost of
4 electricity.

5
6 In addition, AEP Ohio's proposed continuation and expansion of the DIR is not
7 aligned with customer expectations and priorities regarding reliability. According
8 to Mr. Dias, approximately 17.9 percent of the DIR capital spending would be
9 directed to reliability programs.⁴² He defines reliability programs as "specific
10 programs that target known reliability issues impacting groups of customers or
11 whole circuits experiencing reliability issues."⁴³ When asked which of the
12 reliability programs are intended to improve SAIFI and which of the reliability
13 programs are intended to improve CAIDI, the Utility responded that the focus is
14 on avoiding outages and the number of customers interrupted.⁴⁴ In fact, the
15 Utility further responded, that "none of the reliability projects focus on reducing
16 CAIDI."⁴⁵ Yet, 32 percent of the residential customers prioritized quickly
17 restoring service following an outage. Only 20 percent of the AEP Ohio
18 residential customers prioritized keeping power outages to a minimum. This
19 further demonstrates that AEP Ohio and its customer expectations for reliability
20 are not aligned.

⁴² Dias Testimony at 16.

⁴³ Id at 16.

⁴⁴ AEP Ohio response to OCC INT-2-291. (attached herein as Attachment JDW-10.)

⁴⁵ Id.

**Q21. IS THERE ADDITIONAL EVIDENCE THAT AEP OHIO AND ITS
CUSTOMER EXPECTATIONS CONCERNING RELIABILITY ARE NOT
ALIGNED?**

A21. Yes. On June 30, 2016, AEP Ohio filed an application to amend its distribution reliability standards.⁴⁶ As shown in Table 2, AEP Ohio has requested reliability standards that reflect a decline in reliability performance compared with the current standards.

Table 2: AEP Ohio Reliability Standards (Current and Proposed)

Current SAIFI	Proposed SAIFI	Current CAIDI	Proposed CAIDI
1.2	1.22	150.0	159.23

As shown in Table 2, AEP is proposing a SAIFI standard that is worse than the current standard (meaning customers can experience more frequent outages). Additionally, AEP Ohio proposed a CAIDI standard that is significantly worse than the current standard (meaning outage durations can be much longer). According to the survey though, over two-thirds of the residential customers said their expectations concerning reliability were not likely to change over the next five years. But as shown in Table 1, AEP Ohio's reliability has not improved since 2013 even with the massive costs customers are paying for the DIR. And as shown in Table 2, AEP Ohio is proposing new reliability standards that are far worse than the existing standards even though customer expectations are more

⁴⁶ *In the Matter of the Establishment of 4901: 1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company. Case No. 16-1511-EL-ESS, Application (June 30, 2016).*

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1 aligned with the current standards. There can be no doubt that AEP Ohio's
2 expectations concerning reliability during the term of the continued ESP are not
3 aligned with customers' expectations.

4

5 ***Q22. IS THERE ADDITIONAL INFORMATION ABOUT AEP OHIO'S***
6 ***RELIABILITY THAT YOU WOULD LIKE THE PUCO TO CONSIDER?***

7 ***A22.*** Yes. I believe the PUCO should consider customer satisfaction of AEP Ohio
8 residential customers prior to deciding if there is a need to continue and expand
9 the DIR. In a recent J.D. Power Customer Satisfaction Survey (attached herein as
10 Attachment JDW-11), AEP Ohio ranked near the bottom when compared to
11 customer satisfaction ratings of other large electric utilities in the Midwest. Based
12 on a 1,000 point scale, AEP Ohio rated 654, which is well below the average
13 rating of 678. Considering that AEP Ohio customers have and are currently
14 paying well over a \$1 billion in additional charges through the DIR rider, such
15 dismal customer satisfaction ratings by customers of AEP Ohio should be
16 unacceptable for the PUCO and grounds for denying continuation and expansion
17 of the DIR.

B. ENHANCED SERVICE RELIABILITY RIDER

***Q23. CAN YOU BRIEFLY DESCRIBE THE PROPOSED CONTINUATION AND
EXPANSION OF THE ESRR RIDER?***

A23. Yes. AEP Ohio currently collects from customers separately through an ESRR rider \$26.0 million dollars annually in addition to \$24.2 million annually that is collected from customers in base rates to perform vegetation management.⁴⁷ Over \$450 million has been collected from customers since the ESRR was initiated in 2009.⁴⁸ AEP Ohio is now proposing to continue and expand the amount of money collected from customers by approximately 2.5 percent per year between 2018 and 2024. Table 3 provides the details for the amount of money that would be paid by customers on an annual basis between 2018 and 2024 under the Utility proposal.

Table 3: Tree-trimming Costs 2018 - 2024 (AEP Ohio Proposal)
In millions of Dollars

	2018	2019	2020	2021	2022	2023	2024	Total
Base Rates	\$24.2	\$24.2	\$24.2	\$24.2	\$24.2	\$24.2	\$24.2	\$145.2
ESRR	\$27.7	\$28.9	\$30.2	\$31.6	\$33.1	\$34.4	\$35.9	\$221.8
Total	\$51.9	\$53.1	\$54.4	\$55.8	\$57.3	\$58.6	\$60.1	\$367

⁴⁷ Dias Testimony at 11.

⁴⁸ Id. at 7.

1 ***Q24. WHAT DOES THE ESRR COST RESIDENTIAL CUSTOMERS ON A***
2 ***MONTHLY BASIS?***

3 ***A24.*** Residential customers are currently paying \$1.96 per month for the ESRR.⁴⁹ AEP
4 Ohio's proposal to continue and expand the ESRR will further increase customer
5 bills.

6
7 ***Q25. DO YOU HAVE AN OPINION ON AEP OHIO'S PROPOSED***
8 ***CONTINUATION OF THE ESRR?***

9 ***A25.*** Yes. I believe that the ESRR has not proven effective in reducing outages
10 caused by trees and customers should no longer have to pay for the ESRR
11 as a separate rider on their bill.

12
13 ***Q26. PLEASE EXPLAIN***

14 ***A26.*** Table 4 includes a summary of the total number of tree caused outages by
15 year between 2009 and 2016.

⁴⁹ <https://www.aepohio.com/account/bills/rates/AEPOhioRatesTariffsOH.aspx> (assuming 1,000 kWh usage).

Table 4: Outages Caused by Trees⁵⁰ (2009 – 2016)

Year	Interruptions	Customers Interrupted	Customer Outage Minutes
2009	5,876	261,804	54,716,513
2010	6,336	274,163	57,840,607
2011	7,003	312,118	69,624,736
2012	5,490	250,943	51,227,123
2013	4,845	213,659	46,485,876
2014	4,568	201,716	46,545,188
2015	4,852	223,697	45,262,937
2016 ⁵¹	5,083	257,540	51,219,163

As shown, the total number of interruptions has declined by approximately 13.5 percent. The total number of customer interruptions has declined by approximately 1.6 percent. Total customer outage minutes declined by approximately 6.6 percent.

The reductions in the number of outages and the impact of those reductions between 2009 and 2016 seem minimal in comparison to the \$450 million AEP Ohio has collected from customers for tree-trimming. Customers should not have to pay separately through the ESRR for tree-trimming expenses that AEP Ohio can collect from customers through base rates. AEP Ohio is not prohibited from filing a distribution base rate case after 2018 if it determines that additional revenues are necessary to

⁵⁰ Sum of the AEP Ohio responses to OCC INT 2-149 and 150. (attached jointly herein as Attachment JDW-12.)

⁵¹ In the Matter of the Annual Report of Electric Distribution System Reliability Pursuant to Rule 4901:1-10-(C)., Case No. 17-890-EL-ESS (March 31, 2017 at 6a: 1).

1 meet any PUCO mandates involving tree-trimming, or any other
2 legitimate expense or investment for that matter.

3

4 ***Q27. IS AEP OHIO CURRENTLY MEETING THE PUCO MANDATES***
5 ***CONCERNING TREE-TRIMMING?***

6 ***A27.*** No. Ohio Adm. Code 4901:1-10-26 requires each electric utility to file an
7 annual system improvement plan on March 31 of each year that includes
8 reporting compliance with PUCO inspection, maintenance, repair, and
9 replacement plans. I routinely review these plans. During my review of
10 the AEP Ohio annual system improvement plan,⁵² I noticed that AEP Ohio
11 did not fulfill its requirements for distribution vegetation control in 2016.⁵³

12

13 AEP Ohio also failed to meet its distribution vegetation control
14 requirements in 2012 and 2015.⁵⁴ I find it disturbing that AEP Ohio is
15 collecting extra money from customers for tree-trimming, yet is not
16 meeting its annual tree-trimming requirements. This further reinforces my
17 position that the PUCO should not require customers to pay separately for
18 the continuation and expansion of the ESRR rider.

⁵² *In the Matter of the Annual Report of the Electric Service and Safety Standards, Pursuant to Rule 4901:1-10-26(B) of the Ohio Administrative Code*, Case No. 17-996-EL-ESS, March 31, 2017.

⁵³ Id. See page 10-2.

⁵⁴ See Case No. 16-0996-EL-ESS and 13-0996-EL-ESS.

C. INTERNAL COMMUNICATIONS SYSTEM

Q28. CAN YOU PROVIDE A BRIEF DESCRIPTION OF THE AEP OHIO PROPOSAL TO HAVE CUSTOMERS PAY SEPARATELY THROUGH A RIDER FOR AN UPGRADE TO ITS COMMUNICATIONS SYSTEM?

A28. Sure. AEP Ohio proposed as part of its DTR the replacement of its internal radio communications system with a new system called “NextGen.”⁵⁵ The program is estimated to cost \$70 million.⁵⁶ AEP Ohio claims that its current internal communications system (EDACS) is obsolete and does not have the functionality required to maintain the reliability of its distribution system.⁵⁷

Q29. DOES AEP OHIO TAKE THE POSITION THAT THE REPLACEMENT OF THE AEP OHIO INTERNAL COMMUNICATIONS SYSTEM (NEXTGEN) QUALIFIES AS DISTRIBUTION MODERNIZATION IN THE CONTEXT OF R.C. 4928.143(2)(H).

A29. Yes. Mr. Osterholt claims that the replacement of the internal communications system (Next Gen) is a modernization initiative supported under R.C. 4928.143(h).

⁵⁵ Testimony of AEP Ohio Witness Osterholt at 33.

⁵⁶ Id. at 39. AEP Ohio claims that its current internal communications system (EDACS) is obsolete

⁵⁷ Id. at 34.

1 ***Q30. DO YOU AGREE WITH MR. OSTERHOLT?***

2 ***A30.*** Absolutely not. R.C. 4928.143(B)(2)(h) supports single issue ratemaking in the
3 context of infrastructure modernization of a Utility distribution system. The
4 replacement of an internal communications system is part of the normal
5 operations and maintenance expenses that a Utility would incur to fulfil its
6 statutory requirements in providing safe and reliable service. The replacement of
7 an internal communications system has nothing to do with the reliability of the
8 distribution system. It is merely part of the expense that AEP Ohio recovers in
9 base rates to provide service to customers. No doubt the internal communications
10 systems have been upgraded numerous times over the years to meet the
11 requirements of the times. And AEP Ohio had the opportunity to seek collection
12 of those investment costs in base rates. Collection of money from customers to
13 upgrade AEP Ohio's internal communications system should occur in a
14 distribution base rate case, subject to the appropriate PUCO standards including
15 that costs are ordinary and necessary, and that investment is shown to be prudent
16 and used and useful in providing electric service to customers.

17

18 ***Q31. HAS THE PUCO ALREADY PROVIDED GUIDANCE ON COST***
19 ***RECOVERY FOR THE REPLACEMENT OF THE INTERNAL***
20 ***COMMUNICATIONS SYSTEM?***

21 ***A31.*** Yes. In the Opinion and Order in Case 13-2385-EL-SSO, the PUCO denied AEP
22 Ohio's request for expanding the scope of the DIR rider to include cost recovery
23 for further expansion of the scope of the DIR including replacement of an internal

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1 radio communications system. The PUCO reasoned that AEP Ohio's
2 interpretation of R.C. 4928.143(B)(2)(h) exceeded the statutory intent. And the
3 PUCO determined that an expansion of the DIR to support cost recovery for such
4 initiatives should be addressed in a distribution base rate case where revenues and
5 expenses can be reviewed in a more comprehensive manner.⁵⁸ This more
6 comprehensive review explicitly included balancing the Company's interest in
7 collecting more money from consumers with customers' rights to reasonably
8 priced service.⁵⁹ Even though the PUCO has already addressed this issue,⁶⁰ AEP
9 Ohio is now seeking authority to replace the internal communications system
10 through yet another new rider. The replacement of the internal communications
11 system has nothing to do with the DTR rider, and has nothing to do with any of
12 the other 20 plus riders on the AEP Ohio bill. The PUCO should deny AEP Ohio
13 request to charge customers for an internal radio communications system through
14 this single-issue rider in an electric security plan case.

⁵⁸ *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan*. Case 13-2385-EL-SSO, (February 25, 2015 at 46).

⁵⁹ *Id.*

⁶⁰ *Id.*

1 **D. SUBSTATION SECURITY**

2

3 ***Q32. CAN YOU PROVIDE A BRIEF DESCRIPTION OF THE AEP OHIO***
4 ***PROPOSAL TO HAVE CUSTOMERS PAY SEPARATELY THROUGH A***
5 ***RIDER FOR ADDITIONAL SECURITY MEASURES AT ITS***
6 ***DISTRIBUTION SUBSTATIONS?***

7 **A32.** Yes. AEP Ohio has proposed as part of its distribution technology
8 investment plan that customers pay separately for additional security
9 measures at several of its distribution substations.⁶¹ The additional
10 measures include installation of cameras, lights, and signs.⁶² AEP Ohio
11 has proposed spending \$31 million of customer money to perform these
12 upgrades at substations.⁶³

13

14 ***Q33. DOES AEP OHIO CLAIM THAT SUBSTATION SECURITY QUALIFIES AS***
15 ***DISTRIBUTION MODERNIZATION IN THE CONTEXT OF R.C.***
16 ***4928.143(B)(2)(H).***

17 **A33.** Yes. Mr. Osterholt claims that substation security is a modernization initiative
18 supported under R.C. 4928.143(B)(2)(h).

⁶¹ Osterholt Testimony at 40.

⁶² Osterholt Testimony at 44-45.

⁶³ Id. at 46.

1 ***Q34. DO YOU AGREE WITH MR. OSTERHOLT?***

2 ***A34.*** No. Once again, AEP Ohio is misinterpreting R.C. 4928.143(B)(2)(h)
3 concerning single issue ratemaking for infrastructure modernization of a
4 distribution system to apply to investments that have nothing to do with
5 infrastructure modernization. Additional substation security has nothing
6 to do with the reliability of the distribution system and the plant
7 investments that may be needed to improve reliability. AEP has a
8 fundamental obligation to make appropriate investments concerning the
9 security of its substations.⁶⁴ And there is no indication in Mr. Osterholt's
10 testimony that the Utility is not meeting all PUCO requirements
11 concerning the security of its substations.⁶⁵

12

13 ***Q35. IF AEP OHIO CHOSE TO IMPROVE THE SECURITY AT ITS***
14 ***SUBSTATIONS ARE THERE OTHER OPTIONS AVAILABLE WHERE IT***
15 ***CAN SEEK COLLECTION OF COSTS FROM CUSTOMERS?***

16 ***A35.*** Yes. In the AEP Ohio response to OCC INT 2-365 (attached herein as
17 Attachment JDW-13), the Utility acknowledged that recovery of the funds
18 spent on substation security improvements could occur through a
19 distribution rate case. But AEP Ohio claims that a rate case would require
20 greater lag in updating the infrastructure and additional costs due to rate
21 case expense.

⁶⁴ R.C. 4905.06.

⁶⁵ Id. at 42.

1 ***Q36. DO YOU AGREE THAT A RATE CASE WOULD CAUSE REGULATORY***
2 ***LAG AND MORE EXPENSES?***

3 ***A36.*** No. Assuming that there is even a need for the additional substation
4 security, AEP Ohio could proceed immediately with the upgrades. I
5 believe that a base rate case, and the comprehensive financial review
6 provided therein, provides better consumer protection in helping ensure
7 customers are being charged just and reasonable rates based on property
8 that is used and useful to provide electric distribution service to customers.
9 Additional savings and other benefits the Utility receives from the
10 upgrades⁶⁶ when evaluated in the context of a rate case could sufficiently
11 offset the expense.

12

13 ***Q37. DO YOU HAVE ANY FINAL CONCERNS THAT YOU WOULD LIKE THE***
14 ***PUCO TO CONSIDER INVOLVING THE AEP OHIO PROPOSAL TO HAVE***
15 ***CUSTOMERS FUND THE SUBSTATION SECURITY AND THE***
16 ***REPLACEMENT OF ITS INTERNAL COMMUNICATIONS SYSTEM***
17 ***THROUGH THE DTR RIDER?***

18 ***A37.*** Yes. I am concerned that with single-issue ratemaking and the inclusion of
19 numerous riders on customers' bills, AEP Ohio may not be making the necessary
20 investments in its distribution facilities to ensure that it is providing adequate
21 service for consumers unless collection of costs from consumers is guaranteed.⁶⁷

⁶⁶ Osterholt Testimony at 40.

⁶⁷ R.C. 4905.22

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1 This is especially troubling with the replacement of the internal communications
2 system where the PUCO rejected the Utility proposal to replace the radio system
3 almost 27 months ago. Yet AEP Ohio has done nothing to actually address this
4 issue other than seeking another rider to guarantee collection of costs from
5 consumers. Either the replacement of the internal communications system is not
6 as serious of an issue as the Utility alleges or AEP Ohio has become overly reliant
7 on riders for seeking collection of additional money from consumers. This same
8 premise holds true for AEP Ohio making the necessary security upgrades at its
9 facilities to protect its employees and the public.

10

11 **V. CONCLUSION**

12

13 ***Q38. DOES THIS CONCLUDE YOUR TESTIMONY?***

14 ***A38.*** Yes. However, I reserve the right to incorporate new information that may
15 subsequently become available through outstanding discovery or otherwise.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of James D. Williams on Behalf of the Office of the Ohio Consumers' Counsel* was served via electronic transmission to the persons listed below on this 2nd day of May 2017.

/s/ William J. Michael

William J. Michael
Assistant Consumers' Counsel

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Testimony of James D. Williams
Filed at the Public Utilities Commission of Ohio

1. *In the Matter of the Application of the Cincinnati Gas and Electric Company for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 95-0656-GA-AIR (August 12, 1996).*
2. *In the Matter of the Application of the Cincinnati Gas and Electric Company for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 01-1228-GA-AIR (February 15, 2002).*
3. *In the Matter of the Commission's Investigation into the Policies and Procedures of Ohio Power Company, Columbus Southern Power Company, The Cleveland Electric Illuminating Company, Ohio Edison Company, The Toledo Edison Company and Monongahela Power Company regarding installation of new line extensions, Case No. 01-2708-EL-COI (May 30, 2002).*
4. *In the Matter of the Application of The East Ohio Gas Company d/b/a Dominion East Ohio for an Increase in Its Rates for Gas Service to All Jurisdictional Customers, Case No. 07-0829-GA-AIR (June 23, 2008).*
5. *In the Matter of the Application of the Columbia Gas of Ohio, Inc. for Authority to Amend Filed Tariffs to Increase the Rates and Charges for Gas Distribution, Case No. 08-072-GA-AIR (September 25, 2008).*
6. *In the Matter of a Settlement Agreement Between the Staff of the Public Utilities Commission of Ohio, The Office of the Consumers' Counsel and Aqua Ohio, Inc. Relating to Compliance with Customer Service Terms and Conditions Outlined in the Stipulation and Recommendation in Case No. 07-564-WW-AIR and the Standards for Waterworks Companies and Disposal System Companies, Case No. 08-1125-WW-UNC (February 17, 2009).*
7. *In the Matter of the Application of the Ohio American Water Company to Increase its Rates for water and Sewer Services Provided to its Entire Service Area, Case No. 09-391-WS-AIR (January 4, 2010).*
8. *In the Matter of the Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in its Masury Division, Case No. 09-560-WW-AIR (February 22, 2010).*
9. *In the Matter of the Application of Aqua Ohio, Inc. for Authority to Increase its Rates and Charges in Its Lake Erie Division, Case No. 09-1044-WW-AIR (June 21, 2010).*

10. *In the Matter of the Application of The Ohio American Water Company to Increase its Rates for Water Service and Sewer Service*, Case No. 11-4161-WS-AIR (March 1, 2012).
11. *In the Matter of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan*, Case No. 11-346-EL-SSO, et al (May 4, 2012).
12. *In the Matter of the Application of The Dayton Power and Light Company for Approval of its Market Rate Offer*, Case No. 12-426-EL-SSO (June 13, 2012).
13. *In the Matter of the Application of Ohio Power Company to Establish Initial Storm Damage Recovery Rider Rates*, Case No. 12-3255-EL-RDR (December 27, 2013).
14. *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan*, Case No. 13-2385-EL-SSO (May 6, 2014).
15. *In the Matter of the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service*, Case 14-841-EL-SSO (May 29, 2014).
16. *In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan*, Case No. 14-1297-EL-SSO (December 22, 2014).
17. *In the Matter of the Application of Duke Energy Ohio, Inc., to Adjust Rider DR-IM and Rider AU for 2013 Grid Modernization Costs*, Case No. 14-1051-EL-RDR (December 31, 2014) and (February 6, 2015).
18. *In the Matter of the Application Not for an Increase in Rates Pursuant to Section 4901:18, Revised Code, of Ohio Power Company to Establish Meter Opt Out Tariff*, Case No. 14-1158-EL-ATA (April 24, 2015).
19. *In the Matter of the Application of Duke Energy of Ohio, Inc., for Approval of a Grid Modernization Opt-out Tariff and for a Change in Accounting Procedures Including a Cost Recovery Mechanism.*, Case 14-1160-EL-UNC and 14-1161-EL-AAM (September 18, 2015).

20. *In the Matter of the Application of Duke Energy Ohio, Inc., for Approval of an Alternative Rate Plan Pursuant to Section 4929.05, Revised Code, for an Accelerated Service Line Replacement Programs*, Case No. 14-1622-GA-ALT (November 6, 2015).
21. *In the Matter of the Complaint of Jeffrey Pitzer, Complainant, v. Duke Energy Ohio, Inc. Respondent.*, Case No. 15-298-GE-CSS (December 30, 2015).
22. *In the Matter of the Application of Ohio Power Company to Initiate Phase 2 of Its gridSMART Project and to Establish the gridSMART Phase 2 Rider.*, Case No. 13-1939-EL-RDR (July 22, 2016).
23. *In the Matter of the Application of Columbia Gas of Ohio, Inc. for Approval of Demand Side Management Program for its Residential and Commercial Customers.*, Case No. 16-1309-GA-UNC (September 13, 2016).
24. *In the Matter of the Application of the Dayton Power and Light Company for Approval of Its Electric Security Plan*, Case No. 16-0395-EL-SSO (November 21, 2016). Supplemental Testimony, (March 29, 2017).
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**A report by the Staff of the
Public Utilities Commission of Ohio**

Ohio Utility Rate Survey

February 1, 2017

Ohio Utility Bills - Residential Customers

Comparison of Utility Bills

16 Major Ohio Cities

Rank	Cities	Combined Bill	Combined Bill	Electric *	Gas *	Telephone **
		02/01/16	02/01/17	02/01/17	02/01/17	02/01/17
1	Ashtabula	184.33	187.28	91.75	67.93	27.60
2	Cleveland	190.11	193.42	91.75	67.93	33.74
3	Akron	190.80	193.85	92.56	67.93	33.36
4	Youngstown	190.94	194.00	92.56	67.93	33.51
6	Marietta	186.02	199.70	98.26	67.93	33.51
5	Dayton	195.69	202.60	87.55	81.54	33.51
8	Canton	189.08	205.83	104.62	67.93	33.28
9	Lima	188.03	205.99	104.62	67.93	33.44
7	Lorain	204.54	209.96	92.56	88.59	28.81
10	Marion	208.04	213.10	92.56	88.59	31.95
12	Toledo	212.22	216.02	93.99	88.59	33.44
11	Mansfield	206.03	216.38	92.56	88.59	35.23
13	Columbus	203.60	220.44	98.26	88.59	33.59
14	Chillicothe	206.40	221.24	98.26	88.59	34.39
15	Zanesville	206.80	226.72	104.62	88.59	33.51
16	Cincinnati	225.59	231.48	92.93	99.10	39.45
Average		\$199.26	\$208.63	\$95.59	\$79.77	\$33.27

Based on 750 KWH, 10 MCF, and Flat Rate Telephone Service

* Based on utility rate schedules for non-shopping customers

** Price reflects incumbent local exchange carrier's flat rate, USF, SLC & 911 and local taxes for Residential
Combined Bill = Electric Standard Service Offer + Gas + Telephone

This document was created by the staff of the Rates and Analysis Department. It is for staff discussion purposes only and does not reflect the view of the Commission.

Ohio Utility Bills - Commercial Customers Comparison of Utility Bills 8 Major Ohio Cities

Rank	Cities	Combined Bill 02/01/16	Combined Bill 02/01/17	Electric * 02/01/17	Gas * 02/01/17	Telephone 02/01/17	
1	Dayton	29,568.25	26,276.81	25,914.54	320.52	41.75	‡
3	Columbus	28,938.35	28,020.23	27,546.97	431.41	41.85	‡
2	Cincinnati	30,371.40	28,167.82	27,496.32	604.48	67.02	†
6	Canton	30,905.52	31,104.12	30,827.95	234.71	41.46	‡
4	Akron	36,321.00	31,884.79	31,608.52	234.71	41.56	‡
5	Youngstown	36,321.19	31,884.98	31,608.52	234.71	41.75	‡
7	Toledo	39,346.73	34,001.59	33,528.52	431.41	41.66	‡
8	Cleveland	39,897.58	34,789.43	34,512.68	234.71	42.04	‡
Average		\$33,958.75	\$30,766.22	\$30,380.50	\$340.83	\$44.89	

Based on 300,000 KWH, 1,000 KWD, 46 MCF, and Business Rate Telephone Service

Ohio Utility Bills - Industrial Customers Comparison of Utility Bills 8 Major Ohio Cities

Rank	Cities	Combined Bill 02/01/16	Combined Bill 02/01/17	Electric * 02/01/17	Gas * 02/01/17	Telephone 02/01/17	
1	Columbus	402,381.44	427,513.19	424,904.35	2,566.99	41.85	‡
2	Cincinnati	482,228.97	443,205.53	440,577.62	2,560.89	67.02	†
3	Canton	425,255.58	472,743.93	470,875.63	1,826.84	41.46	‡
4	Dayton	552,477.87	497,473.63	495,196.29	2,235.59	41.75	‡
5	Toledo	600,261.21	528,914.99	526,306.34	2,566.99	41.66	‡
6	Akron	580,341.40	544,729.13	542,860.73	1,826.84	41.56	‡
7	Youngstown	580,341.59	544,729.32	542,860.73	1,826.84	41.75	‡
8	Cleveland	633,770.96	560,297.48	558,428.60	1,826.84	42.04	‡
Average		\$532,132.38	\$502,450.90	\$500,251.29	\$2,154.73	\$44.89	

Based on 6,000,000 KWH, 20,000 KWD, 350 MCF, and Business Rate Telephone Service

* Based on utility rate schedules for non-shopping customers

† Price reflects incumbent local exchange carrier's flat monthly rate, USF, SLC and 911.

‡ Price reflects incumbent local exchange carrier's monthly rate, USF, SLC and 911. Additional usage fees apply.
Combined Bill = Electric Standard Service Offer + Gas + Telephone

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Ohio Energy Bills - Residential Customers 8 Major Ohio Cities As of February 1, 2017

Cities	Electric Bill	Per KWH	Gas Bill	Per MCF	GCR Rate
Akron	92.56	0.12	67.93	6.79	3.341
Canton	104.62	0.14	67.93	6.79	3.341
Cincinnati	92.93	0.12	99.10	9.91	4.790
Cleveland	91.75	0.12	67.93	6.79	3.341
Columbus	98.26	0.13	88.59	8.86	4.821
Dayton	87.55	0.12	81.54	8.15	4.832
Toledo	93.99	0.13	88.59	8.86	4.821
Youngstown	92.56	0.12	67.93	6.79	3.341
Average	\$94.28	\$0.13	\$78.70	\$7.87	\$4.078

Based on Usage of 750KWH and 10 MCF

Ohio Energy Bills - Commercial Customers 8 Major Ohio Cities As of February 1, 2017

Cities	Electric Bill	Per KWH	Gas Bill	Per MCF	GCR Rate
Akron	31,608.52	0.11	234.71	5.10	3.341
Canton	30,827.95	0.10	234.71	5.10	3.341
Cincinnati	27,496.32	0.09	604.48	13.14	4.790
Cleveland	34,512.68	0.12	234.71	5.10	3.341
Columbus	27,546.97	0.09	431.41	9.38	4.821
Dayton	25,914.54	0.09	320.52	6.97	4.832
Toledo	33,528.52	0.11	431.41	9.38	4.821
Youngstown	31,608.52	0.11	234.71	5.10	3.341
Average	\$30,380.50	\$0.10	\$340.83	\$7.41	\$4.078

Based on Usage of 300,000 KWH, 1,000 KWD and 46MCF

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Ohio Energy Bills - Industrial Customers 8 Major Ohio Cities As of February 1, 2017

Cities	Electric Bill	Per KWH	Gas Bill	Per MCF	GCR Rate
Akron	542,860.73	0.09	1,826.84	5.22	3.341
Canton	470,875.63	0.08	1,826.84	5.22	3.341
Cincinnati	440,577.62	0.07	2,560.89	7.32	4.790
Cleveland	558,428.60	0.09	1,826.84	5.22	3.341
Columbus	424,904.35	0.07	2,566.99	7.33	4.821
Dayton	495,196.29	0.08	2,235.59	6.39	4.832
Toledo	526,306.34	0.09	2,566.99	7.33	4.821
Youngstown	542,860.73	0.09	1,826.84	5.22	3.341
Average	\$500,251.29	\$0.08	\$2,154.73	\$6.16	\$4.078

Based on Usage of 6,000,000KWH, 20,000 KWD and 350 MCF

Cities	Electric	Gas	Telephone
Akron	Ohio Edison	Dominion	AT&T Ohio
Ashtabula	Cleveland Electric Illuminating	Dominion	Western Reserve
Canton	Ohio Power	Dominion	AT&T Ohio
Chillicothe	Columbus Southern Power	Columbia Gas	Horizon Chillicothe
Cincinnati	Duke Energy	Duke Energy	Cincinnati Bell
Cleveland	Cleveland Electric Illuminating	Dominion	AT&T Ohio
Columbus	Columbus Southern Power	Columbia Gas	AT&T Ohio
Dayton	Dayton Power & Light	Vectren	AT&T Ohio
Lima	Ohio Power	Dominion	CenturyLink
Lorain	Ohio Edison	Columbia Gas	CenturyLink
Mansfield	Ohio Edison	Columbia Gas	CenturyLink
Marietta	Columbus Southern Power	Dominion	AT&T Ohio
Marion	Ohio Edison	Columbia Gas	Frontier
Toledo	Toledo Edison	Columbia Gas	AT&T Ohio
Youngstown	Ohio Edison	Dominion	AT&T Ohio
Zanesville	Ohio Power	Columbia Gas	AT&T Ohio

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The Public Utilities Commission of Ohio
Asim Z. Haque, Chairman

180 E. Broad Street, Columbus, Ohio 43215-3793
(800) 686-PUCO (7826)

An Equal Opportunity Employer and Service Provider

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Annual Report of)
Of Service Disconnections for Nonpayment) Case No. 16-1224- GE-UNC
Required by 4933.123 Ohio Revised Code)

**OHIO POWER COMPANY'S
NOTICE OF FILING SERVICE DISCONNECTION FOR NONPAYMENT REPORT**

Ohio Power Company hereby gives notice of filing the attached Service Disconnection for Nonpayment Reports, in compliance with the Commission's Entry in this matter dated June 1, 2016.

Respectfully submitted,

//s/ Steven T. Nourse

Steven T. Nourse

American Electric Power Service Corporation

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Counsel for Ohio Power Company

Ohio Power Company
R.C. 4933-123 Service Disconnections for Nonpayment Report

For the 12-month period ending May 31:

(a) Total number of service disconnections for nonpayment and the total dollar amount of unpaid bills represented by such disconnections

Ohio Power		
	Service Disconnection	Dollar Amount Unpaid Bills
June, 2015	11,991	\$5,154,602.18
July, 2015	10,338	\$4,274,870.08
August, 2015	11,046	\$4,623,085.20
September, 2015	12,372	\$5,186,173.99
October, 2015	14,647	\$6,459,447.94
November, 2015	13,034	\$6,793,662.44
December, 2015	11,329	\$5,926,617.37
January, 2016	4,840	\$2,238,186.87
February, 2016	7,494	\$3,712,442.02
March, 2016	12,719	\$7,745,908.06
April, 2016	12,922	\$7,944,649.60
May, 2016	13,140	\$7,730,646.32
Total	135,872	\$67,790,292.07

(b) Total number of final notices of actual disconnection issued for service disconnections for nonpayment and the total dollar amount of unpaid bills represented by such notices

Ohio Power		
	Final Notice of Disconnection	Dollar Amount for Notices
June, 2015	178,131	\$46,129,200.24
July, 2015	185,860	\$47,332,957.36
August, 2015	189,091	\$50,766,160.75
September, 2015	192,447	\$53,514,165.64
October, 2015	198,973	\$67,653,380.00
November, 2015	159,611	\$53,130,607.46
December, 2015	167,290	\$47,453,133.09
January, 2016	166,139	\$46,882,101.38
February, 2016	177,692	\$59,904,515.01
March, 2016	177,039	\$64,168,362.44
April, 2016	164,705	\$55,856,732.07
May, 2016	164,488	\$51,180,363.02
Total	2,121,466	643,971,678.46

(c) Total number of residential customer accounts in arrears by more than 60 days and the total dollar amount of such arrearages

Ohio Power		
	Arrears > 60 Days	Dollar Amount Presented
June, 2015	118,645	\$23,185,220
July, 2015	118,734	\$22,494,713
August, 2015	122,166	\$24,533,735
September, 2015	126,859	\$26,051,276
October, 2015	127,852	\$26,720,970
November, 2015	128,498	\$33,736,964
December, 2015	112,602	\$28,530,656
January, 2016	107,307	\$24,969,573
February, 2016	108,037	\$27,961,608
March, 2016	105,342	\$32,321,080
April, 2016	107,781	\$30,826,384
May, 2016	116,866	\$28,534,903
Total	1,400,689	\$329,867,082

(d) Total number of security deposits received from residential customers and the total dollar amount of such deposits

Ohio Power		
	# Security Deposits	Dollar Amount Represented
June, 2015	37,487	\$2,659,423
July, 2015	35,984	\$2,559,281
August, 2015	37,891	\$2,931,505
September, 2015	31,998	\$2,425,304
October, 2015	31,428	\$2,431,252
November, 2015	29,814	\$2,222,266
December, 2015	30,048	\$2,144,805
January, 2016	27,442	\$1,908,077
February, 2016	28,373	\$2,043,330
March, 2016	27,663	\$2,022,897
April, 2016	25,449	\$1,854,818
May, 2016	26,359	\$1,949,677
Total	369,936	\$27,152,635

(e) Total number of service reconnections

Ohio Power	
	# Service Reconnections
June, 2015	9,009
July, 2015	7,883
August, 2015	8,467
September, 2015	9,590
October, 2015	12,463
November, 2015	11,140
December, 2015	9,599
January, 2016	4,025
February, 2016	5,880
March, 2016	9,902
April, 2016	10,553
May, 2016	10,558
Total	109,069

(f) Total number of residential customers

Ohio Power	
	# Residential Customers
June, 2015	1,285,769
July, 2015	1,273,849
August, 2015	1,273,544
September, 2015	1,275,071
October, 2015	1,272,872
November, 2015	1,272,015
December, 2015	1,279,671
January, 2016	1,271,019
February, 2016	1,277,236
March, 2016	1,290,898
April, 2016	1,278,491
May, 2016	1,276,279

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Notice of Filing Service Disconnections for Nonpayment Report was sent to the persons by first class mail, postage prepaid this 30th Day of June 2016.

//s/ Steven T. Nourse

Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, OH 43215

Public Utilities Commission of Ohio
Docketing Division
180 East Broad Street
Columbus, Ohio 43215-3793

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/30/2016 12:06:15 PM

in

Case No(s). 16-1224-GE-UNC

Summary: Report electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company



GUIDE TO EVIDENCE-BASED PREVENTION

State policy options to increase food security and access to healthy food

Food security and access to healthy food in Ohio

Food insecurity in Ohio

- In 2014, Ohio ranked **46th** for food insecurity in the U.S., with 45 states having a lower percent of households living without reliable, daily access to enough food.¹
- In 2014, **17 percent of Ohioans were living in food-insecure households**,² including nearly a quarter of children³ and more than 17 percent of seniors.⁴

Health outcomes

- Food insecurity is associated with increased **diabetes risk and poor diabetes control in adults**⁵ and **poor academic performance in children**.⁶
- Poor nutrition is a key factor in many of the leading causes of death in Ohio, including heart disease, stroke, diabetes and cancer.⁷

Healthcare costs

- Hunger costs Ohio an estimated **\$7 billion in healthcare, education and charity spending**⁸ – approximately \$600 for every Ohioan each year.⁹
- Preventing diabetes through lifestyle change, including improved nutrition, costs as little as \$440 per person per year.¹⁰
- Almost 15 percent of working-age adults enrolled in Medicaid in Ohio report having diabetes, well above the state rate of about 11 percent.¹¹ **Managing diabetes is estimated to cost Medicaid nearly \$4,000 per person per year in medical costs.**¹²

Evidence-based prevention strategies relevant to state policy

Increase participation in school breakfast programs ★

Ohio status

Fewer than half of eligible students in Ohio took advantage of free or reduced price school breakfasts in 2013-2014, resulting in \$68 million in unclaimed federal reimbursements.¹³

Policy options

- Support adoption of evidence-based practices to increase participation, such as offering breakfast in the classroom, "grab-and-go" options in more convenient locations or breakfast after first or second period.
- Provide free breakfast to all children in all schools.

Nutrition interventions in preschool and child care: Licensing standards

Because childcare settings play such an important role in establishing healthy habits for children, adding state licensing standards for healthy eating and active playtime can ensure all children have equitable access to healthy learning environments.

Ohio status

In 2014, Ohio's state licensing requirements for childcare facilities included only seven of the 47 components recommended to improve child nutrition by the National Resource Center for Health and Safety in Child Care and Early Education (NRC).¹⁴

Policy options

Continue to adopt licensing requirement recommendations from the NRC. (The Centers for Disease Control and Prevention [CDC] recommends states include at least 38 out of 47 recommendations.)

Evidence-based prevention strategies relevant to state policy (cont.)

Nutrition interventions in preschool and child care: Quality ratings

A state's childcare quality rating improvement system can incentivize childcare administrators to continue to improve their programs' health and safety.

Ohio status

Ohio's voluntary rating system, Step Up to Quality, does not include healthy eating standards.¹⁵

Policy options

- Adopt Step Up to Quality standards that require healthy eating policies, building upon existing resources:
- Award Step Up to Quality bonus points for completion of the [Ohio Healthy Program](#) professional development designation process.
- Award Step Up to Quality bonus points for compliance with 75 percent of the U.S. Department of Agriculture (USDA) [Child and Adult Care Food Program best practices](#).
- Consider Step Up to Quality recommendations proposed by the [Ohio Early Childhood Health Network](#).

Competitive pricing for healthy foods (Incentives, subsidies or price discounts for healthy foods and beverages and/or disincentives or price increases for unhealthy foods and beverages)

Nutrition incentives increase the value of Supplemental Nutrition Assistance Program (SNAP) dollars when spent on produce, increasing affordability and accessibility to healthy fruits and vegetables for low-income consumers.¹⁶

Ohio status

- Sixty-six of Ohio's 316 farmer's markets currently provide these incentives to SNAP customers.¹⁷ In 2015, participating markets saw \$140,000 in SNAP and incentive spending,¹⁸ increasing access to healthy foods and input to the local economy. This work is currently supported by local and federal funding.
- The incentive model can be expanded to all venues that accept SNAP benefits, including grocery stores, corner stores, community-supported agriculture programs and others.

State agencies and schools can use competitive pricing to decrease the cost of healthier options and increase the cost of less healthy options in food service venues and vending machines.¹⁹

Ohio status

- Ohio has no recommendations or guidelines related to foods and beverages sold on state government property or by food vendors contracting with state government.
- Ohio has no state guidelines for competitive pricing for healthy food in schools.

Policy options

- Fund a statewide program incentivizing the purchase of fruits and vegetables by SNAP consumers, similar to the [Market Match](#) program in California.
- Assist Ohio's SNAP processing vendors in providing free wireless electronic benefits transfer (EBT) equipment and service to all farmer's markets as part of their state contract to increase EBT access.
- Adopt healthy eating environment guidelines that include competitive pricing as a way to promote healthy eating in state agency cafeterias and other state-supported food venues.²⁰
- Develop and disseminate recommendations for schools to competitively price foods and beverages sold on school property.

Evidence-based prevention strategies relevant to state policy (cont.)

Diabetes Prevention Program (combined diet and physical activity promotion programs to prevent type 2 diabetes)

Ohio status

- Eighteen organizations have implemented the Diabetes Prevention Program (DPP) in Ohio, offering programs at more than 50 sites across the state.²¹
- In Ohio, only UnitedHealthcare currently reimburses for the cost of the DPP (for privately-insured only). Beginning in 2018, the DPP will also be covered as a Medicare preventive service.
- No state employees are covered for the program through state-provided healthcare benefits.²²

Policy options

- Launch a high-intensity effort to increase screening, referral and treatment of prediabetes by healthcare providers, with special emphasis on Medicaid enrollees and state employees.
- Encourage adoption of performance-based DPP reimbursement models by private health insurance.
- Establish a Medicaid-approved, performance-based reimbursement model for all Medicaid managed care plans to incentivize adoption.
- Incentivize program participation for patients through reduced out-of-pocket expenses, including waived co-pays for Medicaid enrollees.
- Ensure health plan coverage and wellness programming for state employees includes performance-based program reimbursement and participation incentives.
- Raise awareness among providers of prediabetes screening, identification and referral through dissemination of the [Prevent Diabetes STAT toolkit](#).

Stable housing (housing choice vouchers and rapid rehousing programs) ★

Ohio status

- More than half of renters in Ohio spend at least 30 percent of their household income on rent, and more than 25 percent spend at least 50 percent of their income on rent, leaving little left for food.²³
- Ohio currently has only one state-funded housing assistance program, serving low-income people who are homeless and disabled.²⁴

Policy options

Establish a statewide housing assistance program to provide rental assistance to apartment owners who lease units to extremely low-income households.

★=Likely to reduce health disparities (The Community Guide and/or What Works for Health have indicated that the strategy is likely to decrease disparities, including racial/ethnic, socioeconomic, geographic or other disparities, based upon the best available evidence.)

See [Evidence Inventory](#) publication for details and additional strategies

Our approach

To identify the strategies in this publication, HPIO and the Center for Public Health Practice (CPHP) at the Ohio State University developed an **Evidence Inventory** summarizing the following research reviews:

- What Works for Health (County Health Rankings and Roadmaps)
- Nutrition Evidence Library (USDA)
- The Guide to Community Preventive Services (CDC)
- U.S. Preventive Services Task Force Recommendations (Agency for Healthcare Research and Quality)

HPIO and CPHP selected strategies from the Evidence Inventory to include in this fact sheet that met the following criteria:

- Strong evidence for reducing food insecurity, improving access to healthy foods and reducing health disparities; or improving obesity, cardiovascular disease and diabetes outcomes through nutrition-based interventions
- Relevant to state policy and actionable by state legislators and/or state agency leaders
- Timely opportunity for our state given Ohio's current status and alignment with existing efforts, such as **Ohio's Plan to Prevent and Reduce Chronic Disease**

How can we improve health value in Ohio?

The **2014 HPIO Health Value Dashboard** identifies areas in which Ohio's performance is worse than most other states, including:

- Adult smoking
- Secondhand smoke exposure for children
- Adult diabetes
- Food insecurity
- Drug abuse (unmet need for illicit drug use treatment)
- Infant mortality



HPIO's **Guide to Evidence-Based Prevention** provides policymakers, community health improvement planners and philanthropy with the best-available sources of evidence for what works to address many of these challenges.

This fact sheet is part of a series of tools that comprise the Guide to Evidence-Based Prevention. HPIO will continue to add tools on specific health challenges throughout 2016. All publications can be found at:

<http://bit.ly/1VVBpkH>



Notes

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2. Ibid.
3. Data from the 2014 U.S. Census Bureau Current Population Survey, as compiled by Feeding America. Map the Meal Gap 2016. Accessed June 2016. <http://www.feedingamerica.org/hunger-in-america/our-research/map-the-meal-gap/2014/map-the-meal-gap-2014-exec-summ.pdf>.
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7. Ohio Department of Health. The Impact of Chronic Disease in Ohio: 2015. Ohio Department of Health, Bureau of Health Promotion, Chronic Disease Epidemiology and Evaluation Section, 2015. http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/Chronic%20Disease%20Plan/CD%20Burden%20Final_Webv2.pdf.
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12. Data from the Centers for Disease Control and Prevention Chronic Disease Cost Calculator version 2, prepared by Ohio Department of Health. Provided April 28, 2016.
13. Ohio School Breakfast Scorecard, SY 2013-2014. Columbus, OH: Children's Hunger Alliance, October 2015. [http://www.childrenshungeralliance.org/assets/childrenshungeralliance/files/\\$cms\\$/100/2296.pdf](http://www.childrenshungeralliance.org/assets/childrenshungeralliance/files/cms/100/2296.pdf).
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www.hprio.net



Map the Meal Gap 2016:

Child Food Insecurity in Ohio by County in 2014¹



County	Food insecurity rate (full population)	Population under 18 years old	Child food insecurity rate	Estimated number food insecure children (rounded)	Food insecure children likely income-eligible for federal nutrition assistance ²	Food insecure children likely NOT income-eligible for federal nutrition assistance ²
Adams	18.1%	7,052	30.0%	2,120	81%	19%
Allen	16.5%	24,879	24.8%	6,160	75%	25%
Ashland	14.2%	12,350	25.3%	3,130	77%	23%
Ashtabula	15.7%	23,103	26.1%	6,030	79%	21%
Athens	19.8%	10,087	27.0%	2,720	79%	21%
Auglaize	11.8%	11,333	20.1%	2,270	71%	29%
Belmont	14.8%	13,453	24.8%	3,330	67%	33%
Brown	14.3%	10,706	24.4%	2,610	77%	23%
Butler	14.0%	91,496	21.0%	19,230	61%	39%
Carroll	13.7%	6,276	25.4%	1,590	80%	20%
Champaign	13.2%	9,538	23.3%	2,220	68%	33%
Clark	16.3%	31,799	25.5%	8,100	79%	21%
Clermont	12.3%	49,657	20.5%	10,180	56%	44%
Clinton	16.3%	10,243	25.9%	2,660	75%	26%
Columbiana	15.0%	22,687	25.5%	5,780	75%	25%
Coshocton	15.5%	8,679	27.2%	2,360	84%	16%
Crawford	15.1%	9,741	25.9%	2,520	79%	21%
Cuyahoga	19.4%	279,120	23.0%	64,120	65%	35%
Darke	13.7%	12,918	23.3%	3,010	74%	26%
Defiance	12.3%	9,315	21.7%	2,020	76%	24%
Delaware	9.0%	51,343	15.0%	7,690	37%	64%
Erie	15.0%	16,397	22.5%	3,680	66%	34%
Fairfield	13.2%	37,409	20.4%	7,620	60%	40%
Fayette	16.1%	7,003	26.0%	1,820	76%	24%
Franklin	17.9%	284,677	21.8%	62,010	65%	35%
Fulton	11.6%	10,665	20.8%	2,220	68%	33%
Gallia	16.1%	7,333	26.6%	1,950	80%	21%
Geauga	10.3%	23,427	19.2%	4,490	64%	36%
Greene	14.5%	34,584	21.9%	7,590	62%	39%
Guernsey	15.4%	9,109	27.2%	2,480	80%	20%
Hamilton	18.6%	187,740	22.6%	42,350	63%	37%
Hancock	12.9%	17,276	22.2%	3,830	69%	31%
Hardin	15.1%	7,454	24.9%	1,860	73%	27%
Harrison	14.5%	3,334	26.2%	870	74%	26%
Henry	12.1%	6,884	21.8%	1,500	61%	39%
Highland	16.5%	10,653	27.8%	2,960	87%	13%
Hocking	14.6%	6,887	24.9%	1,710	76%	24%
Holmes	12.4%	14,488	22.2%	3,220	98%	2%
Huron	14.2%	15,046	24.2%	3,640	73%	27%
Jackson	17.7%	7,934	30.3%	2,400	86%	14%
Jefferson	16.7%	13,485	26.9%	3,630	78%	22%
Knox	14.0%	14,400	24.3%	3,500	77%	23%
Lake	12.4%	49,429	19.8%	9,780	59%	41%
Lawrence	15.1%	14,378	24.5%	3,520	79%	21%
Licking	13.3%	40,491	21.8%	8,820	66%	34%
Logan	13.9%	11,207	25.2%	2,820	69%	31%
Lorain	14.3%	70,449	22.5%	15,860	65%	35%
Lucas	18.3%	102,958	24.5%	25,240	72%	29%
Madison	13.5%	9,428	21.1%	1,990	61%	39%
Mahoning	16.9%	49,371	24.9%	12,290	74%	26%
Marion	15.9%	14,197	25.7%	3,650	72%	28%
Medina	11.1%	42,392	19.0%	8,060	51%	49%
Meigs	16.9%	5,246	29.5%	1,550	80%	20%
Mercer	11.1%	10,474	18.6%	1,950	58%	42%
Miami	13.7%	24,267	23.5%	5,690	69%	31%
Monroe	17.1%	3,140	31.1%	980	82%	18%
Montgomery	18.4%	121,161	24.5%	29,650	71%	29%
Morgan	16.2%	3,384	25.9%	880	75%	25%
Morrow	12.6%	8,878	23.2%	2,060	68%	32%
Muskingum	16.7%	20,263	27.0%	5,480	77%	23%
Noble	14.8%	1,992	26.6%	530	79%	21%
Ottawa	12.6%	8,275	22.5%	1,860	64%	36%

County	Food insecurity rate (full population)	Population under 18 years old	Child food insecurity rate	Estimated number food insecure children (rounded)	Food insecure children likely income-eligible for federal nutrition assistance ²	Food insecure children likely NOT income-eligible for federal nutrition assistance ²
Paulding	12.8%	4,750	22.5%	1,070	72%	28%
Perry	15.5%	8,907	26.5%	2,360	76%	25%
Pickaway	13.5%	12,779	22.7%	2,900	68%	32%
Pike	17.9%	6,977	29.8%	2,080	90%	10%
Portage	14.8%	32,249	23.2%	7,480	62%	38%
Preble	13.1%	9,920	23.3%	2,310	76%	24%
Putnam	9.6%	8,886	17.5%	1,560	49%	51%
Richland	16.2%	27,096	25.1%	6,810	77%	23%
Ross	16.1%	17,137	26.6%	4,550	80%	20%
Sandusky	12.9%	14,327	22.2%	3,180	78%	22%
Scioto	18.2%	17,485	28.7%	5,020	76%	24%
Seneca	14.2%	12,809	24.9%	3,190	69%	31%
Shelby	13.0%	13,071	21.1%	2,760	66%	34%
Stark	15.2%	83,741	23.6%	19,760	70%	30%
Summit	16.2%	119,945	22.2%	26,620	65%	35%
Trumbull	16.3%	44,676	26.7%	11,910	76%	24%
Tuscarawas	13.7%	21,535	23.6%	5,090	75%	25%
Union	11.2%	13,953	18.3%	2,550	55%	45%
Van Wert	12.7%	6,860	22.3%	1,530	77%	23%
Vinton	16.6%	3,162	30.7%	970	89%	12%
Warren	10.7%	57,865	17.2%	9,970	41%	59%
Washington	14.5%	12,465	23.9%	2,980	71%	29%
Wayne	13.0%	28,693	22.6%	6,480	83%	17%
Williams	13.3%	8,666	23.5%	2,040	87%	13%
Wood	13.7%	27,001	19.9%	5,370	59%	41%
Wyandot	12.5%	5,366	20.7%	1,110	66%	34%
State Total³	16.8%	2,635,640	23.8%	628,580	67%	33%

For additional data and maps by county, state, and congressional district, please visit www.feedingamerica.org/mapthegap.

Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. *Map the Meal Gap 2016: Food Insecurity and Child Food Insecurity Estimates at the County Level*. Feeding America, 2016. This research is generously supported by the Howard G. Buffett Foundation and The Nielsen Company.

¹Map the Meal Gap's child food insecurity rates are determined using data from the 2001-2014 Current Population Survey on children under 18 years old in food insecure households; data from the 2014 American Community Survey on median family incomes for households with children, child poverty rates, home ownership, and race and ethnic demographics among children; and 2014 data from the Bureau of Labor Statistics on unemployment rates.

²Numbers reflect percentage of food insecure children living in households with incomes above or below 185% of the federal poverty guideline for 2014. Eligibility for federal child nutrition programs is determined in part by income thresholds which can vary by state.

³Data in the state totals row do not reflect the sum of all counties in that state. The state totals are aggregated from the congressional districts data in that state.



Map the Meal Gap 2016:

Child Food Insecurity in Ohio by Congressional District in 2014¹



Congressional District	Food Insecurity rate (full population)	Child food Insecurity rate	Estimated number food Insecure children (rounded)	Food Insecure children likely Income-eligible for federal nutrition assistance ²	Food Insecure children likely NOT Income-eligible for federal nutrition assistance ²
1	19.3%	23.4%	41,810	59%	41%
2	15.9%	23.1%	38,350	66%	34%
3	23.0%	26.2%	48,690	71%	29%
4	15.4%	24.7%	39,440	68%	32%
5	13.0%	20.8%	34,730	66%	35%
6	15.9%	26.7%	40,850	75%	25%
7	14.4%	23.6%	39,810	71%	29%
8	15.0%	23.4%	40,350	67%	33%
9	19.4%	27.1%	43,650	76%	24%
10	19.0%	26.3%	41,880	67%	33%
11	29.8%	31.7%	49,800	68%	33%
12	12.4%	18.3%	34,030	51%	49%
13	18.0%	26.9%	38,800	75%	25%
14	12.2%	20.1%	32,110	61%	40%
15	14.3%	21.5%	34,720	60%	40%
16	11.6%	19.0%	29,560	58%	43%

For additional data and maps by county, state, and congressional district, please visit www.feedingamerica.org/mapthegap.

Gundersen, C., A. Dewey, A. Crumbaugh, M. Kato & E. Engelhard. *Map the Meal Gap 2016: Food Insecurity and Child Food Insecurity Estimates at the County Level*. Feeding America, 2016. This research is generously supported by the Howard G. Buffett Foundation and The Nielsen Company.

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²Numbers reflect percentage of food insecure children living in households with incomes above or below 185% of the federal poverty guideline for 2014. Eligibility for federal child nutrition programs is determined in part by income thresholds which can vary by state.

**OHIO POWER COMPANY'S RESPONSE TO
THE PUBLIC UTILITIES COMMISSION'S
DISCOVERY REQUEST
PUCO CASE 16-1852-EL-SSO et al.
FIRST SET**

INTERROGATORY

OCC-INT-1-247 Please identify any benefits for residential customers from funding the necessary capital investments in your distribution system through the DIR instead of through a distribution rate case.

RESPONSE

The Company cannot fund the necessary capital investment through a base distribution case but it could recover the funds spent on capital investment through a base distribution case. This would require a greater lag in updating the Company's infrastructure due to the timely process of a distribution case as well as additional costs based on rate case expenses. As with the existing DIR, the Company has proposed continuation of the DIR in order to allow a pro-active approach to upgrading the aging infrastructure. The benefit to customers associated with recovering capital investment funds through the DIR rather than through Base Distribution rates is for an improved or maintained distribution system that will serve greater reliability to customers in the pro-active manner in which the Company can respond by eliminating the regulatory lag.

Prepared by: Andrea E. Moore

**OHIO POWER COMPANY'S RESPONSE TO
THE PUBLIC UTILITIES COMMISSION'S
DISCOVERY REQUEST
PUCO CASE 16-1852-EL-SSO et al.
FIRST SET**

REQUEST FOR ADMISSION

OCC-RFA-1-067 Admit that the Company has performed no cost/benefit analysis related to the DIR program (for any year or period of years) at any point since 2012.

RESPONSE

The Company objects to this request as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. The Company also objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. Without waiving the foregoing objection(s) or any general objection the Company may have, the Company states as follows. The Company is completing the DIR work plan approved by the Commission, which approval did not impose such a condition or requirement.

Prepared by: Selwyn J. Dias
 Counsel

**OHIO POWER COMPANY'S RESPONSE TO
THE PUBLIC UTILITIES COMMISSION'S
DISCOVERY REQUEST
PUCO CASE 16-1852-EL-SSO et al.
FIRST SET**

REQUEST FOR ADMISSION

OCC-RFA-1-058 Admit that the Company has performed no studies or analyses to
"understand that the relationship between cost and reliability is not linear,
but exponential."

RESPONSE

The Company objects to the form of the question as this request is vague, overbroad and/or unduly burdensome. Without waiving the foregoing objections or any general objection the Company may have, the Company states as follows. The Company has not performed a separate or distinct study to understand that the relationship between cost and reliability is not linear, but exponential that supports the proposition being discussed. But the Company maintains that its position is just and reasonable and is adequately supported and explained in testimony. The relationship regarding cost and reliability is based on experience and review of data from internal Company software systems as well as on my experience and review of the Company trends.

Prepared by: Selwyn J. Dias
 Counsel



AEP Ohio 2015 Service Reliability Perception Survey

Summary of Results

February 2016

Prepared by:



1941 Bishop Lane, Suite 1017 • Louisville, KY 40218

Research Methodology

AEP Ohio contracted Thoroughbred Research Group to provide marketing research services for a year-long study regarding customer perceptions of service reliability. The study examined perceptions among both AEP Ohio residential and AEP Ohio commercial electric customers.

Each quarter, telephone interviews were conducted with a random selection of 100 residential customers and 100 commercial customers, for a total annual sample size of 400 interviews within each segment. The annual sample size for each segment provides results accurate to within plus or minus 4.9 percentage points at 95% confidence for that segment.

Sample Design

Segment	Sample Size	Data Collection Dates	Margin of Error at 95% Confidence
<u>Residential Customers</u>			
• Q1 2015	100	Jan 21 – Mar 27	
• Q2 2015	100	Apr 10 – Jun 23	
• Q3 2015	100	Jul 7 – Sep 21	
• Q4 2015	100	Oct 2 – Dec 17	
Total 2015	400		+/- 4.9 percentage points
<u>Commercial Customers</u>			
• Q1 2015	100	Jan 22 – Mar 29	
• Q2 2015	100	Apr 13 – Jun 22	
• Q3 2015	100	Jul 8 – Sep 21	
• Q4 2015	100	Oct 12 – Dec 17	
Total 2015	400		+/- 4.9 percentage points

All respondents were adults age 18 or older and confirmed they were completely responsible or shared responsibility for the utility decisions of the household or business.

Interviews averaged 15.0 minutes in length for residential customers, and 15.5 minutes for commercial customers.

The questionnaire for the study was developed by the staff of AEP Ohio and AEP's Performance Management Group with the oversight of the Public Utility Commission of Ohio (PUCO).

Residential Customer Results

Service Priority

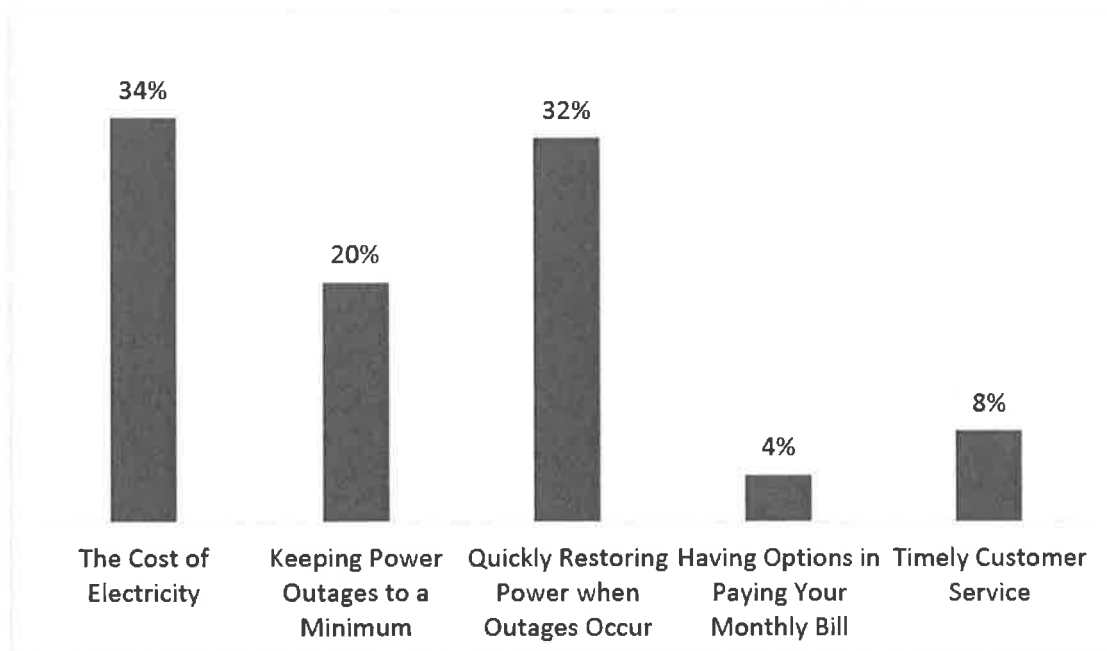
When asked which of five options is most important to them about their home electric service, residential customers gravitated to two issues, each mentioned by about one-third of residential customers:

- The cost of electricity (34%)
- Quickly restoring power when outages occur (mentioned by 32%)

A significant number of respondents (20%) selected “Keeping power outages to a minimum” as being most important to them.

In comparison, “Customer service and getting any questions and issues addressed in a timely manner” (8%) and “Having options in paying your monthly bills” (4%) were selected as most important by the fewest number of residential customers.

Electric Service Priority



AEP Ohio's Ability to Provide Uninterrupted Service

Using a scale ranging from zero (*extremely poor job*) to ten (*extremely good job*), residential customers were asked to rate AEP Ohio's ability to provide electricity without interruption.

Overall, customers gave an average (mean) rating of 8.52, with nearly six in ten (58%) giving a rating of either 9 or 10.

Ability to Provide Electricity Without Interruption

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	58%	58%	66%	56%
• Rated 6, 7 or 8	33%	34%	25%	38%
• Rated 5 or Lower	8%	8%	9%	5%
• Don't know/No answer	1%	-	-	2%
<i>Average Rating</i>	8.52	8.51	8.61	8.66

Changes in Expectations for Service Reliability

Although a large majority report no change (72%), more than twice as many residential customers say their expectations for uninterrupted service have increased over the past five years (18%) than say their expectations have decreased (7%).

Changes in Expectations for Service Reliability, Past Five Years

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
Decreased (TOTAL)	7%	7%	9%	4%
• Significantly	2%	2%	4%	2%
• Somewhat	4%	5%	5%	2%
Stayed the Same	72%	71%	71%	78%
Increased (TOTAL)	18%	19%	15%	16%
• Significantly	8%	10%	8%	4%
• Somewhat	10%	10%	8%	13%
Don't Know/No Answer	3%	3%	5%	2%

When asked to speculate on any changes in expectations over the *next five years*, results for residential customers are largely the same. About two-thirds (67%) say they do not feel their expectations will change at all. But while only 7% feel expectations will decrease, one in five (20%) feel their expectations for uninterrupted service will increase over the next five years.

Changes in Expectations for Service Reliability, Next Five Years

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
Decrease (TOTAL)	7%	9%	3%	5%
• Significantly	2%	3%	-	2%
• Somewhat	5%	5%	3%	3%
Stay the Same	67%	63%	75%	71%
Increase (TOTAL)	20%	25%	15%	17%
• Significantly	5%	5%	5%	4%
• Somewhat	15%	19%	10%	13%
Don't Know/No Answer	6%	4%	8%	7%

Residential customers were asked to rate AEP Ohio's performance in providing reliable electric service compared to their expectations. Customers used a scale that ranged from zero (*fell short of expectations*) to ten (*exceeded expectations*).

Residential customers gave an average rating of 7.32. About one third (33%) gave a high rating of 9 or 10, indicating their reliability expectations have been exceeded in this regard. About one in four (25%) gave a rating of 5 or less, indicating performance fell short of their expectations.

AEP Ohio Service Reliability Compared to Expectations

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	33%	30%	39%	32%
• Rated 6, 7 or 8	39%	45%	33%	42%
• Rated 5 or Lower	25%	24%	23%	26%
• Don't know/No answer	3%	1%	5%	-
<i>Average Rating</i>	7.32	7.28	7.55	7.34

Total Past 12 Month Outages

Counting both momentary (less than five minutes) and extended (five minutes or longer) power outages, residential customers reported experiencing an average of 3.82 outages during the past 12 months. This includes the 19% who say they have not had any interruptions in electric service at all during the past 12 months.

Among those experiencing at least one power interruption, the average duration of the longest outages was reported as 13.6 hours. While 25% say the longest outage lasted less than one hour, 15% report having lost power for 24 hours or longer during the past 12 months.

Past 12-Month Outages

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Number of Outages in the Past 12 Months (Momentary and Extended)</u>				
• None	19%	19%	22%	17%
• One or Two	37%	37%	32%	39%
• Three or Four	22%	20%	25%	23%
• Five or More	19%	22%	19%	19%
• Don't know/No answer	3%	2%	2%	2%
<i>Average (Including "None")</i>	3.82	4.40	3.21	3.48
<u>Duration of Longest Outage</u>				
Less than 1 hour	25%	32%	25%	23%
One to less than 2 hours	10%	13%	4%	10%
Two to less than 4 hours	22%	18%	26%	22%
Four to less than 8 hours	18%	15%	23%	20%
Eight to less than 24 hours	10%	6%	14%	8%
24 hours or longer	15%	17%	9%	16%
<i>Average (Excluding "No Outages")</i>	13.6 hrs.	15.6 hrs.	10.7 hrs.	13.9 hrs.

Extended Outages

When discussing “extended” interruptions in electric service, customers were asked to think about only those outages in which they had complete loss of electric power for five minutes or longer.

On average, customers reported 1.86 extended interruptions of electric service during the past 12 months. This average includes the 20% who say they have not had any extended outages during this time.

Across all extended outages, customers estimated their power to have been off a total of 6.7 hours with the average extended outage lasting 4.5 hours in duration.

Extended Electric Outages

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Number Extended Outages in the Past 12 Months</u>				
• None	20%	27%	17%	15%
• One	34%	33%	38%	35%
• Two	18%	11%	12%	26%
• Three	8%	9%	8%	8%
• Four	6%	8%	12%	3%
• Five or More	9%	8%	12%	9%
• Don't know/No answer	4%	3%	2%	5%
<i>Average (Including “None”)</i>	1.86	1.71	2.19	1.81
<u>Total Duration of Outage</u>				
Less than 1 hour	21%	29%	23%	17%
One to less than 2 hours	15%	21%	9%	14%
Two to less than 4 hours	34%	29%	36%	34%
Four to less than 8 hours	17%	15%	23%	17%
Eight to less than 24 hours	4%	0%	9%	3%
24 hours or longer	9%	6%	0%	14%
<i>Average (Excluding “No Outages”)</i>	6.7 hrs.	4.5 hrs.	3.3 hrs.	7.2 hrs.

Extended Electric Outages (Continued)

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Duration of Average Extended Outage</u>				
Less than 1 hour	22%	19%	33%	21%
One to less than 2 hours	22%	22%	17%	19%
Two to less than 4 hours	26%	28%	29%	29%
Four to less than 8 hours	20%	14%	17%	24%
Eight to less than 24 hours	3%	0%	4%	2%
24 hours or longer	8%	17%	0%	5%
<i>Average</i>	4.5 hrs.	4.0 hrs.	2.3 hrs.	4.8 hrs.

Acceptable Duration of Outages

Residential customers say that for an extended outage caused by a severe storm, it would be acceptable for the power to be out for an average of 17.4 hours. However, nearly one in five (18%) say it would only be acceptable for the power to be interrupted for no more than one hour.

For outages that are not caused by storms, residential customers say an acceptable outage time is no longer than 4.0 hours on average and 39% say it would only be acceptable to have a power outage of less than one hour.

Acceptable Duration of Outages

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Acceptable Duration of Severe Storm-Related Outage</u>				
None	6%	5%	1%	10%
Less than 1 hour	12%	10%	9%	11%
One to less than 2 hours	15%	16%	15%	13%
Two to less than 4 hours	23%	25%	24%	21%
Four to less than 8 hours	15%	11%	28%	11%
Eight to less than 24 hours	9%	9%	7%	10%
24 hours or longer	22%	24%	16%	23%
<i>Average (Including "None")</i>	17.4 hrs.	14.0 hrs.	12.9 hrs.	20.8 hrs.
<u>Acceptable Duration of Non-Storm Related Outage</u>				
None	13%	13%	9%	14%
Less than 1 hour	26%	26%	20%	26%
One to less than 2 hours	39%	40%	45%	40%
Two to less than 4 hours	8%	5%	14%	9%
Four to less than 8 hours	3%	2%	4%	2%
Eight to less than 24 hours	4%	4%	5%	2%
24 hours or longer	8%	9%	3%	9%
<i>Average (Including "None")</i>	4.0 hrs.	4.5 hrs.	2.9 hrs.	4.6 hrs.

Recall of Recorded Message for Most Recent Outage

Among those experiencing an interruption in service, 11% recall having received a recorded message from AEP Ohio regarding their most recent outage. Of those that did recall a recorded outage message, 80% found the information helpful with 62% describing the message as "very helpful".

Recall/Helpfulness of Recorded Message

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Recall Phone Message from AEP Ohio?</u>				
• Yes	14%	12%	23%	13%
• No	82%	86%	73%	81%
• Not sure/No answer	4%	2%	3%	7%
<u>Helpfulness of Phone Message</u>				
• Very Helpful	62%	46%	57%	77%
• Somewhat Helpful	18%	15%	21%	15%
<i>Sub-total</i>	80%	62%	79%	92%

Relative Importance of Outage Issues

Residential customers were asked to rate the importance of three different aspects of service reliability using a scale ranging from zero (*least important*) to ten (*most important*). Service interruptions of five minutes or longer were considered sustained while shorter interruptions were classified as momentary interruptions.

- The length of sustained interruptions rated highest with an average importance rating of 7.79.
- The number of sustained interruptions received an average importance rating of 7.47 among residential customers.
- The number of momentary interruptions was rated lowest, with an average importance rating of 5.94.

Importance of Outage Issues

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Number of Sustained Interruptions</u>				
• Rated 9 or 10	41%	35%	52%	45%
• Rated 6, 7 or 8	28%	35%	25%	25%
• Rated 5 or Lower	25%	25%	18%	24%
• Don't know/No answer	6%	5%	5%	6%
<i>Average Rating</i>	7.47	7.41	8.12	7.54
<u>Length of Sustained Interruptions</u>				
• Rated 9 or 10	47%	43%	58%	47%
• Rated 6, 7 or 8	27%	27%	24%	29%
• Rated 5 or Lower	21%	26%	14%	20%
• Don't know/No answer	5%	4%	4%	4%
<i>Average Rating</i>	7.79	7.58	8.22	7.89
<u>Number of Momentary Interruptions</u>				
• Rated 9 or 10	24%	21%	28%	25%
• Rated 6, 7 or 8	23%	28%	20%	20%
• Rated 5 or Lower	47%	45%	43%	47%
• Don't know/No answer	6%	6%	9%	7%
<i>Average Rating</i>	5.94	5.90	6.14	5.92

Perception of Ability to Restore Power

Customers rated the performance of AEP Ohio in restoring power, using a scale from zero (*extremely poor job*) to ten (*extremely good job*). On average, residential customers gave AEP Ohio an average rating of 8.05 in terms of their general ability to restore power with almost half (45%) assigning top ratings of nine or ten.

General Ability to Restore Power

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	45%	46%	49%	45%
• Rated 6, 7 or 8	40%	37%	37%	41%
• Rated 5 or Lower	13%	14%	11%	13%
• Don't know/No answer	2%	4%	3%	1%
<i>Average Rating</i>	8.05	7.99	8.21	8.06

Performance Expectations for Power Restoration

On average, residential customers expect AEP Ohio to be able to identify the cause of a sustained power outage within 1.2 hours after it begins. They indicated that the company should be able to give customers an estimate of the amount of time necessary to restore power within 1.7 hours of the start of a sustained interruption.

Power Restoration Expectations: Identifying Cause and Estimating Restoration Time

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Expected Time to Know Cause of Outage</u>				
• Less than 15 minutes	10%	10%	8%	13%
• 15 to 29 minutes	9%	9%	10%	6%
• 30 to 59 minutes	19%	17%	24%	19%
• One hour to less than two hours	36%	34%	33%	38%
• Two hours or longer	21%	25%	20%	19%
• Don't know/No answer	5%	4%	5%	6%
<i>Average</i>	1.2 hrs.	1.3 hrs.	1.0 hrs.	1.2 hrs.
<u>Expected Time to Have Estimate of Restoration Time</u>				
• Less than 15 minutes	6%	7%	4%	7%
• 15 to 29 minutes	7%	7%	6%	5%
• 30 to 59 minutes	17%	14%	23%	17%
• One hour to less than two hours	33%	33%	32%	37%
• Two hours or longer	34%	34%	35%	32%
• Don't know/No answer	4%	4%	0%	2%
<i>Average</i>	1.7 hrs.	1.9 hrs.	1.5 hrs.	1.7 hrs.

For power outages caused by a severe storm, residential customers feel AEP Ohio should be able to restore power within an average of 3.1 hours.

For non-storm related outages, residential customers expect power to be restored within 1.6 hours.

Power Restoration Expectations: Restoration Time for Severe Storm and Non-Storm Outages

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>For Outages Caused by Severe Storm</u>				
• Within 30 minutes	8%	6%	6%	10%
• 30 to 59 minutes	13%	12%	15%	10%
• One to less than two hours	24%	25%	25%	21%
• Two to less than four hours	19%	16%	22%	22%
• Four hours or longer	24%	25%	20%	27%
• Don't know/No answer	14%	16%	11%	9%
Average	3.1 hrs.	3.6 hrs.	2.7 hrs.	3.1 hrs.
<u>For Non-Storm Outages</u>				
• Within 30 minutes	18%	19%	16%	14%
• 30 to 59 minutes	17%	11%	19%	22%
• One to less than two hours	31%	37%	28%	30%
• Two to less than four hours	16%	10%	25%	19%
• Four hours or longer	10%	12%	8%	8%
• Don't know/No answer	9%	10%	4%	7%
Average	1.6 hrs.	1.7 hrs.	1.7 hrs.	1.5 hrs.

Service Reliability Performance Ratings

Residential customers rated AEP Ohio's performance on six aspects of performance relative to service reliability. Performance was rated on a scale ranging from zero (*extremely poor job*) to ten (*extremely good job*).

- The overall quality of power delivered was rated highest, with an average score of 8.52.
- Keeping the number of momentary outages to a minimum received an average rating of 8.10.
- Keeping the number of longer outages to a minimum received an average performance rating of 8.08.
- Keeping the duration of longer outages to a minimum received an average rating of 7.99.
- Making sure that all power lines and poles are well-maintained received a rating of 7.93.
- Trimming trees to help prevent power outages received an average performance rating of 7.21.

AEP Ohio Performance Ratings

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Overall Quality of Power</u>				
• Rated 9 or 10	61%	56%	78%	61%
• Rated 6, 7 or 8	28%	29%	13%	30%
• Rated 5 or Lower	10%	13%	8%	7%
• Don't know/No answer	2%	1%	1%	2%
<i>Average Rating</i>	8.52	8.25	8.99	8.64
<u>Keeping the number of momentary outages to a minimum</u>				
• Rated 9 or 10	48%	47%	53%	45%
• Rated 6, 7 or 8	37%	38%	35%	36%
• Rated 5 or Lower	14%	14%	10%	17%
• Don't know/No answer	1%	1%	1%	2%
<i>Average Rating</i>	8.10	7.96	8.42	7.98

AEP Ohio Performance Ratings (Continued)

	All Residential Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Keeping the number of longer outages to a minimum</u>				
• Rated 9 or 10	46%	49%	54%	41%
• Rated 6, 7 or 8	39%	35%	32%	46%
• Rated 5 or Lower	14%	16%	13%	12%
• Don't know/No answer	2%	1%	1%	2%
<i>Average Rating</i>	8.08	8.04	8.27	8.04
<u>Keeping the duration of longer outages to a minimum</u>				
• Rated 9 or 10	45%	47%	48%	45%
• Rated 6, 7 or 8	38%	36%	38%	39%
• Rated 5 or Lower	15%	16%	13%	14%
• Don't know/No answer	2%	1%	1%	2%
<i>Average Rating</i>	7.99	7.92	8.18	8.04
<u>Making sure that all power lines and poles are well-maintained</u>				
• Rated 9 or 10	49%	45%	58%	46%
• Rated 6, 7 or 8	30%	36%	24%	28%
• Rated 5 or Lower	18%	13%	16%	23%
• Don't know/No answer	4%	7%	1%	4%
<i>Average Rating</i>	7.93	8.04	8.14	7.58
<u>Trimming trees to help prevent power outages</u>				
• Rated 9 or 10	37%	31%	39%	41%
• Rated 6, 7 or 8	29%	35%	27%	24%
• Rated 5 or Lower	27%	28%	27%	28%
• Don't know/No answer	7%	6%	8%	8%
<i>Average Rating</i>	7.21	6.98	7.32	7.27

Overall Satisfaction

Lastly, residential customers rated their overall satisfaction with AEP Ohio as their home's electric company. Satisfaction was rated on a scale from zero (*extremely dissatisfied*) to ten (*extremely satisfied*).

Overall satisfaction was rated an average of 8.23 among residential customers with slightly over half (55%) rating it as either a nine or ten.

Overall Satisfaction with AEP Ohio

	All Residential Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Overall Satisfaction</u>				
• Rated 9 or 10	55%	43%	61%	64%
• Rated 6, 7 or 8	32%	37%	28%	29%
• Rated 5 or Lower	12%	19%	10%	6%
• Don't know/No answer	1%	1%	1%	1%
<i>Average Rating</i>	8.23	7.62	8.42	8.64

|

Commercial Customer Results

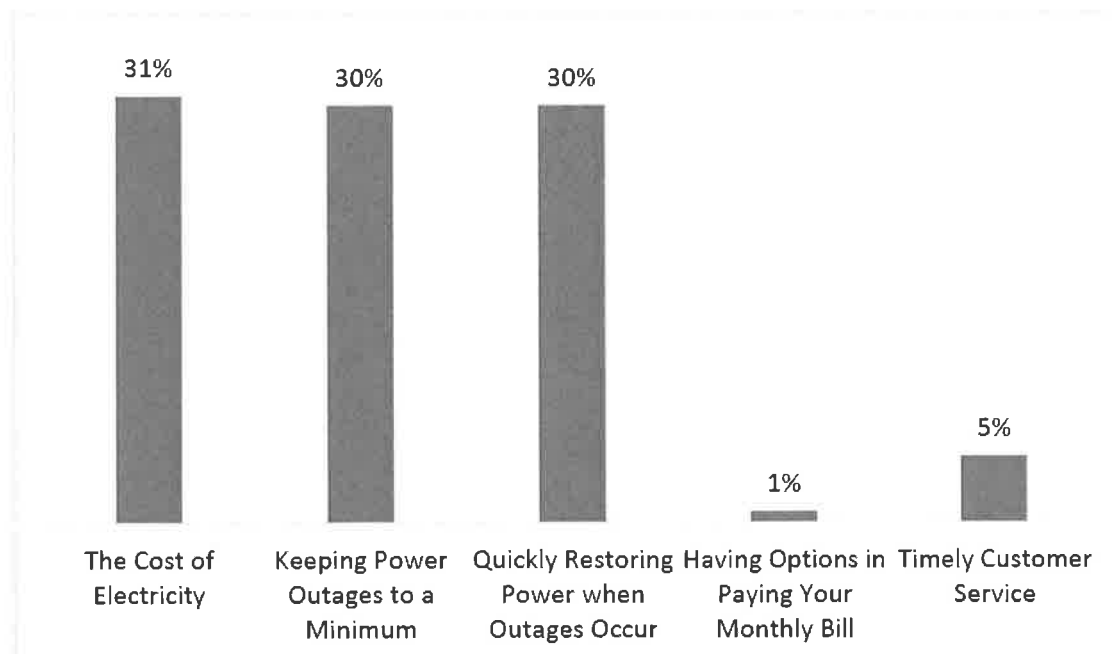
Service Priority

When asked which of five options is most important to them about their commercial electric service, three issues were mentioned with about equal frequency by commercial customers:

- The cost of electricity (mentioned by 31% of commercial customers)
- Keeping power outages to a minimum (30%)
- Quickly restoring power when outages occur (30%)

In comparison, “Customer service and getting any questions and issues addressed in a timely manner” (5%) and “Having options in paying your monthly bills” (1%) were selected as most important by small number of commercial customers.

Electric Service Priority



AEP Ohio's Ability to Provide Uninterrupted Service

Using a scale ranging from zero (*extremely poor job*) to ten (*extremely good job*), commercial customer were asked to rate AEP Ohio's ability to provide electricity without interruption.

Overall, customers gave an average rating of 8.52, with nearly six in ten (62%) giving a rating of 9 or 10.

Ability to Provide Electricity Without Interruption

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	62%	60%	67%	62%
• Rated 6, 7 or 8	30%	34%	25%	31%
• Rated 5 or Lower	9%	6%	8%	7%
• Don't know/No answer	-	-	-	-
<i>Average Rating</i>	8.52	8.56	8.62	8.64

Changes in Expectations for Service Reliability

Although a large majority report no change (78%), more than three times as many commercial customers say their expectations for uninterrupted service have increased over the past five years (16%) than say their expectations have decreased (5%).

Changes in Expectations for Service Reliability, Past Five Years

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
Decreased (TOTAL)	5%	6%	6%	2%
• Significantly	2%	2%	3%	-
• Somewhat	2%	3%	2%	2%
Stayed the Same	78%	77%	73%	83%
Increased (TOTAL)	16%	15%	19%	16%
• Significantly	6%	8%	6%	4%
• Somewhat	10%	6%	13%	12%
Don't Know/No Answer	2%	3%	2%	-

When asked to speculate on any changes in expectations over the *next five years*, results for commercial customers are largely the same. About three-quarters say they do not feel their expectations will change at all. But while only 5% feel expectations will decrease, nearly one in five feel their expectations for uninterrupted service will increase over the next five years.

Changes in Expectations for Service Reliability, Next Five Years

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
Decrease (TOTAL)	5%	6%	4%	2%
• Significantly	2%	2%	2%	0%
• Somewhat	3%	5%	2%	2%
Stay the Same	75%	77%	73%	78%
Increase (TOTAL)	19%	16%	21%	20%
• Significantly	3%	3%	3%	3%
• Somewhat	15%	13%	17%	17%
Don't Know/No Answer	2%	1%	2%	1%

Commercial customers were asked to rate AEP Ohio's performance in providing reliable electric service compared to their expectations. Customers used a scale that ranged from zero (*fell short of expectations*) to ten (*exceeded expectations*).

Commercial customers gave an average (mean) rating of 7.16. About half (51%) gave a high rating of 9 or 10, indicating their expectations have been exceeded in this regard. Slightly more than one in four (27%) gave a rating of 5 or less.

AEP Ohio Service Reliability Compared to Expectations

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	51%	45%	55%	55%
• Rated 6, 7 or 8	19%	23%	18%	17%
• Rated 5 or Lower	27%	27%	24%	27%
• Don't know/No answer	3%	4%	2%	1%
<i>Average Rating</i>	7.16	7.01	7.31	7.39

Total Past 12 Month Outages

Counting both momentary (less than five minutes) and extended (five minutes or longer) power outages, commercial customers reported experiencing an average of 3.7 outages during the past 12 months. This includes the 18% who say they have not had any interruptions in electric service at all during the past 12 months.

Among those experiencing at least one power interruption, the average duration of the longest outages was reported as 9.0 hours.

Past 12-Month Outages

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Number of Outages in the Past 12 Months</u>				
• None	18%	24%	16%	18%
• One or Two	35%	35%	38%	35%
• Three or Four	22%	19%	21%	22%
• Five or More	20%	17%	25%	20%
• Don't know/No answer	5%	5%	1%	5
Average	3.7	3.4	4.8	3.0
<u>Duration of Longest Outage</u>				
Less than 1 hour	25%	22%	35%	21%
One to less than 2 hours	9%	13%	9%	5%
Two to less than 4 hours	37%	32%	29%	47%
Four to less than 8 hours	14%	15%	13%	14%
Eight to less than 24 hours	9%	11%	9%	7%
24 hours or longer	7%	7%	5%	6%
Average (Excluding "No Outages")	9.0 hrs.	8.6 hrs.	8.3 hrs.	7.2 hrs.

Extended Outages

When discussing “extended” interruptions in electric service, commercial customers were asked to think about only those outages in which they had complete loss of electric power for five minutes or longer.

On average, commercial customers reported 2.1 extended interruptions of electric service during the past 12 months. This average includes the 19% who say they have not had any extended outages during this time.

Across all extended outages, customers estimated their power to have been off a total of 6.0 hours with the average extended outage lasting 8.4 hours in duration.

Extended Electric Outages

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Number Extended Outages in the Past 12 Months (Momentary and Extended)</u>				
• None	19%	18%	23%	16%
• One	34%	33%	33%	34%
• Two	20%	25%	15%	21%
• Three	10%	7%	12%	10%
• Four	4%	2%	3%	5%
• Five or More	11%	13%	14%	11%
• Don't know/No answer	2%	2%	1%	2%
Average	2.1	2.8	2.0	2.0
<u>Duration of Outage</u>				
Less than 1 hour	20%	21%	28%	13%
One to less than 2 hours	21%	14%	25%	22%
Two to less than 4 hours	27%	29%	22%	25%
Four to less than 8 hours	20%	21%	16%	25%
Eight to less than 24 hours	8%	7%	6%	13%
24 hours or longer	5%	7%	3%	3%
Average (Excluding “No Outages”)	6.0 hrs.	6.8 hrs.	4.9 hrs.	5.1 hrs.

Extended Electric Outages (Continued)

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Duration of Average Extended Outage</u>				
Less than 1 hour	16%	23%	19%	7%
One to less than 2 hours	19%	18%	21%	22%
Two to less than 4 hours	29%	15%	21%	47%
Four to less than 8 hours	19%	31%	17%	11%
Eight to less than 24 hours	11%	8%	14%	9%
24 hours or longer	5%	5%	7%	4%
<i>Average</i>	8.4 hrs.	12.0 hrs.	9.8 hrs.	4.8 hrs.

Acceptable Duration of Outages

Commercial customers say that for an extended outage caused by a severe storm, it would be acceptable for the power to be out for an average of 14.0 hours. However, nearly one in five (19%) say it would only be acceptable for the power to be interrupted for no longer than one hour.

For outages that are not caused by storms, commercial customers say an acceptable outage time is no longer than 5.0 hours on average and 41% say it would only be acceptable to have a power outage of less than one hour.

Acceptable Duration of Outages

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Acceptable Duration of Severe Storm-Related Outage</u>				
None	8%	7%	7%	8%
Less than 1 hour	11%	10%	17%	7%
One to less than 2 hours	15%	16%	14%	14%
Two to less than 4 hours	26%	24%	29%	27%
Four to less than 8 hours	11%	10%	8%	18%
Eight to less than 24 hours	11%	13%	9%	11%
24 hours or longer	19%	21%	15%	19%
<i>Average (Including "None")</i>	14.0 hrs.	23.2 hrs.	7.8 hrs.	9.7 hrs.
<u>Acceptable Duration of Non-Storm Related Outage</u>				
None	13%	12%	10%	11%
Less than 1 hour	28%	21%	39%	25%
One to less than 2 hours	28%	24%	19%	28%
Two to less than 4 hours	23%	25%	22%	19%
Four to less than 8 hours	7%	8%	4%	10%
Eight to less than 24 hours	3%	5%	2%	4%
24 hours or longer	3%	4%	3%	3%
<i>Average (Including "None")</i>	5.0 hrs.	8.3 hrs.	2.4 hrs.	2.8 hrs.

Recall of Recorded Message for Most Recent Outage

Among those experiencing an interruption in service, 18% recall having received a recorded message from AEP Ohio regarding their most recent outage. Of those that did recall a recorded outage message slightly more than half (56%) found the information helpful with 38% describing the message as “very helpful”.

Recall/Helpfulness of Recorded Message

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Recall Phone Message from AEP Ohio?</u>				
Yes	18%	14%	23%	18%
No	77%	78%	74%	78%
Not sure/No answer	5%	8%	3%	4%
<u>Helpfulness of Phone Message</u>				
Very Helpful	38%	25%	39%	50%
Somewhat Helpful	18%	25%	22%	11%
<i>Sub-total</i>	56%	50%	61%	61%

Relative Importance of Outage Issues

Commercial customers were asked to rate the importance of three different aspects of service reliability, using a scale ranging from zero (*least important*) to ten (*most important*). Service interruptions of five minutes or longer were considered sustained while shorter interruptions were classified as momentary interruptions.

- The length of sustained interruptions rated highest, with an average importance rating of 8.2.
- The number of sustained interruptions received an average importance rating of 7.8 among commercial customers.
- The number of momentary interruptions was rated lowest, with an average importance rating of 6.6.

Importance of Outage Issues

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Length of Sustained Interruptions</u>				
• Rated 9 or 10	55%	48%	60%	59%
• Rated 6, 7 or 8	24%	23%	27%	24%
• Rated 5 or Lower	18%	27%	10%	16%
• Don't know/No answer	3%	3%	3%	2%
<i>Average Rating</i>	8.2	7.8	9	8.3
<u>Number of Sustained Interruptions</u>				
• Rated 9 or 10	47%	38%	51%	50%
• Rated 6, 7 or 8	28%	29%	34%	25%
• Rated 5 or Lower	22%	31%	12%	22%
• Don't know/No answer	3%	2%	3%	3%
<i>Average Rating</i>	7.8	7.3	8.3	7.9
<u>Number of Momentary Interruptions</u>				
• Rated 9 or 10	26%	23%	31%	21%
• Rated 6, 7 or 8	35%	35%	37%	34%
• Rated 5 or Lower	38%	40%	29%	45%
• Don't know/No answer	1%	2%	3%	-
<i>Average Rating</i>	6.6	6.6	7.0	6.1

Perception of Ability to Restore Power

Customers rated the performance of AEP Ohio in restoring power, using a scale from zero (*extremely poor job*) to ten (*extremely good job*). On average, commercial customers gave AEP Ohio an average rating of 8.23 in terms of their general ability to restore power with almost half (46%) assigning top ratings of nine or ten.

General Ability to Restore Power

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
• Rated 9 or 10	46%	41%	58%	52%
• Rated 6, 7 or 8	44%	50%	43%	39%
• Rated 5 or Lower	10%	8%	7%	9%
• Don't know/No answer	1%	1%	1%	-
<i>Average Rating</i>	8.23	8.19	8.37	8.41

Performance Expectations for Power Restoration

On average, commercial customers expect AEP Ohio to be able to identify the cause of a sustained power outage about within an hour after it begins. They indicated the company should be able to give customers an estimate of the amount of time necessary to restore power within 90 minutes of the start of a sustained interruption.

Power Restoration Expectations: Identifying Cause and Estimating Restoration Time

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Expected Time to Know Cause of Outage</u>				
• Less than 15 minutes	12%	9%	14%	11%
• 15 to 29 minutes	9%	7%	14%	7%
• 30 to 59 minutes	24%	26%	21%	30%
• One hour to less than two hours	37%	35%	39%	40%
• Two hours or longer	14%	17%	10%	10%
• Don't know/No answer	4%	6%	2%	2%
<i>Average</i>	61 mins	62 mins	68 mins	51 mins
<u>Expected Time to Have Estimate of Restoration Time</u>				
• Less than 15 minutes	5%	5%	6%	4%
• 15 to 29 minutes	6%	3%	11%	7%
• 30 to 59 minutes	20%	19%	25%	19%
• One hour to less than two hours	39%	40%	36%	42%
• Two hours or longer	27%	31%	18%	26%
• Don't know/No answer	3%	2%	4%	2%
<i>Average</i>	90 mins	96 mins	75 mins	83 mins

For power outages caused by a severe storm, commercial customers feel AEP Ohio should be able to restore power within an average of 3.4 hours.

For non-storm related outages, commercial customers expect power to be restored within about 90 minutes.

Power Restoration Expectations: Restoration Time for Severe Storm and Non-Storm Outages

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>For Outages Caused by Severe Storms</u>				
• Within 30 minutes	4%	2%	6%	5%
• 30 to 59 minutes	12%	6%	16%	12%
• One to less than two hours	26%	30%	27%	22%
• Two to less than four hours	26%	28%	24%	26%
• Four hours or longer	21%	21%	13%	26%
• Don't know/No answer	12%	13%	14%	8%
<i>Average</i>	3.4 hrs.	3.3 hrs.	2.9 hrs.	3.9 hrs.
<u>For Non-Storm Outages</u>				
• Within 30 minutes	13%	11%	19%	9%
• 30 to 59 minutes	23%	20%	26%	26%
• One to less than two hours	32%	35%	27%	36%
• Two to less than four hours	15%	15%	12%	14%
• Four hours or longer	8%	10%	5%	9%
• Don't know/No answer	9%	8%	11%	7%
<i>Average</i>	92 mins	95 mins	80 mins	90 mins

Service Reliability Performance Ratings

Commercial customers rated AEP Ohio's performance on six aspects of performance relative to service reliability. Performance was rated on a scale ranging from zero (*extremely poor job*) to ten (*extremely good job*).

- The overall quality of power delivered was rated highest, with an average score of 8.40.
- Keeping the duration of longer outages to a minimum received an average rating of 8.16.
- Keeping the number of longer outages to a minimum received an average performance rating of 8.14.
- Keeping the number of momentary outages to a minimum received an average rating of 8.13.
- Making sure that all power lines and poles are well-maintained received a rating of 7.91.
- Trimming trees to help prevent power outages received an average performance rating of 7.61.

AEP Ohio Performance Ratings

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Power Quality</u>				
• Rated 9 or 10	56%	45%	68%	58%
• Rated 6, 7 or 8	34%	45%	26%	35%
• Rated 5 or Lower	9%	9%	7%	7%
• Don't know/No answer	1%	1%	-	-
<i>Average Rating</i>	8.40	8.21	8.68	8.55
<u>Keeping the duration of longer outages to a minimum</u>				
• Rated 9 or 10	45%	44%	49%	43%
• Rated 6, 7 or 8	46%	45%	44%	49%
• Rated 5 or Lower	9%	9%	7%	7%
• Don't know/No answer	1%	2%	-	2%
<i>Average Rating</i>	8.16	8.10	8.37	8.21

AEP Ohio Performance Ratings (Continued)

	All Commercial Customers	Service Priority		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Keeping the number of longer outages to a minimum</u>				
• Rated 9 or 10	45%	39%	50%	46%
• Rated 6, 7 or 8	44%	52%	40%	42%
• Rated 5 or Lower	10%	7%	10%	9%
• Don't know/No answer	1%	2%	-	2%
<i>Average Rating</i>	8.14	8.11	8.36	8.17
<u>Keeping the number of momentary interruptions to a minimum</u>				
• Rated 9 or 10	48%	44%	53%	51%
• Rated 6, 7 or 8	40%	46%	36%	39%
• Rated 5 or Lower	11%	10%	10%	9%
• Don't know/No answer	1%	1%	1%	1%
<i>Average Rating</i>	8.13	8.12	8.15	8.32
<u>Making sure that all power lines and poles are well-maintained</u>				
• Rated 9 or 10	45%	41%	49%	45%
• Rated 6, 7 or 8	34%	40%	35%	34%
• Rated 5 or Lower	18%	19%	14%	18%
• Don't know/No answer	2%	-	2%	2%
<i>Average Rating</i>	7.91	7.78	8.10	8.04
<u>Trimming trees to help prevent power outages</u>				
• Rated 9 or 10	37%	32%	38%	44%
• Rated 6, 7 or 8	37%	41%	40%	31%
• Rated 5 or Lower	20%	21%	16%	21%
• Don't know/No answer	6%	6%	7%	3%
<i>Average Rating</i>	7.61	7.55	7.75	7.74

Overall Satisfaction

Lastly, commercial customers rated their overall satisfaction with AEP Ohio as their electric company. Satisfaction was rated on a scale from zero (*extremely dissatisfied*) to ten (*extremely satisfied*).

Overall satisfaction was rated an average of 8.37 among commercial customers with somewhat over half (58%) rating it either a nine or ten.

Overall Satisfaction with AEP Ohio

	All Commercial Customers	<i>Service Priority</i>		
		Cost	Keep Outages to a Minimum	Restore Power Quickly
<u>Overall Satisfaction</u>				
• Rated 9 or 10	58%	48%	64%	58%
• Rated 6, 7 or 8	34%	40%	30%	34%
• Rated 5 or Lower	7%	11%	7%	7%
• Don't know/No answer	1%	-	-	1%
<i>Average Rating</i>	8.37	8.15	8.67	8.49

|

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
DISCOVERY REQUEST
PUCO CASE NO. 16-1852-EL-SSO et al.
SECOND SET**

INTERROGATORY

OCC-INT-2-291 Referring to the Dias Testimony at 16:6-8, please identify which capital investments are intended to improve SAIFI and which investments are intended to improve CAIDI.

RESPONSE

Lines 6-8 refer to distribution reliability projects, which mostly focus on avoiding outages and reducing the number of customers interrupted (CI). Reducing CI impacts SAIFI since SAIFI is calculated as CI divided by the number of customers served. None of the reliability projects focus on reducing CAIDI, although it might be impacted. CAIDI is more a reflection of the outage restoration process. It is difficult to predict CAIDI impacts when an improvement program focuses on SAIFI since CAIDI essentially reflects the outages that remain, as opposed to those avoided.

Prepared by: Selwyn J. Dias

J.D. POWER

Press Releases

Overall Satisfaction Is Up and Monthly Bills Down, Yet Electric Providers Still Lag Behind Other Industries in Customer Satisfaction, J.D. Power Study Finds

J.D. Power Ratings

For additional J.D. Power ratings data, please visit www.jdpower.com/cars and www.jdpower.com/ratings.

< Back

Power Reliability Shows Improvement; Communications about Outages Is Key

COSTA MESA, Calif.: 13 July 2016 — Although customer-reported monthly electric bills have fallen to their lowest levels in 10 years and overall satisfaction is on the rise, electric utility providers continue to struggle to match other industries in customer satisfaction, according to the J.D. Power 2016 Electric Utility Residential Customer Satisfaction Study,SM released today.

The study, now in its 18th year, measures customer satisfaction with electric utility companies by examining six factors: power quality & reliability; price; billing & payment; corporate citizenship; communications; and customer service. Satisfaction is calculated on a 1,000-point scale.

Overall satisfaction has improved for the fourth consecutive year, averaging 680, up by 12 points from 2015. However, the industry continues to trail far behind many of the other industries J.D. Power tracks, including auto insurance [averaging 811 in 2016], retail banking [793], and airline [726].[1] In fact, only 11 of the 137 utility brands included the study outperform the airline industry average.

“The lesson that utilities can learn from other high-performing service providers is that to excel you need a culture that puts customers and employees first,” said **John Hazen, senior director of the utility practice at J.D. Power**. “And because customer expectations continue to increase, you need to have a mindset of continuous improvement to keep up.”

Following are some of the key findings of the study:

- **Average monthly bill:** Customer-reported monthly electric bills are the lowest in 10 years, averaging \$129 in 2016, down from \$132 in 2015. Satisfaction in the price factor improves the most this year, increasing by 16 points from 2015.
- **Satisfaction by state:** Satisfaction is highest among customers in Georgia, Alabama and Oregon, and lowest in West Virginia, Connecticut and New Hampshire.
- **Power reliability:** The average frequency of brief power interruptions [outages of 5 minutes or less] reported by customers has continued to decline since 2010. Further, 41% of customers experience “perfect power,” or no brief or long interruptions, up from 37% in 2010. While

lengthy interruptions have remained fairly constant, the length of the longest outage has fallen to an average of 6.4 hours in 2016 from 7.0 hours in 2015.

J.D. POWER

The study finds that utilities are improving in terms of informing customers about scheduled utility work, with 73% of customers indicating they were notified ahead of time, up from 71% in 2015. However, only 40% of customers say they were informed about an outage this year, down from 42% in 2015.

“It’s hard to overstate how important consistent and proactive communications are to alleviate the frustration customers feel when they experience any kind of power interruption,” said Hazen. “People rely so heavily on electric power, which is why providers are under such intense scrutiny when something goes wrong. Improving the accuracy and the amount of outage information provided to customers requires an investment by providers, but it’s one with measurable benefits.”

Study Rankings

The Electric Utility Residential Customer Satisfaction Study ranks midsize and large utility companies in four geographic regions: East, Midwest, South and West. Companies in the midsize utility segment serve between 100,000 and 499,999 residential customers, while companies in the large utility segment serve 500,000 or more residential customers. For the first time, the study also includes a new segment that includes brands serving cooperative residential customers, which were previously included in regional segments.

East Region

PPL Electric Utilities ranks highest among large utilities in the East region for a fifth consecutive year, with a score of 705. PSE&G [690] ranks second, followed by BGE [680], PECO [675] and Con Edison [672].

Among midsize utilities in the East region, Green Mountain Power ranks highest with a score of 681. Following in the rankings are Met-Ed [672], Delmarva Power and Rochester Gas & Electric in a tie [670 each], and Penn Power [664].

Midwest Region

J.D. POWER

MidAmerican Energy ranks highest in the large utility segment in the Midwest region for a ninth consecutive year, with a score of 713. DTE Energy [703] ranks second, followed by Xcel-Energy Midwest [692] and Alliant Energy and We Energies in a tie [687 each].

Kentucky Utilities ranks highest in the midsize segment in the Midwest region with a score of 712. Following Kentucky Utilities are Otter Tail Power Company [703], Omaha Public Power District [700], Louisville Gas & Electric [696] and Lincoln Electric System [694].

South Region

Florida Power & Light [FPL] ranks highest in the large utility segment in the South region with a score of 724. Following in the rankings are Alabama Power [721], Georgia Power [712], OGE [711] and CPS Energy and Entergy Arkansas in a tie [707 each].

EPB ranks highest in the midsize utility segment in the South region with a score of 737. Following EPB are Entergy Texas [715], Entergy Mississippi [714] and Gulf Power [711].

West Region

Salt River Project [SRP] ranks highest in the large utility segment in the West region for a 15th consecutive year, with a score of 730. SMUD [719] ranks second, followed by Portland General Electric [710], Pacific Power [698] and APS [691].

Clark Public Utilities ranks highest in the midsize utility segment in the West region for a ninth consecutive year, with a score of 743. Colorado Springs Utilities ranks second [712], followed by Idaho Power [704] and Imperial Irrigation District and Seattle City Light in a tie [699 each].

Cooperatives Segment

SECO Energy ranks highest in the newly designated cooperatives segment with a score of 769. Following SECO Energy are Jackson EMC [763], NOVEC [748], Sawnee EMC [741] and Weldon EMC [740].

The 2016 Electric Utility Residential Customer Satisfaction Study is based on responses from 101,138 online interviews conducted July 2015 through May 2016 among residential customers of 137 electric utility brands across the United States, which collectively represent more than 97.7 million households.

For more information about the 2016 Electric Utility Residential Customer Satisfaction Study, visit

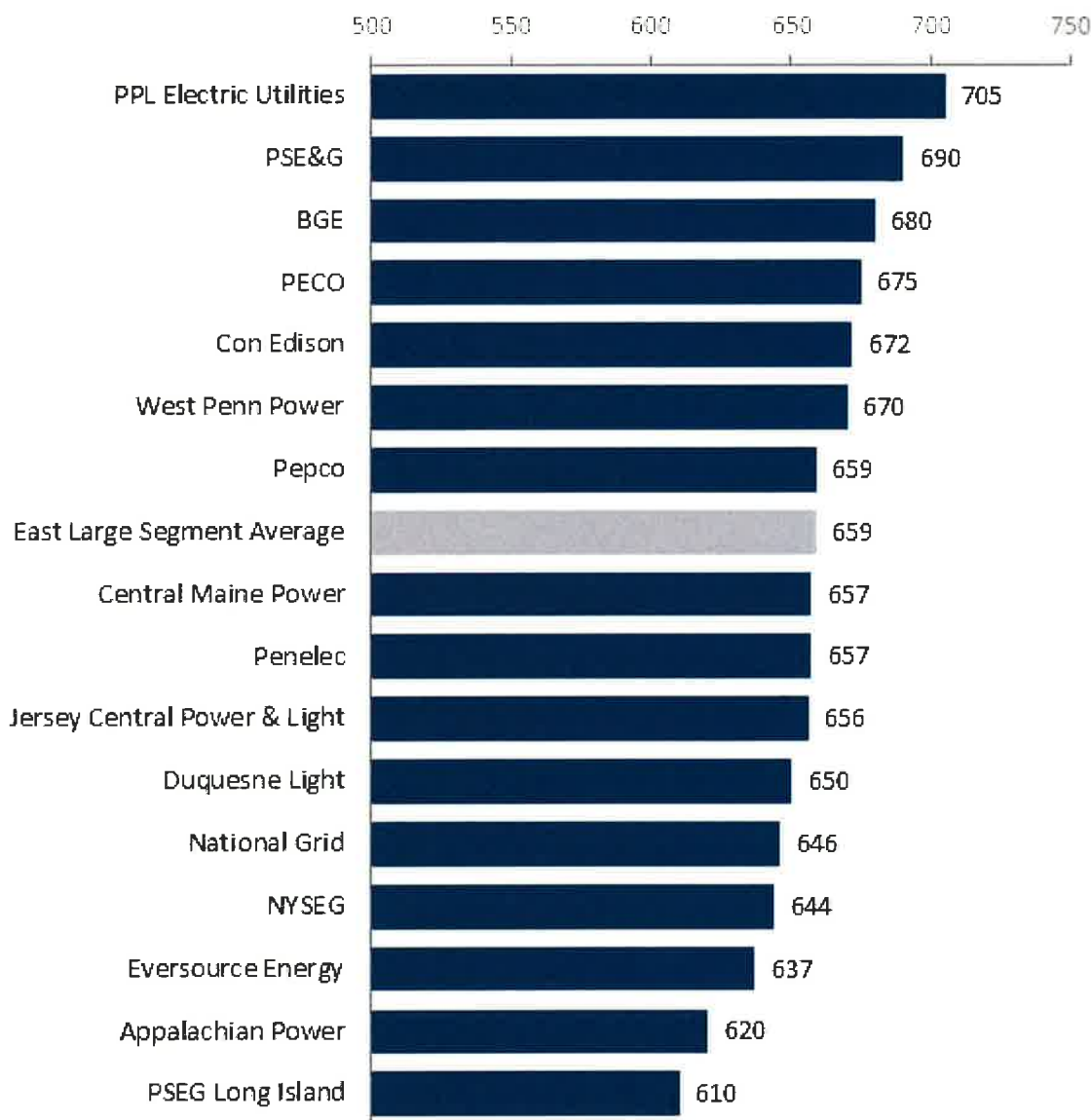
<http://www.jdpower.com/resource/us-electric-utility-residential-customer-satisfaction-study>.

Media Relations Contacts

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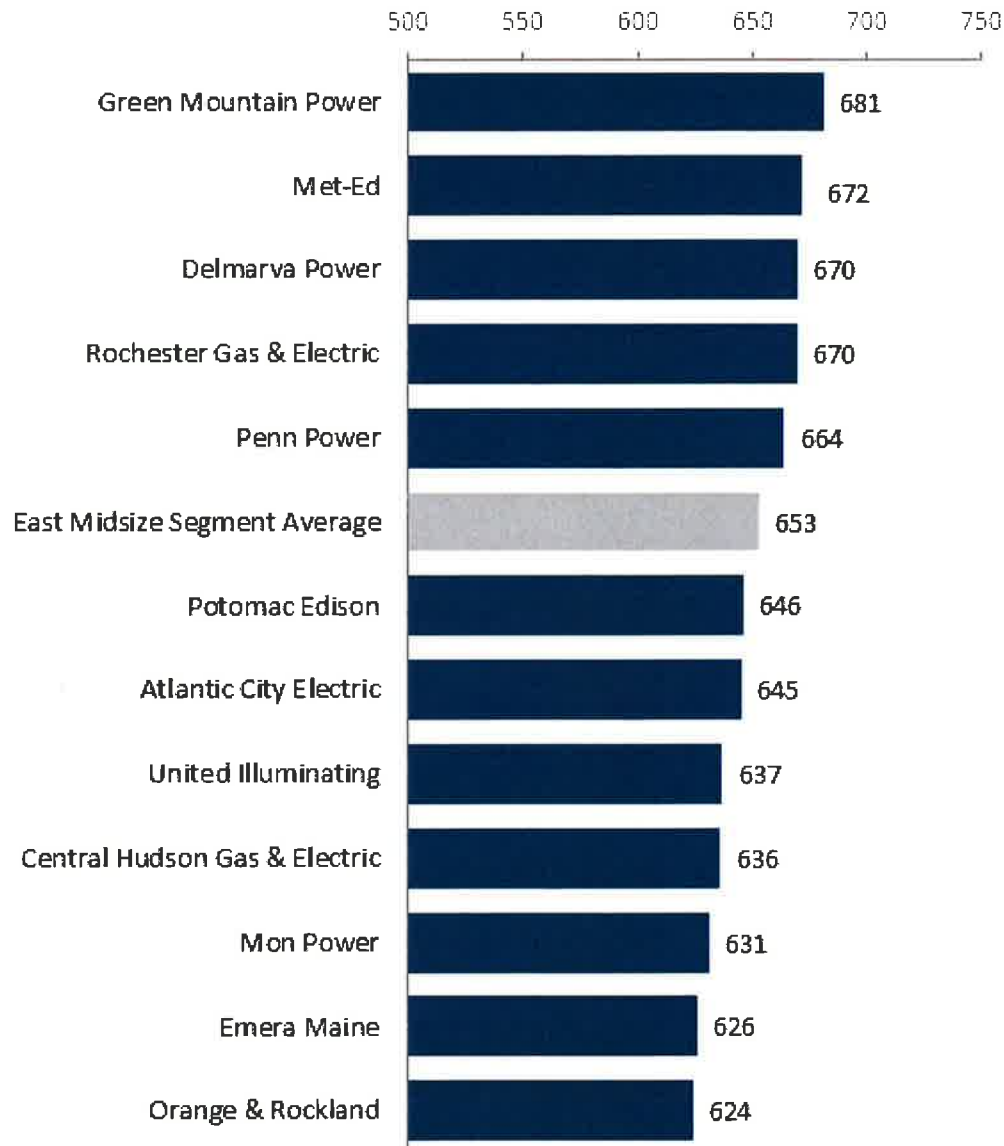
About J.D. Power and Advertising/Promotional Rules www.jdpower.com/about-us/press-release-info

[1] Sources: J.D. Power 2016 U.S. Auto Insurance StudySM; J.D. Power 2016 U.S. Retail Banking Satisfaction StudySM; and J.D. Power 2016 North America Airline Satisfaction StudySM

J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****East Region: Large Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

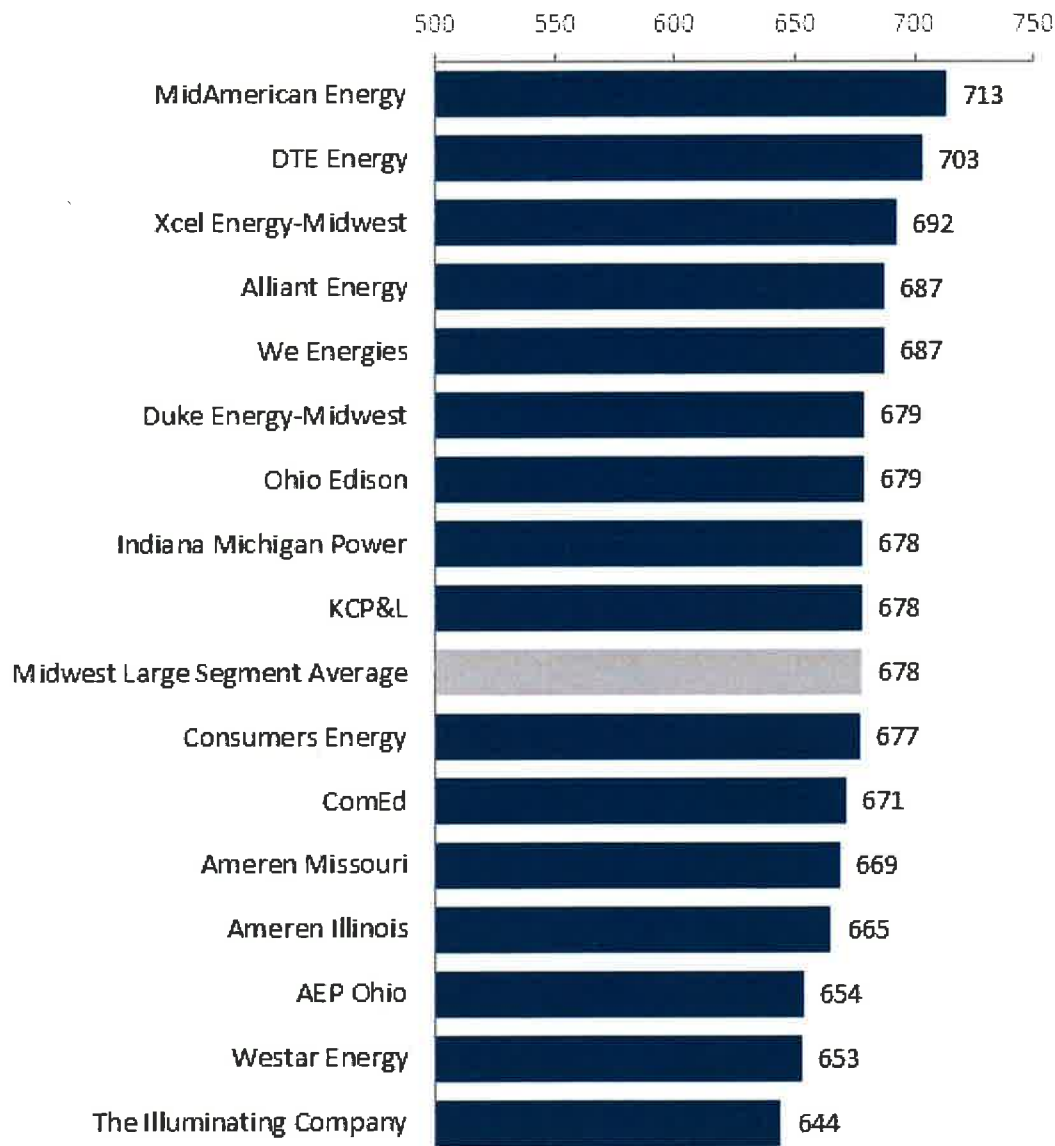
Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****East Region: Midsize Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

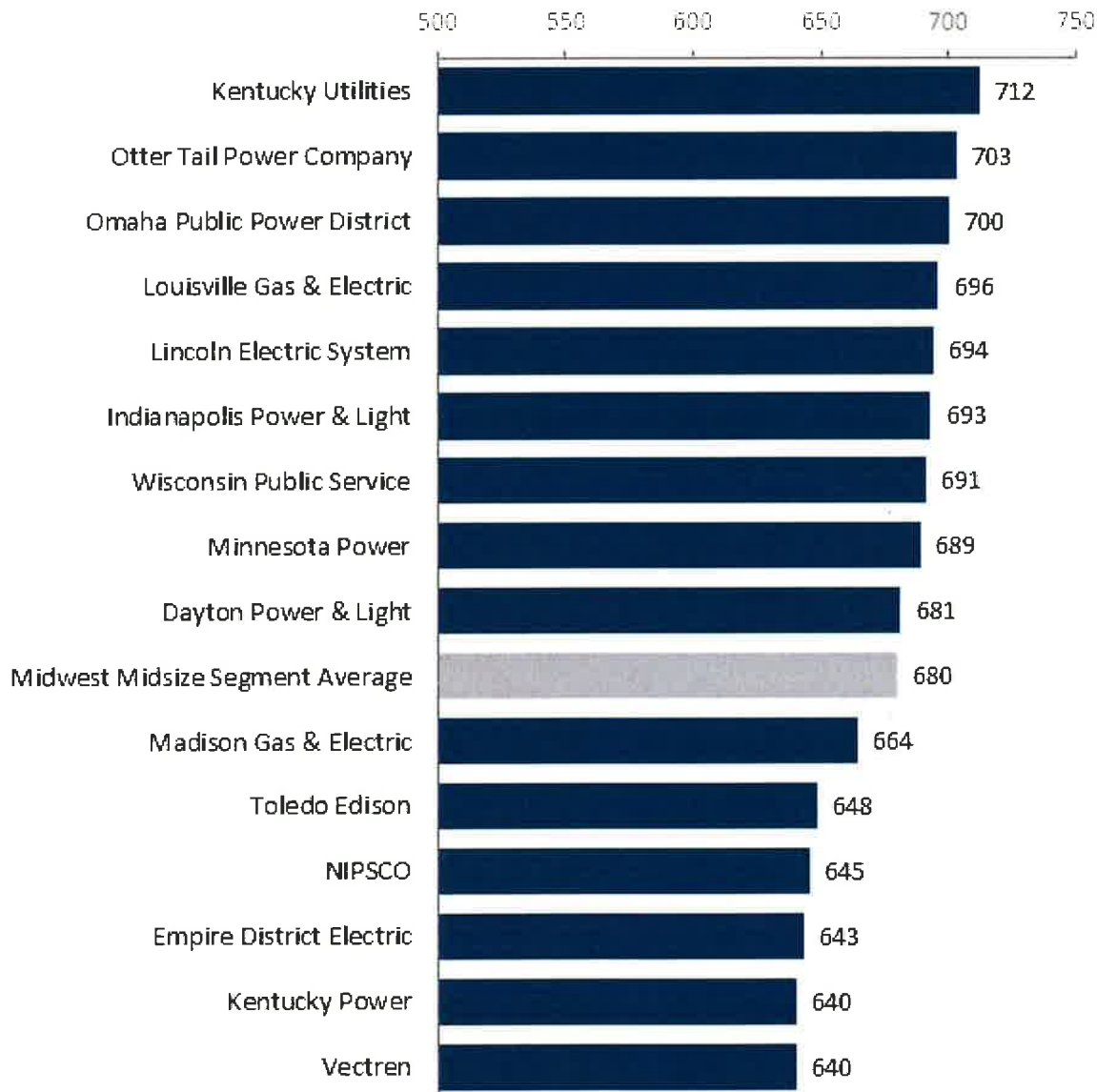
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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****Midwest Region: Large Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

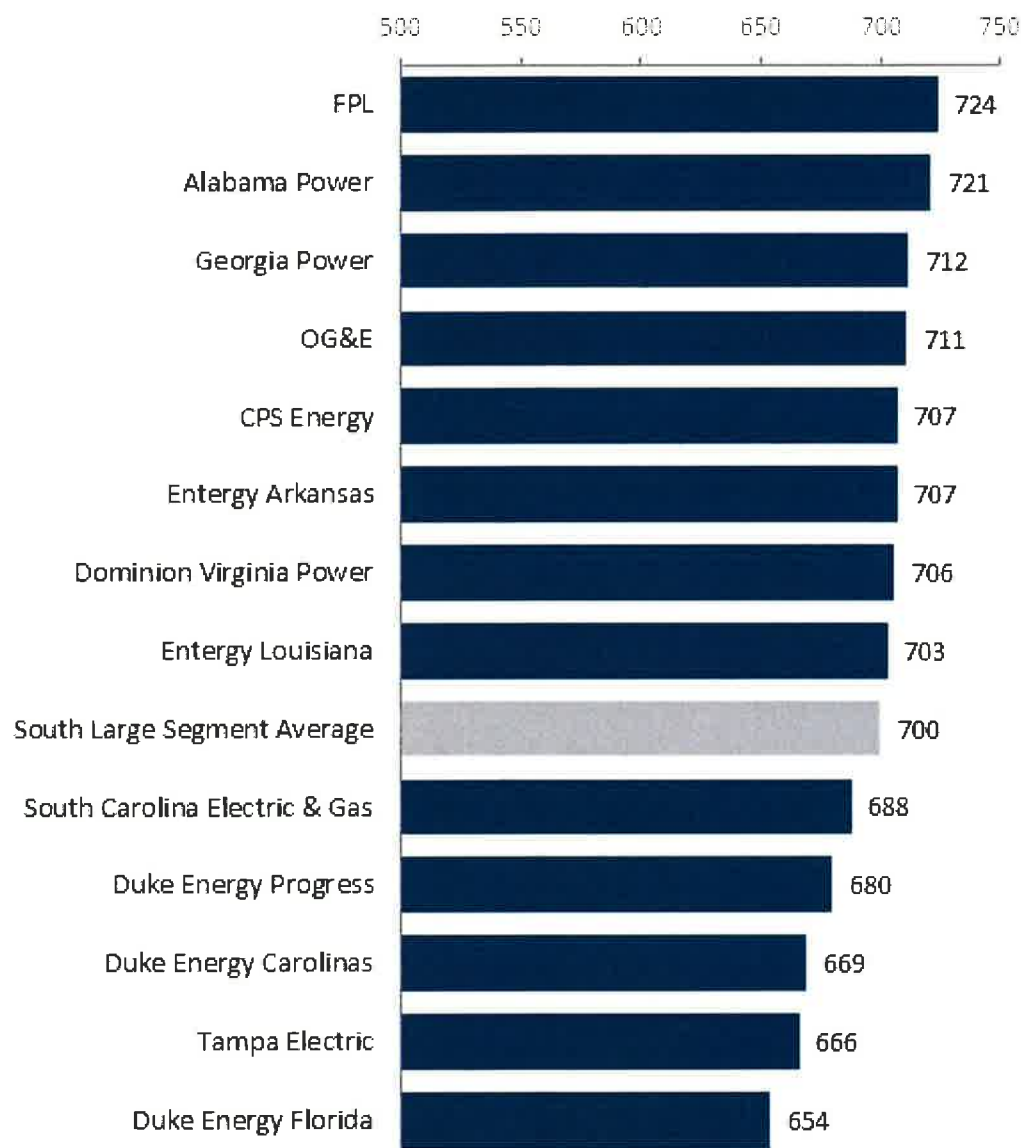
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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****Midwest Region: Midsize Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

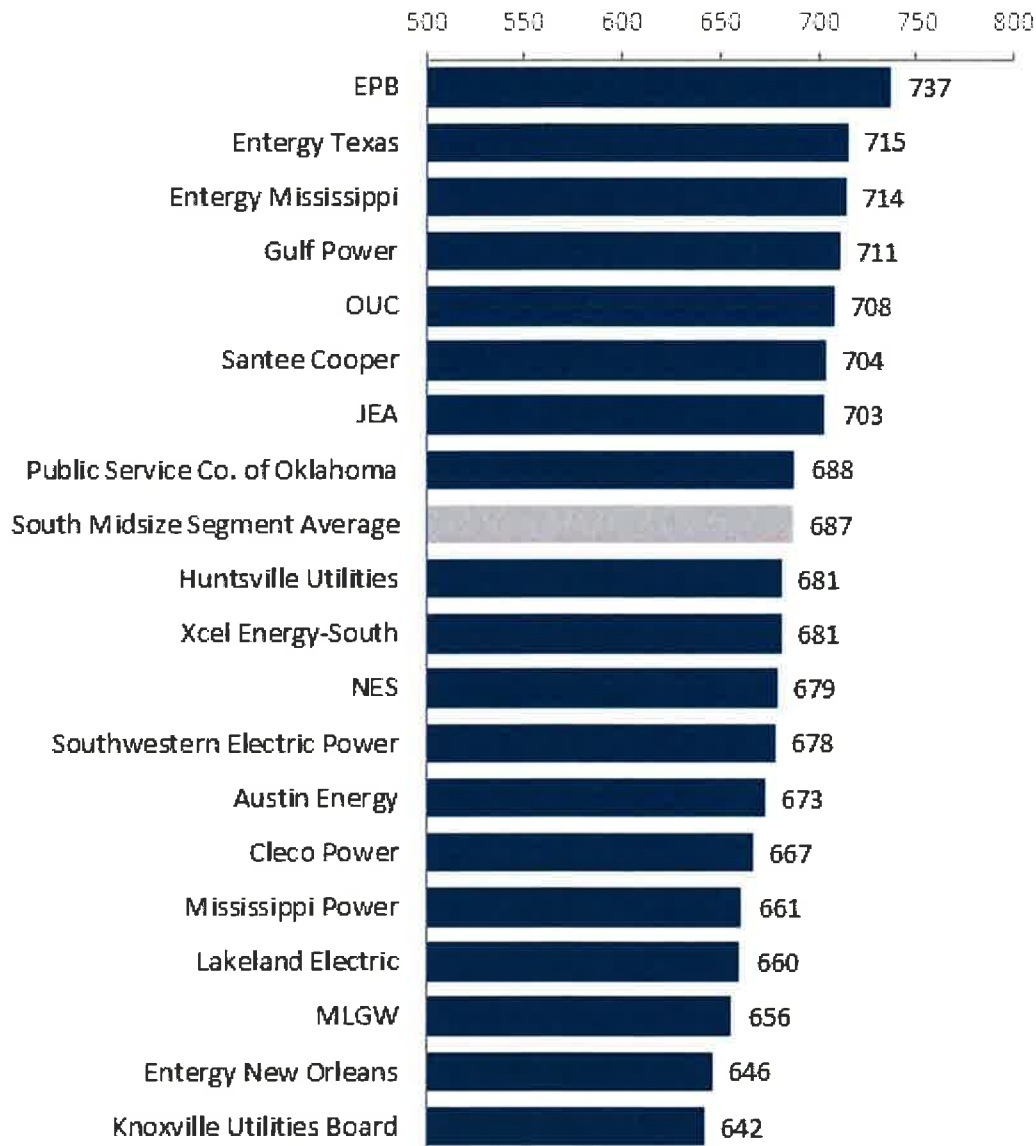
Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****South Region: Large Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

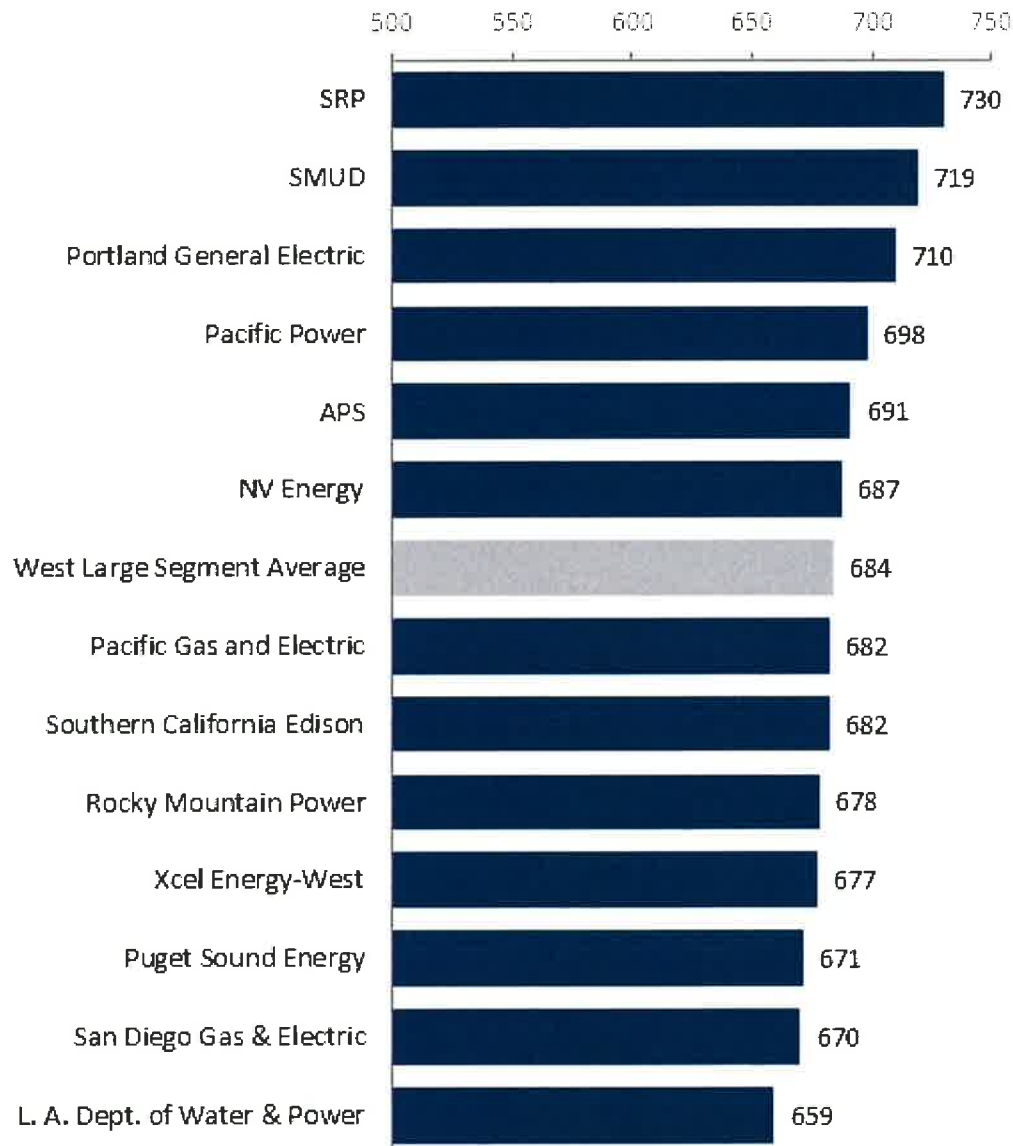
Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****South Region: Midsize Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

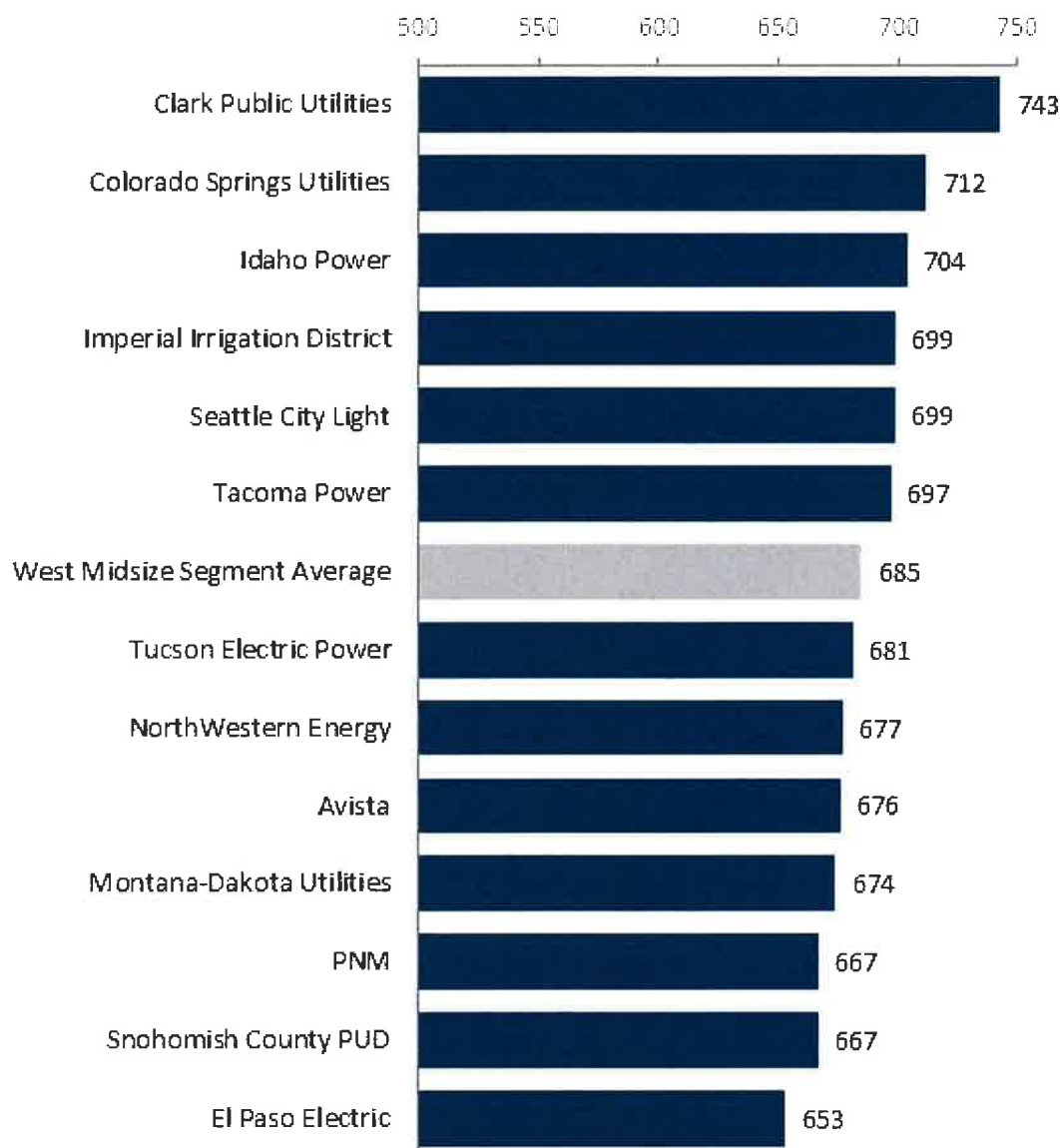
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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****West Region: Large Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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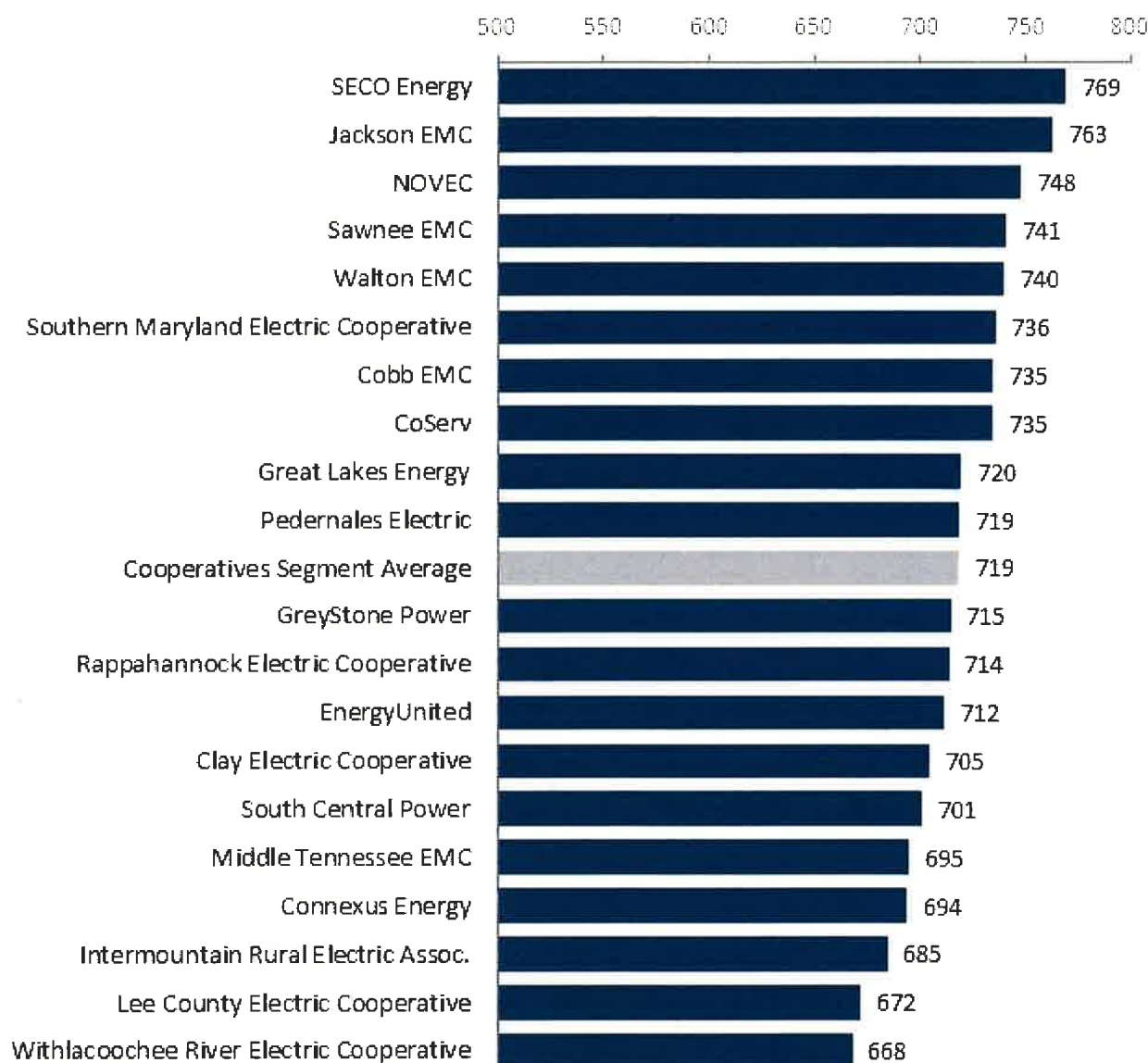
J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study****West Region: Midsize Segment
Customer Satisfaction Index Ranking***(Based on a 1,000-point scale)*

Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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J.D. POWER**J.D. Power****2016 Electric Utility Residential Customer Satisfaction Study**

Cooperatives Segment Customer Satisfaction Index Ranking

(Based on a 1,000-point scale)

Source: J.D. Power 2016 Electric Utility Residential Customer Satisfaction StudySM

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**OHIO POWER COMPANY'S RESPONSE TO
THE PUBLIC UTILITIES COMMISSION'S
DISCOVERY REQUEST
PUCO CASE 16-1852-EL-SSO et al.
FIRST SET**

INTERROGATORY

OCC-INT-1-149 Referring to the Dias Testimony at 7, what was the total number of outages, total number of customers interrupted, and customer minutes interrupted caused by trees inside the right of way by year for 2006 through 2015?

RESPONSE

Outages caused by trees inside the ROW.

Year	#Int	Cust Out	Cust Min
2009	2,503	104,373	21,434,358
2010	2,689	97,643	20,443,549
2011	2,665	102,154	22,223,275
2012	1,837	69,194	13,387,987
2013	1,122	36,205	8,453,552
2014	844	34,848	6,427,706
2015	643	16,851	2,909,076

(Excluding Generation, Transmission, and Major Events)

Prepared by: Selwyn J. Dias

**OHIO POWER COMPANY'S RESPONSE TO
THE PUBLIC UTILITIES COMMISSION'S
DISCOVERY REQUEST
PUCO CASE 16-1852-EL-SSO et al.
FIRST SET**

INTERROGATORY

OCC-INT-1-150 Referring to the Dias Testimony at 7, what was the total number of outages, total customers interrupted, and customer minutes interrupted caused by trees outside the right of way by year for 2006 through 2015?

RESPONSE

Outages caused by trees outside the ROW.

Year	#Int	Cust Out	Cust Min
2009	3,373	157,431	33,282,155
2010	3,647	176,520	37,397,058
2011	4,338	209,964	47,401,461
2012	3,653	181,749	37,839,136
2013	3,723	177,454	38,032,324
2014	3,724	166,868	40,117,482
2015	4,209	206,846	42,353,861

(Excluding Generation, Transmission, and Major Events)

Prepared by: Selwyn J. Dias

**OHIO POWER COMPANY'S RESPONSE TO
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
DISCOVERY REQUEST
PUCO CASE NO. 16-1852-EL-SSO et al.
SECOND SET**

INTERROGATORY

OCC-INT-2-365 With regard to the proposed distribution substation security plan, please describe why AEP Ohio should not proceed to make appropriate investments for this purpose and obtain recovery of costs under traditional cost of service ratemaking principles in future rate cases.

RESPONSE

The Company could recover the funds spent on capital investment through a base distribution case. This would require a greater lag in updating the Company's infrastructure due to the timely process of a distribution case as well as additional costs based on rate case expenses

Prepared by: Andrea E. Moore

This foregoing document was electronically filed with the Public Utilities

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5/2/2017 11:55:11 AM

in

Case No(s). 16-1852-EL-SSO, 16-1853-EL-AAM

Summary: Testimony Direct Testimony of James D. Williams on Behalf of the Office of the Ohio Consumers' Counsel electronically filed by Ms. Deb J. Bingham on behalf of Michael, William J. Mr.