

**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 Section 4928.143, Revised)
Code, 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)

**TESTIMONY OF JOHN SERYAK
ON BEHALF OF THE
OHIO MANUFACTURERS' ASSOCIATION ENERGY GROUP**

May 2, 2017

1 **Introduction**

2 **Q. Please state your name and business address.**

3 A. My name is John A. Seryak. My principal place of business is at 3709 N. High
4 Street, Columbus, Ohio 43214.

5

6 **Q. By whom are you employed and in what capacity?**

7 A. I am the lead analyst at RunnerStone, LLC on regulatory, policy, and market
8 matters concerning customer-sited energy resources, which we define as energy
9 efficiency, demand response, distributed generation, and energy storage. I am also
10 Chief Executive Officer of Go Sustainable Energy, LLC, a consultancy that
11 provides technical assistance on energy efficiency matters to the industrial,
12 commercial, residential, and utility sectors.

13

14 **Q. On whose behalf are you testifying in this proceeding?**

15 A. My testimony is being sponsored by the Ohio Manufacturers' Association Energy
16 Group (OMAEG). OMAEG is a non-profit entity that strives to improve business
17 conditions in Ohio and drive down the cost of doing business for Ohio
18 manufacturers.

19

20 OMAEG members take service under the Ohio Power Company's (AEP Ohio or
21 the Company) General Service (GS) 3 and GS 4 tariffs, and include transmission,
22 sub-transmission, primary, and secondary electric services.

1

2 **Q. Please describe your professional experience and qualifications.**

3 A. I received a Bachelor's degree in Mechanical Engineering from the University of
4 Dayton, as well as a Master's of Science degree in Mechanical Engineering. I am
5 a licensed Professional Engineer in the State of Ohio. I have worked extensively
6 with customer-sited resources, primarily energy efficiency, for 16 years. My
7 experience includes fieldwork at industrial, commercial, and residential buildings
8 identifying energy savings opportunities and quantifying the energy and dollar
9 savings, chiefly through my responsibilities the last eleven years for Go
10 Sustainable Energy, LLC, of which I am a founding partner. Finally, I have four
11 years of experience in regulatory and policy analysis in regard to behind-the-
12 meter customer-sited energy resources. In connection with these experiences, I
13 have authored or co-authored 30 peer-reviewed academic papers on technical,
14 programmatic, cultural, and regulatory issues concerning energy efficiency and
15 customer-sited resources.

16

17 **Q. Have you participated in PUCO proceedings previously?**

18 A. Yes, I have provided testimony and advised clients on numerous energy-related
19 issues before the Public Utilities Commission of Ohio (PUCO), including AEP
20 Ohio's previous Affiliate Power Purchase Agreement proceeding, Case Nos. 14-
21 1693-EL-RDR, et al., which is the stated rationale (at least in part) for AEP
22 Ohio's filing.¹

¹ Amended Application at 3; Direct Testimony of Moore at 3-4.

1 **Overview and Conclusions**

2 **Q. What is the purpose of your testimony in this proceeding?**

3 A. My testimony addresses the new charges AEP Ohio is proposing in its amended
4 application filed on November 23, 2016 (Application) to extend and modify its
5 current Electric Security Plan (the ESP extension includes the addition of the
6 Renewable Generation Rider (RGR), and the Plug-In Electric Vehicles (PEVs),
7 micro-grid, and sub-metering components of the Distribution Technology Rider
8 (DTR)).

9

10 Given the wide scope of the issues addressed in the Application, my
11 recommendations are concentrated on a limited number of issues. Absence of
12 comment on my part regarding a particular aspect of the Application does not
13 signify support (or opposition) toward the Company's filing with respect to said
14 issue.

15

16 **Q. What are your primary conclusions and recommendations?**

17 A. I conclude that AEP Ohio's requests would seriously undermine competition with
18 emerging technologies. Specifically, I recommend:

- 19
- 20 • The Commission should deny the RGR, or at a minimum allow it to be
by-passable.
 - 21 • The Commission should deny the cost recovery of PEV charging
22 stations, micro-grids, and sub-metering in the DTR.

- The Commission should consider exploring the costs, benefits, and ownership model of emerging technologies such as PEV, their charging stations, micro-grids, and sub-metering within their PowerForward initiative.
- The Commission should ensure tariffs for PEV charging stations and micro-grids which include time-dependent price signals, such as real-time pricing or time-of-use pricing.

Customer Need for a Renewable Generation Rider (RGR)

Q. How is AEP Ohio proposing to pay for its renewable energy projects?

A. AEP Ohio proposes recovering the cost of renewable energy projects through its amended and extended ESP III to be recovered through the non-bypassable RGR rider for the life of the renewable energy project.

Q. Has anything changed from the PPA proposal to the RGR?

A. Yes. According to AEP Ohio witness Allen, the financial and physical arrangement of the renewable energy projects would be identical as the previously proposed Power Purchase Agreement (PPA) arrangement. However, AEP Ohio witness Allen lists two differences with AEP Ohio's new proposal: that AEP Ohio customers would now "actually be served" by the project,² and that RGR would persist for the life of the project instead of for the ESP term.

² Direct Testimony of Allen at 10.

1 **Q. Has AEP Ohio presented any evidence that its customers will now “actually**
2 **be served” by the proposed renewable energy projects?**

3
4 **A.** No. Although AEP Ohio witness Allen suggests that the physical and financial
5 arrangements are identical to the PPA proposal and that there would be no
6 substantive change to how the renewable energy project is integrated into the
7 electric grid, it is unclear what is meant by the statement that the renewable power
8 facility will now “actually serve” customers. AEP Ohio has not detailed how the
9 renewable projects would be integrated into the system in a manner that would
10 cause the renewable projects to “actually serve” or be dedicate to specific
11 customers, especially shopping customers. AEP Ohio’s proposal also calls into
12 question whether AEP Ohio’s proposed changes to its renewable commitments
13 are to the benefit of customers, or to the benefit of AEP Ohio.

14
15 **Q. Has AEP Ohio shown need for a utility built renewable energy project?**

16 **A.** No. In fact, Ohio already has a renewable portfolio standard (RPS) that
17 establishes a floor for renewable energy development in Ohio and the region by
18 requiring the purchase of renewable energy credits (RECs). The RPS and REC
19 mechanism establishes a market for renewable energy projects that is adequately
20 served by competitive businesses. Ohio’s policy of spurring renewable energy
21 development is happening without the need for vertically integrated ownership of
22 renewable energy assets.

23

24

1 **Q. Could the renewable energy projects AEP Ohio is considering still be built in**
2 **Ohio without the RGR?**

3
4 **A. Yes if the renewable projects are as cost-effective as competing renewable energy**
5 **projects, these projects could be built by competitive parties without the RGR.**

6

7 **Q. If AEP Ohio's renewable energy projects cannot be built without the RGR,**
8 **would they benefit ratepayers and the public interest?**

9
10 **A. No. If the RGR is required to make these projects feasible, then they are by**
11 **definition less economical than competitive renewable energy projects that would**
12 **otherwise get built. Therefore, AEP Ohio's projects are defacto of greater cost to**
13 **ratepayers than the market is able to supply, and thus do not benefit ratepayers or**
14 **the public interest at this time.**

15

16 **Q. What are the estimated costs of AEP Ohio's renewable energy projects?**

17 **A. AEP Ohio has not estimated any costs that it intends to recover through the RGR.³**
18 **In addition to not disclosing estimated costs of its renewable energy projects, AEP**
19 **Ohio has also not proposed a cost cap on the RGR rider, resulting in a potential**
20 **limitless recovery of generation service costs. Establishing and implementing the**
21 **RGR at this time is equivalent to a blank check for expenditures, without any**
22 **estimate or projection of such expenditures, resulting in unknown costs to**
23 **consumers.**

24

25

³ Direct Testimony of Gill at 9.

1 **Q. Do businesses already invest in and purchase renewable energy?**

2 A. Yes. Businesses and other customers increasingly integrate renewable energy
3 purchases, or on-site renewable energy projects, into their electricity purchasing
4 strategies.⁴A business may purchase 100% renewable energy, or strategically
5 purchase a percentage of its electricity from renewable sources.

6
7 **Q. What impact does AEP Ohio's proposed amended ESP have on customers
8 that have already purchased renewable energy or installed renewable
9 energy?**

10
11 A. In effect, these businesses pay twice for renewable energy: first, for their project
12 or purchase; and second, under the RGR. Moreover, it may affect the revenue of
13 a customer-sited renewable energy project. For example, a business may decide
14 to keep, or sell, its RECs when it develops a renewable energy project. If a
15 business keeps its RECs, it may bypass paying its CRES provider for compliance
16 for the present-day Renewable Energy Portfolio (RPS). Without bypassability, a
17 business would subsidize other ratepayers if the amended ESP includes the RGR.
18 Also, for a business which sells its RECs, the market price of RECs may be
19 unfairly influenced by ratepayer subsidization of AEP Ohio's renewable energy
20 projects. That is, allowing renewable energy into AEP Ohio's amended ESP,
21 would force a business to subsidize its competitor in the REC market.

22

⁴ Public examples include: Amazon's recent announcement to power its new central Ohio data centers with 100% Ohio wind (<http://www.dispatch.com/content/stories/business/2016/11/01/amazon-to-build-second-wind-farm-in-ohio.html>); Ohio State University's announcement to power 25% of its campus with Ohio wind (<http://oee.osu.edu/ohio-state-to-power-campus-with-wind-energy.html>); and the GM Lordstown Plant's solar installation (<http://media.gm.com/media/us/en/gm/home.detail.html/content/Pages/news/us/en/2014/Oct/1020-lordstown-chevrolet.html>).

1 **Q. Is a RGR mechanism different than an RPS in regards to development of**
2 **renewable energy?**

3
4 **A.** Yes. The RPS promotes and allows resource competition. A business may
5 purchase RECs, sell RECs, or develop its own customer-sited renewable energy
6 project and retain ownership of the RECs. An RPS creates a market of many
7 buyers and many sellers, where information is transparently communicated via
8 market prices of RECs. This competition and market pricing often serves to drive
9 prices down. A RGR, in contrast, undercuts market development by greatly
10 limiting the number of buyers and sellers. And, by allowing the buyer and seller
11 to be affiliated (AEP Ohio and AEP Energy), and removing both related parties
12 from the risk of the project (instead, the ratepayers take the risk), the potential for
13 uneconomical decisions is high.

14

15 **Q. Do you agree with Witness Allen’s testimony that “[s]ince customers are**
16 **paying a market based price for power either through the SSO or from a**
17 **CRES provider, having a portion of their power sourced from a specific**
18 **renewable facility will result in their bill being either higher or lower**
19 **depending upon whether the price of power from a renewable power facility**
20 **is higher or lower than the market price for power”?**

21
22 **A.** No. First, customers taking generation service from a CRES provider may
23 already be receiving a portion of their power from a renewable facility, which
24 would cause the customer to pay twice for renewable power. Second, the amount
25 of electricity purchased from a CRES provider would not be reduced. Thus, a
26 customer bill would always be higher, based on the RGR mechanism proposed by
27 AEP Ohio.

28

1 **Q. Do you have a recommendation to the Commission?**

2 A. Yes. The Commission should reject the inclusion of the RGR in AEP Ohio's
3 amended ESP as being anti-competitive for the development of renewable energy.
4 At a minimum, the Commission should require that the RGR be made bypassable
5 for businesses that are already purchasing renewable energy or developing
6 renewable energy projects of their own accord, so as to avoid forcing businesses
7 to pay twice for renewable electricity or pay for more electricity than what they
8 consume.

9

10 **AEP Ohio's Distribution Technology Investment Plan**

11 **Q. What is AEP Ohio's Distribution Technology Investment Plan?**

12

13 A. AEP Ohio is proposing a multi-initiative plan to modernize its infrastructure. In
14 its first initiative, it proposes to install electric vehicle charging stations,
15 microgrids, and smart lighting control in conjunction with Smart Columbus.⁵
16 Second, AEP Ohio is seeking immediate approval to recover costs to deploy its
17 Next Generation Utility Communication System (NextGen UCS). Third, it is
18 proposing to enhance the physical security of its critical distribution
19 infrastructure.

20

21 **Q. How much is AEP Ohio's Distribution Technology Investment Plan expected**
22 **to cost customers?**

23

24 A. Costs for AEP Ohio's Distribution Technology Investment Plan will be recovered
25 through the Distribution Technology Rider (DTR). AEP Ohio is proposing to

⁵ Direct Testimony of Osterholt at 5.

1 recover \$48.9 million in O&M costs through 2024 and carrying charges on capital
2 expenditures of \$250.8 million made through 2020.⁶ Specifically, AEP proposes
3 to recover the following direct costs from customers:

- 4 1. Electric Vehicle Charging Stations: AEP Ohio proposes to recover
5 \$6.4 million over four years and \$775,000 in O&M costs, annually.⁷
- 6 2. Microgrids: Deployment of eight to ten microgrids is expected to cost
7 customers \$52 million over four years and \$1.5 million in O&M
8 costs, annually.⁸
- 9 3. Smart Lighting: Smart lighting controls and LED replacements are
10 expected to cost customers \$30 million over four years and \$2.1
11 million in O&M costs, annually.⁹
- 12 4. Next Generation Utility Communication System: Customers are
13 expected to pay \$69 million over four years and \$1 million in O&M
14 costs over three years.¹⁰
- 15 5. Distribution Substation Security Technology: Deployment of 100
16 substations is expected to cost customers \$30 million over four years
17 and \$400,000 in O&M costs, annually.¹¹

18

⁶ Workpapers for David R. Gill, WP DRG-8 at 10 (amounts represent “loaded” O&M and Capital carrying costs from the second and fourth blocks of WP DRG-8).

⁷ Direct Testimony of Osterholt at 6.

⁸ Id.

⁹ Id.

¹⁰ Id.

¹¹ Id.

1 **Charging Station Deployment**

2 **Q. What is AEP Ohio’s proposal for public charging stations?**

3
4 A. AEP Ohio is proposing as part of its Distribution Technology Investment Plan to
5 install 250 Level 2 public smart charging stations and, 25 public DC Fast
6 Charging Stations.

7
8 **Q. How will the cost for these public charging stations be recovered?**

9
10 A. AEP Ohio plans to recover the installation costs, and the costs for the public
11 charging station’s energy, capacity, and other costs through the Distribution
12 Technology Investment Rider based on AEP Ohio’s SSO rate.¹² Rather than
13 charging the users directly benefiting from these public charging stations, AEP
14 Ohio is proposing to allow Plug-In Electric Vehicle (PEV) owners to use
15 Company-installed public charging stations free of charge during an initial
16 period.¹³ AEP Ohio does not say how long this period will be.

17
18 **Q. What are the estimated costs of the public charging stations?**

19
20 A. AEP Ohio proposes to install 250 Level 2 public smart charging stations
21 estimated to cost between \$10,000-\$20,000 each for a total cost between \$2.5M –
22 \$5M. AEP Ohio also proposes to install 25 DC Fast Charger charging stations
23 costing between \$50,000-\$100,000 each for total cost between \$1.25M – \$2.5M.¹⁴

24

¹² Direct Testimony of Osterholt at 17.

¹³ Id.

¹⁴ Id. at 15-17.

1 **Q. What is AEP Ohio's proposal for residential charging stations?**

2
3 A. AEP Ohio is also proposing to install up to 1,000 Company-owned residential
4 charging station units at no charge to the benefiting customer during the
5 demonstration period.¹⁵ At a cost of \$1,000-\$2,000 per unit, ratepayers will pay
6 up to \$2M for private residential charging stations that will only benefit certain
7 private residential customers.¹⁶ Further, AEP Ohio estimates ratepayers will pay
8 \$200,000 a year to maintain the charging units.¹⁷

9
10 **Q. Does AEP propose any alternate forms to recover costs for Plug-In Electric
11 Vehicle charging stations?**

12
13 A. Separate and in addition to the Distribution Technology Investment Plan, AEP
14 Ohio is proposing to later file a tariff schedule for PEV charging stations.¹⁸ The
15 tariff will allow AEP to recover costs for expanding PEV charging stations.

16
17 **Q. Do Ohio cities and Ohio businesses already invest in PEV charging stations?**

18
19 A. Yes. Businesses in Ohio are already investing in PEV charging stations through a
20 competitive market.¹⁹ Additionally, cities are also installing PEV charging
21 stations.²⁰

22

¹⁵ Direct Testimony of Osterholt at 18.

¹⁶Id. at 17, 18.

¹⁷Id. at 17.

¹⁸ Direct Testimony of Moore at 11.

¹⁹ Ohio business examples include: IKEA to Install Electric Vehicle Charging Stations at Future Columbus Store (<https://patch.com/ohio/cleveland/ikea-install-electric-vehicle-charging-stations-future-columbus-store>)

²⁰For example, see City of Cleveland to install electric vehicle charging stations for public use (http://www.cleveland.com/metro/index.ssf/2012/05/city_of_cleveland_to_install_e.html).

1 **Q. Are PEV manufacturers investing in PEV charging stations for public use?**

2

3 **A. Yes. Both Tesla Motors and Nissan have invested in PEV charging stations for**
4 **public use.²¹**

5

6 **Q. Does AEP Ohio's PEV charging station pilot adequately demonstrate the**
7 **technology, and achieve its potential benefits to ratepayers?**

8

9 **A. No. Two critical benefits to ratepayers from PEV charging stations are:**

10 • The ability of PEVs to charge at non-peak times of the electrical grid; and

11 • The ability of PEV batteries to store electricity, and potentially feed
12 electricity back to the grid during peak times.

13 From an electric ratepayer perspective, these features of PEVs must be utilized to
14 fully gain the financial benefits. Thus, time-dependent price signals are
15 indispensable to the demonstration of the technology, preferably real-time price
16 signals but potentially time-of-use rates. AEP Ohio's current proposal to not
17 charge customers for the charging, and to pass the cost of electricity for public
18 charging stations to other ratepayers at the SSO rate, completely undermines the
19 demonstration of the PEV technology. Without some sort of time-dependent rate
20 or pricing scheme, AEP Ohio's pilot could well result in citizens charging their
21 electric cars during the day, increasing the likelihood of car charging at peak
22 times. This could erase electric-system benefits to ratepayers, and potentially
23 create additional cost burdens.

24

25

²¹For example, see PEV charging stations in Grove City, Ohio
(<http://www.grovecityohio.gov/topic/electric-vehicle-charging-stations/>).

1 **Q. Is the PEV demonstration project anti-competitive?**

2

3 **A.** Yes. It is clear that competitive businesses and other organizations have the
4 capability and interest to purchase and install PEV charging stations without
5 utility ownership.

6

7 **Q. Do you have a recommendation regarding the PEV demonstration project?**

8

9 **A.** Yes. The Commission should reject AEP Ohio's proposal, especially AEP Ohio's
10 requests to own charging stations and charge the costs to customers, and to
11 provide free electricity to PEV owners and/or users. The Commission should
12 direct AEP to file a tariff for PEV charging stations, while ensuring charging
13 station retail electricity rates are tied to real-time pricing or time-of-use pricing.
14 Finally, the Commission should consider the costs, benefits, and ownership model
15 of PEV charging stations as part of its PowerForward initiative.

16

17 **Microgrids**

18 **Q. What is AEP Ohio's microgrid project?**

19

20 **A.** AEP Ohio is proposing to design and deploy eight to ten microgrids. The
21 locations for these microgrids are not yet defined. AEP Ohio is also proposing
22 that should the Commission approve the amended ESP and extension, it will not
23 have to seek additional approval for the first eight to ten microgrids from the
24 Commission.²²

25

26

²²AEP Ohio Response to IGS-INT-2-001 (Attachment JAS-1).

1 **Q. Who is required to pay for the infrastructure and maintenance of the**
2 **microgrid projects?**

3
4 A. According to AEP Ohio witness S. Osterholt, the Company is proposing that the
5 microgrid deployment and maintenance costs associated with this proceeding
6 would be included in the DTR and borne by customers.²³

7

8 **Q. What are the proposed costs associated with the microgrids?**

9
10 A. According the AEP Ohio witness S. Osterholt, the microgrids will cost customers
11 \$51.87 million in capital costs over four years and approximately \$1.5 million
12 annually for O&M expenses at full deployment.²⁴

13

14 **Q. Does AEP Ohio's proposed plan create system benefits to all ratepayers?**

15
16 A. No. While microgrids could, in concept, produce benefits to the electric system,
17 and thus all ratepayers, in much the same way electric vehicles could, AEP Ohio's
18 proposal will not. The main features of a microgrid are the localized abilities to
19 generate electricity, store electricity, and determine whether electricity is of
20 greatest value to the customer or the electric grid at any given time. The value to
21 the electric system is in the ability of the customer to reduce electricity use from
22 the grid, or export electricity to the grid, at times of the highest cost of electricity,
23 thereby lowering demand or increasing supply, resulting in lower electricity costs
24 for all. Microgrids, in essence, have the potential to become dispatchable
25 decentralized electricity resources. AEP Ohio's plan undermines the benefit

²³AEP Ohio Response to IGS-INT-1-004 (Attachment JAS-2).

²⁴ Direct Testimony of Osterholt at 25.

1 potential by socializing the net energy use or production of its proposed
2 microgrids as “unaccounted for energy”.

3

4 I will note that properly structured microgrids can also create important societal
5 benefits by creating redundancy in power for critical facilities and businesses.

6

7 **Q. Do you have a recommendation regarding the microgrid proposal to the**
8 **Commission?**

9

10 **A.** Yes. The Commission should reject AEP Ohio’s proposal for its microgrid
11 program which costs customers \$62.1 million over the term of the amended ESP,
12 while providing few benefits to customers as a whole. The Commission should
13 direct AEP Ohio to file a microgrid tariff to encourage microgrid development
14 that is funded outside of the ratepayer base. Finally, the Commission should
15 consider the costs, benefits, and ownership model of microgrids as part of their
16 PowerForward initiative.

17

18 **Submetering Rider (SR)**

19 **Q. What is the SR?**

20

21 **A.** The Application proposes a non-bypassable, non-specific, and undefined SR to
22 pass through costs to customers from AEP Ohio’s potential purchase of behind
23 the meter submetering infrastructure from submetering entities, as well as pass on

1 to customers other unspecified costs associated with submetering.²⁵ The SR is
2 entirely anticipatory in nature.²⁶

3

4 **Q. What costs are intended to be recovered under the SR?**

5

6 A. AEP Ohio has provided the example of where it may have the opportunity to
7 purchase or replace the distribution infrastructure of certain multi-family
8 complexes served under its tariffs. Under this scenario, AEP Ohio is proposing to
9 collect costs associated with the purchase or replacement of such infrastructure,
10 including collecting other undefined costs “relating to the submetering issue as a
11 percentage of base distribution revenue.”²⁷

12

13 **Q. Are these costs anticipatory or real in nature?**

14

15 A. As stated previously, the cost of any prospective regulatory compliance related to
16 submetering is completely anticipatory in nature. Further, it is my understanding
17 that the issue of whether submetering entities should be regulated by the
18 Commission would not necessarily impose new regulations on the electric
19 distribution utilities. Nowhere in the Application or in the testimony filed in
20 support of AEP Ohio’s Application does AEP Ohio even suggest that it expects
21 future increases in the cost of compliance with future submetering regulations,
22 which have not been approved by the Commission.

23

²⁵ Amended Application at 17; Direct Testimony of Gill at 9.

²⁶ Direct Testimony of Gill at 9 (“the Submetering Rider will serve as a placeholder non-bypassable rider until the Commission approves costs to be recovered in a separate proceedings.”).

²⁷ Direct Testimony of Moore at 12.

1 **Q. Should the PUCO consider the SR at this time?**

2

3 A. No. The establishment and implementation of SR in this proceeding is premature
4 given the lack of specific regulations or any quantifiable expenses anticipated to
5 be expended. Giving AEP Ohio such a rider, even as a placeholder, would be
6 tantamount to providing AEP Ohio with a blank check for expenditures by
7 submetering entities for activities performed by private and unregulated entities
8 having no affiliation with AEP Ohio during an ongoing investigation into these
9 submetering activities.²⁸ The possibility of AEP Ohio being required to “purchase
10 or replace the distribution infrastructure of certain complexes to be served under
11 AEP Ohio’s tariff schedules” is entirely speculative.²⁹

12

13 **Q. Do you have a recommendation to the Commission?**

14 A. Yes. The Commission should reject the inclusion of the SR in AEP Ohio’s
15 amended ESP as being premature.

16

17 **Q. Does this conclude your direct testimony?**

18 A. Yes.

²⁸See *In the Matter of the Commission’s Investigation of Submetering in the State of Ohio*, Case No. 15-1594-AU-COI.

²⁹ Direct Testimony of Moore at 12.

**OHIO POWER COMPANY'S RESPONSE TO
INTERSTATE GAS SUPPLY, INC.'S
DISCOVERY REQUEST
PUCO CASE NO. 16-1852-EL-SSO et al.
SECOND SET**

INTERROGATORY

IGS-INT-2-001 Pages 21-27 of Osterholt's testimony discuss the implementation of utility- owned microgrids installed in front of the meter. If AEP Ohio's current proposal is accepted by the PUCO, would AEP Ohio go back for additional PUCO approval once each specified microgrid project is identified in order to receive approval for each specific microgrid project?

RESPONSE

No, AEP Ohio would expect that the Commission's approval for the first eight to ten microgrids would allow for deployment of these microgrids without additional regulatory proceedings.

Prepared by: Scott S. Osterholt

**OHIO POWER COMPANY'S RESPONSE TO
INTERSTATE GAS SUPPLY, INC'S DISCOVERY REQUEST
PUCO CASE NO. 16-1852-EL-SSO and 16-1853-EL-AAM
FIRST SET**

INTERROGATORY

IGS-INT-1-004

Scott Osterholt's testimony addresses proposed microgrid development options as part of the Smart Columbus initiative on pages 21-22.

- a. Specify and provide an example of what is meant by the phrase "elect to have a Company-owned generator connected to the microgrid" found on page 22 line 12.
- b. Define Company-owned generator.
- c. Explain why generation assets, i.e. solar arrays, are necessary as part of the proposed microgrids.
- d. Would AEP Ohio consider using any other generation type outside of solar on the proposed microgrid projects?
- e. Would facilities involved in a microgrid project be required to bear a portion or the infrastructure or maintenance costs of the project?

RESPONSE

- a. A Company-owned generator would be an AEP Ohio owned generator that could be used to provide power when the renewable and energy storage components do not have sufficient capacity to power the loads of the facility. An example is a location with critical power needs 24 hours a day everyday. There could be cases where the amount of renewable generation and energy storage is not enough to provide all of the power and energy needed during non-daylight hours and cloudy daytime hours while islanded from the Company distribution circuit.
- b. A Company-owned generator would be an AEP Ohio owned generator that could be used to provide power when the renewable and energy storage components do not have sufficient capacity to power the loads of the facility.
- c. A microgrid must have some means of generating power and energy to serve the loads of the facility when it is islanded from the Company distribution circuit.
- d. Yes.
- e. The Company has proposed that microgrid deployment and maintenance costs associated with this proceeding would be included in the Distribution Technology Rider. If infrastructure costs are incurred by the customer, on the customer's property, then those costs would not be included in the rider.

Prepared by: Scott S. Osterholt

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing was served upon all parties of record via electronic mail on May 2, 2017.

/s/James D. Perko, Jr.
James D. Perko, Jr.

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Summary: Testimony Of John Seryak On Behalf Of The Ohio Manufacturers' Association Energy Group electronically filed by Mrs. Kimberly W. Bojko on behalf of OMA Energy Group