

AEP OHIO EXHIBIT NO. _____

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio)
Power Company for New Tariffs Related)
to Data Centers and Mobile Data Centers)

Case No. 24-508-EL-ATA

DIRECT TESTIMONY OF
MATTHEW S. MCKENZIE
ON BEHALF OF
OHIO POWER COMPANY

Filed May 13, 2024

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MATTHEW S. MCKENZIE

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1 AEP affiliates in state regulatory proceedings as in-house and external counsel.
2 (Although I am a licensed attorney, I am not testifying as to legal matters in this case.) In
3 February 2024, I began my current role as AEP Ohio’s Vice President – Regulatory &
4 Finance.

5 **II. PURPOSE OF TESTIMONY AND EXHIBITS**

6 **Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 A5. In this proceeding, AEP Ohio is proposing to establish two new classes of customers:
8 (1) data center customers and (2) cryptocurrency and other mobile (“crypto/mobile”) data
9 center customers. AEP Ohio is also proposing two new tariffs that would apply to each
10 new class of customer. The purpose of my testimony is to explain the policy behind our
11 proposal and to describe the specific provisions of the proposed tariffs.

12 **Q6. WHAT DO AEP OHIO’S OTHER WITNESSES ADDRESS?**

13 A6. In addition to my testimony, AEP Ohio’s proposal is supported by the testimony of:

- 14 • Lisa Kelso, Vice President of Customer Experience for AEP Ohio, provides
15 details about the growth of data centers and crypto/mobile data centers in AEP
16 Ohio’s service territory.
- 17 • Kamran Ali, Vice President of Transmission Planning and Analysis for the AEP
18 Service Corporation, describes the need for transmission investment to serve new
19 data center and crypto/mobile data center load.

20 **Q7. ARE YOU SUPPORTING ANY EXHIBITS?**

21 A7. Yes. I am supporting the following exhibits:

- 1 • Exhibit MSM-1: AEP Ohio’s proposed data center tariff,¹ Schedule DCP (Data
2 Center Power).
- 3 • Exhibit MSM-2: AEP Ohio’s proposed crypto/mobile data center tariff,²
4 Schedule MDC/FLT (Mobile Data Center/Flexible Load Tariff).
- 5 • Exhibit MSM-3: Process for conducting standard service offer (“SSO”) auctions
6 for data centers created by National Economic Research Associations, Inc.
7 (“NERA”), the consultant that conducts AEP Ohio’s SSO auctions.

8 **III. SUMMARY OF PROPOSAL AND POLICY**

9 **Q8. WHAT IS A DATA CENTER?**

10 A8. As defined in AEP Ohio’s proposed Schedule DCP, a data center is “a centralized facility
11 used for the management, storage, processing, and dissemination of data and information
12 through the use of computer systems, servers, networking equipment, and related
13 components.” (Exhibit MSM-1.) As discussed in greater detail below, AEP Ohio is
14 proposing to apply Schedule DCP to data centers with “an aggregate monthly maximum
15 demand of 25,000 kW or greater.” (*Id.*)

16 **Q9. COULD YOU PLEASE SUMMARIZE WHY AEP OHIO IS PROPOSING TO
17 CREATE NEW CUSTOMER CLASSES AND TARIFFS FOR DATA CENTERS?**

18 A9. AEP Ohio is proposing to create new customer classes and tariffs for data centers to
19 address the challenges that AEP Ohio and our customers face in serving these new
20 customers.

¹ When I say “data center tariff” in this testimony, I mean the proposed Schedule DCP (Data Center Power) attached as Exhibit MSM-1.

² When I say “crypto/mobile tariff” in this testimony, I mean the proposed Schedule MDC/FLT (Mobile Data Center/Flexible Load Tariff) attached to my testimony as Exhibit MSM-2.

1 First, AEP Ohio’s proposal is designed to mitigate the risk that transmission
2 infrastructure will be built for speculative data center projects, and when it comes time to
3 serve, the data center projects either will be cancelled or be using significantly less power
4 than they had planned. If this happens, more of the costs of the transmission buildout
5 will be borne by retail customers in the PJM region including AEP Ohio’s other
6 customers. As described below, AEP Ohio’s proposed data center tariffs will require data
7 centers to make long-term financial commitments – to have more *skin in the game* – to
8 mitigate the risk that transmission infrastructure will be built for data centers but not
9 needed.

10 Second, AEP Ohio’s data center tariff proposal is designed to keep AEP Ohio’s
11 service territory open for economic development. As described by Company witnesses
12 Ali and Kelso, data center growth has nearly used up available transmission capacity in
13 Central Ohio. Without requiring data centers to make long-term financial commitments
14 to support transmission investment, data center load growth could leave AEP Ohio with
15 insufficient transmission capacity to support the kind of ordinary, non-data-center
16 economic growth that creates jobs and powers Ohio’s economy. If the Commission
17 accepts AEP Ohio’s proposal to require data center customers to make long-term
18 financial commitments, that decision will support transmission investment to facilitate
19 *both* the growth of ordinary job-creating economic development *and* the growth of data
20 centers.

1 **Q10. COULD YOU PLEASE SUMMARIZE THE BACKGROUND OF AEP OHIO'S**
2 **PROPOSAL?**

3 A10. The recent growth of data center load in AEP Ohio's service territory is an unprecedented
4 phenomenon. As AEP Ohio witness Ali describes, existing peak demand in Central Ohio³
5 is approximately 4,000 MW, and this peak demand will likely more than *double* in the
6 coming years, driven in large part by new data center customers who have already signed
7 binding electric service agreements ("ESAs") with AEP Ohio to bring on approximately
8 5,000 MW of data center load by 2030. Beyond that, customers have expressed interest
9 in building additional data centers with more than 30,000 MW of load in the Central Ohio
10 portion of AEP Ohio's service territory.

11 With this new data center load growth comes new challenges. There is no RTO-
12 controlled generation in Central Ohio. This means that AEP Ohio must rely on the extra-
13 high-voltage ("EHV") transmission system to import power from generators located
14 elsewhere. As AEP Ohio witness Ali makes clear, AEP Ohio can import enough power
15 over the EHV backbone transmission system to serve the new data centers that have
16 signed ESAs to bring approximately 5,000 MW of data center load by 2030. But to serve
17 more data centers will likely require new EHV transmission lines to import large amounts
18 of additional energy to Central Ohio. According to Mr. Ali, building a new EHV
19 transmission line to Central Ohio could cost billions of dollars and take 7-10 years to
20 plan, design, site, and construct.

³ As AEP Ohio witness Ali explains, the Central Ohio transmission system means "the interconnected transmission system that encompasses the greater Columbus Area and its suburbs, stretching to the west through Marysville, north through Delaware, southwest through Grove City, east through Newark to the areas of Conesville and Dresden, and southeast to Lancaster."

1 This new transmission investment to support data centers should not begin
2 without assurances that the new data center customers will follow through with their
3 plans. If billions of dollars of new transmission investment were built for data centers but
4 not fully used, this would harm AEP Ohio's other customers through higher rates.

5 Commitments from data centers are also needed to make sure that new
6 transmission investment can happen under the PJM planning process. PJM transmission
7 investments are based on each transmission owner's load forecasts, as AEP Ohio witness
8 Ali explains. It can be risky, however, to include projected data centers in a load forecast
9 without commitments from customers that they will build their planned data centers and
10 use as much power as they say they will.

11 **Q11. WHY ARE AEP OHIO'S CURRENT TARIFFS INSUFFICIENT TO ADDRESS**
12 **THE PROBLEMS POSED BY NEW DATA CENTERS?**

13 A11. AEP Ohio's current tariffs are insufficient to address the challenges posed by new data
14 centers because they do not provide enough assurance that data centers will follow
15 through with their plans. For instance, AEP Ohio's current general service tariffs
16 contemplate one-year electric service contracts, with an "option" for AEP Ohio to require
17 a longer initial term.⁴ AEP Ohio's current general service tariffs also require contracts to
18 specify a "contract capacity" – that is, the maximum amount of power AEP Ohio will
19 deliver to the customer – and customers must pay minimum demand charges set at 60%
20 of contract capacity.

⁴ Ohio Power Company Tariffs, P.U.C.O. No. 21, Schedule GS (General Service), 3rd Revised Sheet No. 220-6.

1 The terms of the new tariffs AEP Ohio is proposing here will require new data
2 centers to make stronger commitments than those contemplated in AEP Ohio’s current
3 tariffs. Under the proposed tariffs, data centers would be required to commit to ten-year
4 electric service contracts. (There will be an option for data centers to exit the contract by
5 paying an “exit fee” after five years, which I discuss below.) Data centers also would be
6 required to pay minimum demand charges based on 90% of their contract capacity under
7 the proposed tariff, rather than 60% that would otherwise apply under the current general
8 service tariff. And crypto/mobile data centers would be required to pay minimum
9 demand charges based on 95% of their contract capacity.

10 These proposed data center tariff commitments, along with other terms I will
11 discuss below, will ensure that data centers make a binding financial commitment before
12 billions of dollars of transmission infrastructure is built to serve them. This will give data
13 centers *skin in the game* in the new transmission investment being made for their benefit.
14 It will allow the data center load to be included in load forecasts for transmission
15 planning and development. And it will protect AEP Ohio’s other customers, ensuring a
16 source of revenue even if the data centers are never built or are built but do not use as
17 much power as they originally asked for.

18 **Q12. WHY IS AEP OHIO PROPOSING TO CREATE NEW CUSTOMER CLASSES**
19 **FOR DATA CENTERS AS OPPOSED TO ALL LARGE LOADS?**

20 A12. AEP Ohio is proposing to create new customer classes for data centers because data
21 centers are unique customers who pose unique challenges, and the data center tariffs are
22 tailored to address those challenges. For one thing, the recent, massive load growth in
23 AEP Ohio’s service territory has been driven primarily by data centers, not other large

1 loads. As noted above, AEP Ohio has signed ESAs with customers planning to build
2 approximately 5,000 MW of data center load by 2030. Growth from other customers is
3 on a much smaller scale. Also, data centers are driving the potential over 30,000 MW of
4 future load growth. It is appropriate and prudent to seek commitments from data centers
5 to address the unique challenges that data centers themselves are creating.

6 Data centers also form a unique customer class because of the potential size of the
7 load at one location. As AEP Ohio witness Kelso explains in more detail, historically
8 AEP Ohio's largest customers have been large industrial facilities whose peak power
9 demand was in the range of a few hundred MW. Now AEP Ohio has had multiple
10 customers express interest in building data centers that plan to reach loads of 1,000 MW
11 or more. Data centers are also easily scalable in a way that large industrial facilities are
12 not. As a result, it is possible that the load figures we are seeing today are just the
13 beginning, and data center facilities could grow even larger in the future. AEP Ohio's
14 current tariffs were not designed with these large loads in mind, and there are limitations
15 in the current tariffs that AEP Ohio proposes to address with data-center-specific tariffs.

16 The newness of data centers also suggests a cautious, careful approach to this
17 class of customer. My understanding is that the more recent explosion in data center load
18 growth is driven primarily by recent developments in artificial intelligence ("AI"). Even
19 technology professionals struggle to predict what AI technology will be used for and how
20 it will evolve over time. Moreover, my understanding is that data center efficiency is
21 constantly improving, so the incredibly large loads data centers are projecting today may
22 be diminished in the future by efficiency gains. Because of this newness and uncertainty,
23 AEP Ohio believes it would be prudent to recognize that data centers are a unique

1 customer class presenting unique issues and risks that have not been seen before, and it
2 would mitigate those risks to require potential data center customers to make greater
3 commitments to follow through with their planned load growth.

4 A final reason for creating a special tariff for data centers is their unique economic
5 development impact. As AEP Ohio witness Kelso explains, although data centers grow
6 the economy through construction jobs and tax revenue, typically data centers create far
7 fewer *permanent* jobs than industrial customers of a similar size. Although it varies, my
8 understanding is that a typical data center might employ around 50 people permanently.
9 New manufacturing facilities, by contrast, often involve hundreds and even thousands of
10 new jobs while using the same (or often less) electricity. We need to make sure that data
11 centers do not use up AEP Ohio's capacity so that we have enough capacity available for
12 new job-creating businesses, large and small. Our proposed data center tariff would help
13 accomplish that goal by requiring data centers to make binding financial commitments to
14 support the construction of new capacity to serve them.

15 **Q13. DOES AEP OHIO HAVE AN OBLIGATION TO SERVE POTENTIAL DATA**
16 **CENTER CUSTOMERS?**

17 A13. Although I am an attorney, I am not testifying as to any legal matters in this case. That
18 said, I am advised by counsel that although AEP Ohio has a general obligation to serve all
19 customers within its service territory, that obligation does not require AEP Ohio to extend
20 service to customers in a way that would be unreasonable or unjust for AEP Ohio and its
21 other customers. AEP Ohio is proposing data center and crypto/mobile data center tariffs
22 in this proceeding to establish a mechanism by which AEP Ohio can fulfil its obligation

1 to serve new data center customers in a just and reasonable way that mitigates risk to
2 AEP Ohio and other customers.

3 **Q14. DOES AEP OHIO OPPOSE DATA CENTER DEVELOPMENT IN ITS SERVICE**
4 **TERRITORY?**

5 A14. No. AEP Ohio does not oppose the development of data centers, nor is AEP Ohio
6 attempting to impose unreasonable burdens on data centers. To the contrary, the purpose
7 of this filing is to *facilitate* data center growth in a rational and prudent way. Without
8 recognizing data centers as a unique customer class as we are proposing here, new data
9 center development cannot occur – as noted above, there is no way to separate committed
10 data center customers from speculative ones, and there are only limited means to protect
11 customers from the risk that data centers will not follow through with their planned load
12 growth. Our proposal here is meant to break this logjam and provide a reasonable path
13 forward to build infrastructure to serve data centers backed by long-term financial
14 commitments that mitigate the risks to AEP Ohio and its customers.

15 **Q15. ARE THE RISKS POSED BY DATA CENTERS UNIQUE TO CENTRAL OHIO?**

16 A15. No. As several prominent newspaper stories and editorials have recently laid out,⁵ the
17 problem of providing enough electricity to serve data center growth is a national concern.
18 To AEP Ohio’s knowledge, this proposal is one of the first to request that a state
19 regulatory commission recognize data centers as a unique class of retail customer and

⁵ See Patrick Sisson, *A.I. Frenzy Complicates Efforts to Keep Power-Hungry Data Sites Green*, N.Y. Times (Feb. 29, 2024), <https://www.nytimes.com/2024/02/29/business/artificial-intelligence-data-centers-green-power.html>; Evan Halper, *Amid Record High Energy Demand, America Is Running Out of Power*, Washington Post (Mar. 7, 2024), <https://www.washingtonpost.com/business/2024/03/07/ai-data-centers-power/>.

1 require data center customers to make long-term commitments to pay retail charges to
2 support new infrastructure and protect customers.

3 **Q16. WILL AEP OHIO'S PROPOSED DATA CENTER TARIFFS BENEFIT ITS**
4 **ENTIRE SERVICE TERRITORY?**

5 A16. Yes, the benefits of AEP Ohio's proposal in this proceeding are not limited to Central
6 Ohio. To the contrary, the growth of data centers can benefit everyone in AEP Ohio's
7 service territory, and everyone in Ohio. So far, most of the development of data centers
8 has been in the greater Central Ohio area, but AEP Ohio has seen some data centers
9 (mostly crypto/mobile data centers) locate outside of Central Ohio. Even if data centers
10 are located primarily in Central Ohio, moreover, their benefits radiate to all of Ohio.

11 For instance, one potential solution to address the data center load growth in
12 Central Ohio is to build a 765 kV transmission line from Southern Ohio to Central Ohio.
13 A 765 kV transmission line provides reliable, high-quality power to industries that rely on
14 electricity to produce their product. New load (not just data center load) could locate
15 anywhere along the new 765 kV line and tap into the benefits of reliable transmission.
16 This means that cities in Southern and Southeast Ohio like Athens, Chillicothe, and
17 Lancaster – and everywhere along the 765 kV route – would have a new source of
18 reliable, attractive power for potential new industries and other employers to tap into.

19 **IV. THE CURRENT SITUATION AND THE NEED FOR CHANGE**

20 **Q17. HAS AEP OHIO PREVIOUSLY SOUGHT COMMITMENTS FROM DATA**
21 **CENTERS?**

22 A17. Yes. AEP Ohio has signed Letters of Agreement (LOAs) and ESAs with customers for
23 approximately 5,000 MW of new data centers by 2030.

1 **Q18. WHAT IS AN LOA, AND WHAT DO THE CURRENT DATA CENTER LOAs**
2 **PROVIDE?**

3 A18. An LOA sets forth the costs that AEP Ohio expects to pay to build new distribution and
4 transmission equipment to serve the customer. The LOA requires the customer to
5 reimburse AEP Ohio for 100% of these buildout costs if the customer cancels its project
6 or delays the project past a specified date. The terms of an LOA are satisfied, and they
7 have no further effect, after a customer’s project is energized.

8 The LOA also requires the customer to sign a CIAC agreement in which the
9 customer agrees to pay 40% of the cost of distribution equipment installed to serve only
10 the customer. (The customer is not required to pay CIAC on the portion of the buildout
11 that serves multiple customers.) This CIAC payment is required by AEP Ohio’s tariff.⁶

12 **Q19. WHY IS AN LOA NOT SUFFICIENT TO SUPPORT THE TRANSMISSION**
13 **INVESTMENT NEEDED TO SERVE NEW DATA CENTERS?**

14 A19. LOAs by themselves are no longer sufficient for data centers because the scale of new
15 investment to serve data center load has gotten so large that a greater commitment –
16 beyond what can be required in an LOA – is needed from data centers to support the
17 investment.

18 LOAs were sufficient for the first approximately 5,000 MW of data center load
19 because AEP Ohio was (and is) serving these customers using existing EHV backbone
20 transmission capacity. Going forward, serving data centers will require large upgrades to
21 the EHV backbone transmission system. As AEP Ohio witness Ali explains, data centers

⁶ See generally Ohio Power Company Tariff, P.U.C.O. No. 21, Terms & Conditions of Service ¶ 10, 1st Revised Sheet Nos. 103-5 to -8 (“Extension of Local Facilities”).

1 are quickly using up the existing EHV transmission capacity in Central Ohio, and new
2 EHV transmission lines will likely be necessary before AEP Ohio can serve the additional
3 30,000 MW of data center load that has expressed interest in locating in AEP Ohio's
4 service territory.

5 LOAs by themselves are not adequate for this new kind of largescale transmission
6 system investment. A new 765 kV transmission line serving Central Ohio cannot be
7 attributed to any one data center. Rather, a new 765 kV transmission line would be
8 driven by the overall load growth driven by numerous data centers. LOAs are not
9 designed for this situation. LOAs require customers to reimburse AEP Ohio for the cost
10 of serving the customer if the customer cancels or significantly delays its project. But no
11 single data center can be asked to sign an LOA to reimburse AEP Ohio for the cost of a
12 multibillion-dollar 765 kV transmission line that is being built for numerous customers.

13 **Q20. CAN AEP OHIO USE ELECTRIC SERVICE AGREEMENTS (“ESAs”) TO**
14 **PROTECT AGAINST THE RISKS YOU’VE IDENTIFIED?**

15 A20. AEP Ohio *does* believe that appropriate ESAs are the solution for mitigating the risks
16 posed by data centers, but only if they incorporate the additional commitments under
17 AEP Ohio's proposed data center tariff, and only if they are executed before investments
18 are made to serve the data centers. ESAs under AEP Ohio's *current* tariff are insufficient
19 to mitigate the risks of building new EHV backbone transmission infrastructure to serve
20 the more than 30,000 MW of additional data center load that has expressed interest in
21 locating in Central Ohio.

1 **Q21. WHAT IS AN ESA, AND WHAT DO AEP OHIO’S CURRENT ESAs PROVIDE?**

2 A21. ESAs are a form of contract that AEP Ohio enters with new customers. Some new
3 customers sign both an LOA and an ESA, because they deal with different topics. An
4 LOA addresses the construction of equipment *before* the customer is energized; an ESA
5 addresses the ongoing electric service that AEP Ohio will provide *after* the customer is
6 first energized.

7 AEP Ohio enters into an ESA (which the tariff calls a “service contract” or just
8 “contract”)⁷ primarily to establish the customer’s “contract capacity” for an “initial term.”
9 The customer’s contract capacity is the amount of capacity that AEP Ohio is agreeing to
10 provide the customer.⁸ Under AEP Ohio’s tariffs, a customer’s minimum demand charges
11 can be no less than 60% of the customer’s contract capacity.⁹

12 The “initial term” of the ESA is defined under the current general service tariff as
13 one year, but AEP Ohio is provided an “option” to require a longer term.¹⁰ My
14 understanding is that AEP Ohio has infrequently entered into ESAs longer than 5 years
15 outside of the context of a Commission-approved reasonable arrangement. After the

⁷ Ohio Power Company Tariff, P.U.C.O. No. 21, Terms & Conditions of Service ¶ 2, 1st Revised Sheet No. 103-2 (“Electric service shall be made available to a prospective customer within this Company’s area of service upon request or execution of a contract therefore and its acceptance by an officer or authorized representative of the Company.”).

⁸ Ohio Power Company Tariff, P.U.C.O. No. 21, Schedule GS (General Service), 3rd Revised Sheet No. 220-6 (“The Company shall not be required to supply capacity in excess of that contracted for except by mutual agreement.”).

⁹ Precisely, the minimum demand for accounts over 100 kW on AEP Ohio’s General Service (GS) Tariff “shall be not less than 60% of the greater of (a) the customer’s contract capacity in excess of 100 kW, or (b) the customer’s previously established monthly billing demand during the past 11 months in excess of 100 kW.” Ohio Power Company Tariff, P.U.C.O. No. 21, Schedule GS (General Service), 3rd Revised Sheet Nos. 220-3 to -4.

¹⁰ Ohio Power Company Tariff, P.U.C.O. No. 21, Schedule GS (General Service), 3rd Revised Sheet No. 220-6.

1 “initial term,” the contract “will be self-renewing and may be modified or cancelled by
2 either party with 30 days’ written notice to the other of the intention to alter service under
3 the terms of this schedule.”¹¹

4 **Q22. WHY ARE ESAs UNDER AEP OHIO’S CURRENT TARIFF INSUFFICIENT TO**
5 **MITIGATE THE RISKS OF NEW DATA CENTER LOAD?**

6 A22. ESAs under AEP Ohio’s current tariffs do not contemplate the kind of commitment
7 needed from customers to support largescale transmission buildout to serve data center
8 load. For one thing, to support buildout of transmission infrastructure for data center
9 load, customers need to sign up for more than just one year (or even five years) of electric
10 service. Transmission assets are long-lived and recovered in rates over time – often 40-
11 60 years or longer. Data centers would not pay their share of new transmission buildouts
12 – to the detriment of other customers – if they were to take service for a few years and
13 then close their doors and end their contribution to transmission costs. In addition, even
14 for a customer that has a five-year ESA term, AEP Ohio’s current tariffs do not require a
15 credit facility or other security ensuring that the customer will pay the minimum charge
16 for the full term.

17 ESAs under the current tariff are also insufficient because the current minimum
18 demand charges under the tariff – approximately 60% of contract capacity – are
19 inadequate for the substantial investment needed to serve data centers. If a data center
20 comes online and uses less power than it planned, it will not make sufficient
21 contributions to the cost of new transmission infrastructure built to serve it. For example,
22 under the current tariff, a 500 MW data center’s minimum demand charge for purposes of

¹¹ *Id.*

1 transmission charges is only 60%, or 300 MW. Under AEP Ohio’s current transmission
2 rates, that would be approximately \$26.8M annually.¹² Yet if the data center had used the
3 total amount it had promised (500 MW), its transmission charges would be
4 approximately \$44.7M annually.¹³ The difference between 100% of contract capacity
5 and 60% of contract capacity in this example is \$17.9M.¹⁴

6 AEP Ohio needs a different mechanism to ensure that if a customer signs up for
7 500 MW of contract capacity, and transmission capacity is built to accommodate that
8 entire amount, the customer must pay transmission rates based on more than 60% of its
9 contract capacity.

10 **V. DATA CENTER TARIFF – MAIN PROVISIONS**

11 **Q23. PLEASE SUMMARIZE THE MAIN COMPONENTS OF AEP OHIO’S DATA**
12 **CENTER TARIFF.**

13 A23. AEP Ohio’s proposed data center tariff – called “Schedule DCP (Data Center Power)” –
14 is attached to my testimony as Exhibit MSM-1. The four most important provisions in
15 the tariff are the minimum demand provision, the required “initial term” of the ESA, the
16 “exit fee,” and the required credit security.

¹² AEP Ohio recovers transmission costs through the Basic Transmission Cost Rider (“BTCR”). The current BTCR rates for General Service Transmission customers are \$7.45/kW (demand) and \$0.0005702/kWh (energy). Ohio Power Tariff, P.U.C.O. No. 21, Basic Transmission Cost Rider, 3rd Revised Sheet No. 400-1. The value of \$26.8M in my testimony above is a simplified estimate using only the demand portion of the BTCR rates, since the BTCR demand charge represents the vast majority of a GS Transmission customer’s total charges (assuming the customer receives generation supply from a CRES provider). For simplicity, I am also calculating minimum charges based on the full contract capacity, rather than the capacity “in excess of 100 kW,” since the difference is not significant to my illustration of the magnitude of charges. The calculation is $500,000 \text{ kW} * 60\% * \$7.45/\text{kW-month} * 12 \text{ months/year} = \26.8M/year .

¹³ $500,000 \text{ kW} * 100\% * \$7.45/\text{kW-month} * 12 \text{ months/year} = \44.7M/year .

¹⁴ $\$44.7\text{M} - \$26.8\text{M} = \$17.9\text{M}$

1 **Q24. WHAT IS THE MINIMUM DEMAND PROVISION, AND WHAT IS ITS**
2 **PURPOSE?**

3 A24. AEP Ohio’s proposed Schedule DCP provides that data center customers’ minimum
4 demand will be 90% of their contract capacity or the customer’s highest previously
5 established monthly transmission billing demand during the past 11 months. This is an
6 increase from Schedule GS, which, as discussed above, establishes a minimum demand
7 of approximately 60%. In the example I provided above, a 500 MW data center’s
8 minimum transmission charges under Schedule GS would be based on 300 MW (60%),
9 which is approximately \$26.8M annually under AEP Ohio’s current rates.¹⁵ Under the
10 proposed data center tariff, the minimum transmission charges would be based on 450
11 MW (90%), which is approximately \$40.2M annually under AEP Ohio’s current rates.¹⁶
12 Under the proposed tariff, the 90% minimum demand charge would leave \$13.4M less
13 exposure per year¹⁷ (\$134M over a ten-year contract) than the current general service
14 tariff.

15 **Q25. WHAT IS THE “INITIAL TERM” OF THE ESA ESTABLISHED IN THE DATA**
16 **CENTER TARIFF, AND WHAT IS ITS PURPOSE?**

17 A25. AEP Ohio’s proposed Schedule DCP provides that AEP Ohio and data center customers
18 must enter into “contracts” – meaning ESAs – with an initial term of ten years. The tariff
19 also states that AEP Ohio may, “at its option, require a longer initial term of contract if
20 substantial additional investments are made in order to serve the customer.”

¹⁵ See footnote 12.

¹⁶ 500,000 kW * 90% * \$7.45/kW-month * 12 months/year = \$40.2M/year.

¹⁷ \$40.2M – \$26.8M = \$13.4M.

1 The purpose of these provisions is to ensure that data centers are making *long-*
2 *term* commitments to support the investment needed to serve them. As noted above, the
3 transmission and other investments that must be built to support data centers are long-
4 lived assets that will be recovered in rates over many years. If a data center were to come
5 online but close after only a couple years of operating, the investments made to serve the
6 data center would continue to be reflected in AEP Ohio’s rates without any revenue from
7 the data center. The proposed ten-year ESA term mitigates this risk for AEP Ohio and its
8 other customers.

9 **Q26. WHAT IS THE “EXIT FEE”?**

10 A26. The proposed Schedule DCP also contains an “exit fee” provision that gives data center
11 customers a way to terminate the ESA before the end of the initial ten-year term.
12 Specifically, the proposed tariff provides that a customer may cancel the ESA after five
13 years if the customer pays an “exit fee” equal to three years of minimum charges.

14 The purpose of the exit fee is to provide a small amount of relief to data center
15 customers whose plans drastically change and can no longer go through with their data
16 center commitments, while simultaneously protecting the rest of AEP Ohio’s customers.
17 Even with the exit fee, data centers will still face strong incentives to follow through with
18 their plans, and they will be required to make substantial contributions to the cost of the
19 infrastructure built to serve them. For instance, if a data center were to exercise the
20 option to terminate the ESA at the first opportunity (*i.e.*, five years after the ESA began),
21 the customer would still be required to pay, in total, eight years of 90% minimum demand
22 charges (five years of minimums under the ESA plus three years’ worth of minimums in

1 the exit fee). Continuing the 500 MW example from above, eight years of 90%
2 minimums is approximately \$321.8M in transmission demand charges.¹⁸

3 **Q27. ARE THE PROVISIONS OF THE DATA CENTER TARIFF ESTABLISHING A**
4 **90% MINIMUM DEMAND AND TEN-YEAR CONTRACT (WITH EXIT FEE)**
5 **MEANT TO FULLY RECOVER THE COST OF INVESTMENT TO SERVE THE**
6 **CUSTOMER?**

7 A27. No. The 90% minimum demand and ten-year contract (with exit fee) provisions are not
8 meant to perfectly align with investment cost recovery. Instead, those proposed
9 provisions are meant to provide potential data center customers substantial *skin in the*
10 *game*. That is, they are meant to provide data center customers a strong incentive to
11 follow through with their planned developments.

12 AEP Ohio's intent is to strike a balance between two competing interests. On the
13 one hand, the data center tariff commitments should be high enough that they provide
14 strong incentives for data centers to follow through with their plans. The commitments
15 should also be high enough that they provide substantial offsetting revenue to pay for
16 necessary investments. On the other hand, the data center tariff commitments should not
17 be so high that they stifle data center development and make it impossible for data
18 centers to agree to.

19 **Q28. ARE THERE ANY OTHER REASONS FOR THE 90% MINIMUM DEMAND**
20 **AND TEN-YEAR CONTRACT TERM?**

21 A28. Yes. These provisions will help AEP Ohio (and all stakeholders) determine how much
22 investment will be needed to serve data centers in AEP Ohio's service territory.

¹⁸ 500,000 kW * 90% * \$7.45/kW-month * 12 months/year * 8 years = \$321.8M.

1 **Q29. HOW WILL THE 90% MINIMUM DEMAND AND TEN-YEAR CONTRACT**
2 **TERM HELP DETERMINE HOW MUCH INVESTMENT WILL BE**
3 **NECESSARY?**

4 A29. As I mentioned above, transmission investment in AEP Ohio's service territory is subject
5 to PJM's transmission planning processes. As described by AEP Ohio witness Ali, PJM's
6 transmission planning is based primarily on the load forecasts created by AEP and other
7 transmission owners in PJM. Currently, AEP Ohio has limited ability to distinguish
8 customers who are merely speculating on potential data center investments from
9 customers who are willing to make long-term financial *commitments* to data center
10 investments. As a result, AEP's load forecast used for PJM planning processes currently
11 does not include the 30,000 MW of *potential* data center load, since it is likely that some
12 portion of this load will not be realized.

13 The 90% demand and ten-year contract provisions will help solve this problem by
14 requiring data center contracts to make long-term financial commitments. Once a
15 potential data center customer signs a ten-year ESA for a specific contract capacity, it is
16 far more certain that the customer will actually follow through with its data center plans,
17 since it will be required to pay for 90% contract minimums even if it cancels the project
18 or uses less than 90% of its contract capacity. Potential data center customers whose
19 plans are more speculative, by contrast, will be unlikely to make the long-term
20 commitment in a ten-year ESA. Loads that are backed by ESAs, therefore, can be
21 included in AEP's load forecast and the PJM transmission planning process. This will
22 allow AEP and other stakeholders to plan for and execute the new transmission
23 investment needed to serve the committed data centers.

1 **Q30. IF THE DATA CENTER TARIFFS ARE APPROVED, WHEN WILL AEP OHIO**
2 **ASK POTENTIAL DATA CENTER CUSTOMERS TO SIGN ESAs?**

3 A30. Under AEP Ohio’s proposal, AEP Ohio will ask new data center customers to sign ESAs
4 before transmission infrastructure is built to serve the data center’s load. Immediately
5 after the data center tariff is approved, AEP Ohio will reach out to the 30,000 MW of
6 potential customers who have told AEP Ohio they have an interest in building a data
7 center in AEP Ohio’s service territory. AEP Ohio will ask these potential customers
8 whether they are willing to sign a ten-year commitment under the data center contract.
9 AEP Ohio expects that many potential data center customers *will* be willing to make this
10 commitment and will sign the ESA, but there will likely be some customers who will not
11 sign because their interest in building a data center has passed or was speculative to begin
12 with.

13 AEP Ohio does not know how many MW of data center customers will sign a ten-
14 year ESA under the proposed data center tariff, but once that figure is known, the process
15 of planning necessary transmission investment can begin. As AEP Ohio witness Ali
16 explains, there will likely be different transmission solutions based on how much load is
17 committed through ESAs. A 5,000 MW commitment may be able to be served relatively
18 quickly with a certain level of transmission investment. A 15,000 MW commitment, on
19 the other hand, may necessitate a multiyear planning and building process and cost
20 significantly more or require that generation resources be required as part of the solution.

21 The point for now is that this transmission planning work cannot be done without
22 long-term financial commitments from data centers that they will be built and will use as
23 much power as they are planning to use. The 90% minimum demand and ten-year

1 contract term provisions of the data center tariff will provide the means to achieve those
2 commitments and move forward in a balanced and reasonable fashion.

3 **Q31. AFTER POTENTIAL DATA CENTER CUSTOMERS SIGN TEN-YEAR ESAs**
4 **UNDER THE PROPOSED TARIFFS, WILL THE DATA CENTER CUSTOMERS**
5 **ALSO SIGN LOAs?**

6 A31. Yes. Data centers will sign ten-year ESAs at the beginning of the process of locating in
7 AEP Ohio’s service territory, and as I’ve described, this will allow largescale EHV
8 transmission investment to be made to serve these customers. Once that EHV
9 transmission investment has been made and there is sufficient capacity on the EHV
10 backbone transmission system to serve the customer, AEP Ohio and the customer will
11 sign an LOA in the usual way to cover any *customer-specific* buildout needed. For
12 example, an LOA might be needed to address the construction of a radial line from a
13 substation to the specific location of the customer’s data center. Data center customers
14 will also sign CIAC agreements in the usual way.

15 To make this process clear, the proposed data center and crypto/mobile data center
16 tariffs expressly state that “nothing in this Schedule limits the requirement that a
17 customer sign a Letter of Agreement or Contribution in Aid of Construction agreement
18 for customer-specific investment.”

19 **Q32. WHAT IS THE CREDIT SECURITY PROVISION?**

20 A32. A data center customer that declares bankruptcy or otherwise becomes insolvent during
21 the time it takes to build infrastructure to serve them – or during the term of its ten-year
22 ESA – will be unable to follow through on its obligation to make minimum payments
23 under the ESA. This will cause harm customers in precisely the way the data center tariff

1 is meant to avoid – transmission assets will be built for the now-insolvent data center
2 customer, yet it will be other customers who will bear the cost of the investment through
3 increased rates.

4 To mitigate this risk, AEP Ohio is proposing to require data center customers who
5 have credit ratings less than A- from S&P Global Inc. (“S&P) and A3 from Moody’s
6 Corporation (“Moody’s”) to provide a parent guarantee or collateral in the form of a letter
7 of credit or cash equal to 50% of the customer’s minimum charges under the ESA. The
8 amount of collateral will be calculated based on AEP Ohio’s rates at the time the ESA is
9 signed.

10 **Q33. WHY IS AEP OHIO PROPOSING THIS LEVEL OF COLLATERAL?**

11 A33. As with other parts of the data center tariff filing (*e.g.*, the ten-year ESA term and 90%
12 minimum demand), the credit security proposal is meant to strike a balance between
13 competing interests. On the one hand, the credit security must be high enough that it
14 provides both a strong incentive for data center customers to follow through with their
15 commitments and substantial revenue if a data center signs an ESA but then becomes
16 insolvent. On the other hand, the credit security should not be so financially onerous that
17 it stifles data center development.

18 The balance AEP Ohio is attempting to strike in the credit security requirement is
19 analogous to the balance struck in AEP Ohio’s Commission-approved tariffs regarding
20 CIAC.¹⁹ CIAC applies to customer-specific equipment that AEP Ohio installs to extend
21 service to a new customer. A customer’s CIAC requirement is to pay 40% of these

¹⁹ To be clear, the credit security is unrelated to CIAC, which data centers would still be responsible for under AEP Ohio’s ordinary CIAC rules; this is just an analogy.

1 incremental customer-specific costs, whereas 60% of the costs are included in AEP
2 Ohio's overall cost of service and eventually reflected in rates for *all* customers. The
3 40% level of CIAC is calibrated so that new customers make a meaningful contribution
4 to the cost of new service, but at the same time, all other customers share in the
5 remainder of the cost (60%) of extending new service. This is based in part on the
6 understanding that the new customer's charges over time will continue to contribute to
7 AEP Ohio's cost of service and lower rates for everyone else. Likewise, the cost of the
8 credit security requirement is calibrated so that each data center will make a meaningful
9 contribution toward the risk that it will become insolvent before it can follow through
10 with its obligations under the ESA. At the same time, all other customers will share in
11 the remainder of the risk on the assumption that many data centers will fulfill their ESA
12 obligations and continue to make contributions to AEP Ohio's cost of service for far
13 longer than the ten-year term of the ESA.

14 **Q34. WILL EXISTING DATA CENTER PROJECTS BE SUBJECT TO THE TERMS**
15 **AND CONDITIONS OF THE PROPOSED TARIFF?**

16 A34. As noted above and supported in AEP Ohio witness Kelso's testimony, there are
17 approximately 5,000 MW of data center projects for which AEP Ohio has already signed
18 LOAs and ESAs. Although AEP Ohio is proposing that the Commission recognize data
19 centers as a new class of customer, AEP Ohio is proposing that any currently signed
20 ESAs with data centers remain in force, and that these customers not be required to sign
21 new ten-year ESAs under the proposed data center tariffs when the proposed tariffs are
22 approved. A reason for exempting these existing customers from the ten-year ESA
23 requirement is that AEP Ohio has been able to serve these customers using existing EHV

1 backbone transmission capacity and without large-scale investment to the EHV
2 transmission network. As a result, the impact on other customers if these initial data
3 centers fail to follow through with their commitments is lower than the potential impact
4 on other customers if the next tranche of 30,000 MW of potential data center customers
5 fails to follow through with their commitments.

6 **Q35. WHEN WILL THE INITIAL TERM OF THE ESA START?**

7 A35. The ten-year ESA would begin when AEP Ohio first energizes the data center facility.
8 For some customers, this may be several years after first signing the ESA and committing
9 to build a data center. This is because, as noted above, the transmission planning and
10 investment process cannot begin until we first pin down exactly how many data centers
11 are making firm commitments, where they will be located, and what their loads will be.
12 In most cases, AEP Ohio will be unable to provide a firm “start date” in the ESA, since
13 there are so many variables involved in the transmission planning and building process.
14 If relatively small transmission investments are needed, the start date could be relatively
15 soon. But if a new 765 kV transmission line must be built to bring large amounts of
16 power from other parts of PJM, it could be 7-10 years until the customer is energized and
17 the ESA begins. This timing risk is inherent in the process of building transmission
18 assets to serve potential data center load, and it is a risk that data centers must consider
19 carefully before signing ESAs under the proposed data center tariff.

1 **VI. DATA CENTER TARIFF – ADDITIONAL PROVISIONS**

2 **Q36. HOW DOES THE PROPOSED DATA CENTER TARIFF DEFINE “DATA**
3 **CENTER”?**

4 A36. As I noted above, the proposed data center tariff defines a data center as “a centralized
5 facility used for the management, storage, processing, and dissemination of data and
6 information through the use of computer systems, servers, networking equipment, and
7 related components that has an aggregate monthly maximum demand of 25,000 kW or
8 greater.” AEP Ohio has proposed to limit the applicability of the data center tariff to
9 loads greater than 25 MW because these are the large loads that are driving the need for
10 capacity investment. Data centers with peak demand less than 25 MW are much more
11 likely to be served with existing infrastructure.

12 **Q37. WHAT RATES WILL CUSTOMERS PAY UNDER SCHEDULE DCP?**

13 A37. The base rates sets forth in the proposed Schedule DCP – including the distribution
14 demand charge, excess reactive demand, and customer charge – are the same as the rates
15 that customers pay under AEP Ohio’s Schedule GS (General Service). Additionally, as
16 with Schedule GS customers, customers served under Schedule DCP must pay all
17 applicable riders, including AEP Ohio’s Basic Transmission Cost Rider (“BTCR”).

18 **Q38. HOW WILL DATA CENTERS RECEIVE GENERATION SERVICE?**

19 A38. Under the proposed Schedule DCP and Schedule MDC/FLT (discussed in greater detail
20 below), customers may shop for generation supply service from a competitive retail
21 electric supply (“CRES”) provider. AEP Ohio expects that all data center customers will
22 choose to be supplied by a CRES provider.

1 If, however, a customer served under Schedules DCP or MDC/FLT elects not to
2 shop, AEP Ohio proposes to conduct a special SSO auction for data center customers.
3 The details of this proposal can be found on Exhibit MSM-3 attached to my testimony.
4 The proposed data center SSO auction process in Exhibit MSM-3 was created by NERA,
5 the consultant that runs AEP Ohio’s SSO auctions. AEP Ohio proposes to conduct a
6 separate SSO auction for data centers because including data center load in the regular
7 SSO auction could add unacceptable risk and complications for participating suppliers,
8 thus increasing prices for all SSO customers.

9 **Q39. WILL THERE BE ANY MECHANISM FOR DATA CENTERS TO RAMP UP**
10 **THEIR LOAD GRADUALLY, LEADING TO FULL CAPACITY?**

11 A39. Yes, under the proposed data center tariff, data centers may propose a “load ramp” in
12 which they gradually increase their load over three years. During the load ramp period,
13 the data center’s minimum demand will be 90% of the contract capacity for the year. For
14 example, if a data center establishes a load ramp of 100 MW in Year 1, 250 MW in Year
15 2, and 500 MW in Year 3, the data center’s minimum demand in Year 1 would be 90 MW
16 (90% of 100 MW). All data centers must pay minimum charges based on 90% of their
17 full contract capacity beginning in Year 4 of their ESA.

18 **Q40. ARE THERE ANY PROTECTIONS AGAINST DATA CENTERS INTERFERING**
19 **WITH AEP OHIO’S ELECTRIC GRID?**

20 A40. Yes. The potential of large data center loads to cause disruptions on the electric grid is a
21 developing issue that AEP Ohio takes seriously. AEP Ohio will continue to study the
22 potential for data centers to fluctuate load and cause imbalanced or unacceptable system
23 frequencies on the grid (sometimes called “pulsing”). For now, the proposed data center

1 tariffs address this issue by requiring that the customer “will follow all applicable
2 technical operating requirements, such as not intentionally or unintentionally cycling load
3 in a way that creates an imbalanced or unacceptable system frequency, and other
4 requirements that will be maintained and periodically updated for the safety of the larger
5 system.” The proposed data center tariff also gives AEP Ohio the “right to disconnect” if
6 the data center engages in “any activities outside of the technical requirements.”

7 **VII. MOBILE DATA CENTER/FLEXIBLE LOAD TARIFF**

8 **Q41. PLEASE DESCRIBE AEP OHIO’S PROPOSED MOBILE DATA**
9 **CENTER/FLEXIBLE LOAD TARIFF.**

10 A41. In addition to the data center tariff, Schedule DCP (Data Center Power), AEP Ohio is also
11 proposing a separate tariff, Schedule MDC/FLT (Mobile Data Center/Flexible Load
12 Tariff), attached as Exhibit MSM-2, that would apply to crypto/mobile data centers of 1
13 MW or more. Schedule MDC/FLT is substantially similar to Schedule DCP and
14 addresses many of the same issues while also addressing additional issues unique to this
15 category of customers.

16 **Q42. WHAT IS CRYPTOCURRENCY MINING?**

17 A42. Cryptocurrency mining is the process of creating new tokens of cryptocurrency by using
18 powerful computers to solve complex mathematical problems. Cryptocurrency mining
19 often uses a large amount of electricity.

20 Cryptocurrency is digital medium of exchange in which new units of exchange
21 are created by a decentralized digital methodology instead of being issued by
22 governments or banks. Cryptocurrency is exchanged using a blockchain, a system in
23 which many computers linked together in a network record and verify transactions.

1 **Q43. HOW DOES THE PROPOSED SCHEDULE MDC/FLT DEFINE THE**
2 **CUSTOMERS WHO WILL BE SERVED UNDER THE TARIFF?**

3 A43. The proposed crypto/mobile tariff, Schedule MDC/FLT (Mobile Data Center/Flexible
4 Load Tariff), defines eligible customers as those operating “a centralized facility used for
5 the management, storage, processing, and dissemination of data and information
6 (including mining of cryptocurrency) through the use of computer systems, servers,
7 networking equipment, and related components . . . and has load that is portable and/or
8 distributable, including but not limited to structures that are not affixed to the ground or
9 easily removed from a location.”

10 **Q44. HOW MUCH POWER DEMAND MUST A CUSTOMER HAVE TO BE SERVED**
11 **UNDER SCHEDULE MDC/FLT?**

12 A44. In contrast to the data center tariff, which applies to loads greater than 25 MW, the
13 proposed crypto/mobile tariff applies to data center loads greater than 1 MW. This lower
14 threshold is justified by the increased risks posed by crypto/mobile data centers. Whereas
15 typically data centers are permanent installations in which customers invest considerable
16 capital, mobile data center loads (such as cryptocurrency mining operations) involve
17 mobile infrastructure that the customer can move to another location. My understanding
18 is that often self-contained data center facilities can be installed in cargo containers and
19 quickly moved by trucks. Crypto mining containers can have power demand of between
20 1 and 2.5 MW. These mobile designs amplify the risk that these data centers will not
21 “show up” or will not use as much load as they promise. Accordingly, by proposing to
22 include all mobile data center operations above 1 MW on Schedule MDC/FLT, AEP Ohio

1 is effectively seeking to apply the restrictions in the tariff to *all* crypto/mobile data
2 centers.

3 **Q45. WHAT ARE OTHER WAYS THAT SCHEDULE MDC/FLT DIFFERS FROM**
4 **SCHEDULE DCP?**

5 A45. Schedule MDC/FLT is similar to Schedule DCP with a couple important exceptions.

6 First, Schedule MDC/FLT requires customers to commit to 95% of their contract capacity
7 as minimum demand for the term of the ten-year contract. Second, Schedule MDC/FLT
8 requires that potential mobile data center customers provide “a sworn statement, under
9 penalty of perjury, that neither the customer nor its corporate parent or affiliates are
10 affiliated with or acting on behalf of any foreign adversary as defined in 15 C.F.R. § 7.4.”

11 This requirement is based on widespread concerns that Chinese and other foreign-
12 affiliated cryptocurrency mining operations threaten national security and could be used
13 to intentionally disrupt the electric grid.²⁰

14 **VIII. CONCLUSION**

15 **Q46. COULD YOU PLEASE SUMMARIZE AEP OHIO’S REQUEST IN THIS**
16 **PROCEEDING?**

17 A46. As described above, and in the testimonies of AEP Ohio witnesses Ali and Kelso, the
18 unprecedented growth of data center load in AEP Ohio’s service territory has created unique
19 challenges that must be addressed by AEP Ohio, its customers and stakeholders, and the
20 Commission. We believe the proposed data center tariff and crypto/mobile data center
21 tariff provide rational, reasonable answers to these challenges that will facilitate data

²⁰ See Gabriel J.X. Dance & Michael Forsythe, *Across U.S., Chinese Bitcoin Mines Draw National Security Scrutiny*, N.Y. Times (Oct. 18, 2023), available at <https://www.nytimes.com/2023/10/13/us/bitcoin-mines-china-united-states.html>.

1 center growth while mitigating risks for customers. AEP Ohio respectfully requests that
2 the Commission recognize data centers and crypto/mobile data centers as new classes of
3 customers and approve the proposed tariffs.

4 **Q47. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A47. Yes.

OHIO POWER COMPANY

Original Sheet No. ###-1

P.U.C.O. NO. 21

Schedule DCP
(Data Center Power)

Definitions

For purposes of this schedule:

“Contract” means the service agreement entered into by the customer and the Company in accordance with this schedule.

“Contract Capacity” means the customer specified amount of monthly peak load requirements for each month as set forth in the contract for service.

“Data Center” means a centralized facility used for the management, storage, processing, and dissemination of data and information through the use of computer systems, servers, networking equipment, and related components that has an aggregate monthly maximum demand of greater than 25,000 kW.

“Single Location” refers to an area that is owned, operated, or leased by the Data Center customer which can include a contiguous lot to the area with the customer’s metering point may be considered the customer-generator’s premises regardless of easements, public thoroughfares, transportation rights-of-way, or utility rights-of-way, so long as it would not create an unsafe or hazardous condition. If the customer facility operates one or more Mobile Data Centers and Data Centers at the same location, Mobile Data Center/Flexible Load Tariff will apply to all electric distribution service provided to that customer account.

“Load Ramp Contract Capacity” means the mutually agreed monthly peak load requirements associated with the Load Ramp Period.

“Load Ramp Period” refers to the time of commencement of service until the customer reaches full contract capacity, which shall not exceed three years.

Availability of Service

Service pursuant to this schedule is available for general service to customers that operate a Data Center that will use, within the initial contract term, a monthly maximum demand of greater than 25,000 kW at a Single Location. If the customer operates one or more Mobile Data Centers and Data Centers at a Single Location, Mobile Data Center/Flexible Load Tariff will apply to all electric distribution service provided for that customer account. If the customer facility operates one or more Data Centers and has non-Data Center load (that would otherwise be billed under the General Service Tariff) at a Single Location, Data Center Power Tariff will apply to all electric distribution service provided for that customer account. Customers qualifying for this schedule that execute an electric service agreement with the Company or expand their current contracted capacity after the effective date of this tariff are required to take service under this schedule and will not be permitted to take service under other general service tariffs.

This schedule shall also apply to multiple Data Centers owned by a common parent company at a single location interconnected with the Company’s system within a 24-month period having an aggregate monthly maximum demand of greater than 25,000 kW.

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Marc Reitter, President
AEP Ohio

OHIO POWER COMPANY

Original Sheet No. ###-2

P.U.C.O. NO. 21

Schedule DCP
(Data Center Power)

The terms and conditions of service under this this schedule shall apply upon a request for service by an eligible customer but service to customers under this schedule will not commence until the Company has sufficient capacity to meet the contractual load requirements.

Monthly Rate

<u>Schedule Code</u>	<u>Service Voltage</u>	<u>Distribution Demand Charge (\$/kW)</u>	<u>Excess Reactive Demand (\$/kVA)</u>	<u>Customer Charge (\$)</u>
<u>###</u>	<u>Secondary</u>	<u>\$7.01</u>	<u>\$1.25</u>	<u>\$9.40</u>
<u>###</u>	<u>Primary</u>	<u>\$6.33</u>	<u>\$1.21</u>	<u>\$138.50</u>

<u>Schedule Code</u>	<u>Service Voltage</u>	<u>Distribution Demand Charge (\$/kW)</u>	<u>Excess Reactive Demand* (\$/kVAR)</u>	<u>Customer Charge (\$)</u>
<u>###</u>	<u>Transmission</u>	<u>--</u>	<u>\$0.70</u>	<u>\$3,600</u>

*For each kVAR of reactive demand, leading or lagging, in excess of 50% of the kW metered demand.

Minimum Charges

The minimum monthly charge under this schedule shall be the sum of the customer charge, the product of the distribution demand charge and the monthly distribution billing demand, and all Commission-approved riders shown on Sheet Number 104-1.

Monthly Billing Demand

Billing demand in kW shall be taken each month as the single highest 30-minute integrated peak in kW as registered during the month by a 30-minute integrating demand meter or indicator, or at the Company's option, as the highest registration of a thermal-type demand meter. The customer will have no more than the Load Ramp Period to reach full contract capacity, during which time monthly billing demand shall not be less than 90% of the customer's Load Ramp Contract Capacity. After the Load Ramp Period, monthly billing demand established hereunder shall not be less than 90% of the greater of (a) the customer's Contract Capacity, or (b) the customer's highest previously established monthly billing demand during the past 11 months. Unless otherwise mutually agreed by the Company and the customer, the customer shall be billed under the provisions of this tariff using the Contract Capacity during all months of the initial term of contract should the customer fail to energize service. The monthly billing demand defined hereunder shall apply for purposes of billing under all applicable riders, regardless of any conflicting provision in the rider.

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AEP Ohio

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Original Sheet No. ###-3

P.U.C.O. NO. 21

Schedule DCP
(Data Center Power)

Delayed Payment Charge

Bills are due and payable in full by mail, checkless payment plan, electronic payment plan or at an authorized payment agent of the Company within 21 days after the mailing of the bill. On all accounts not paid by the due date, an additional charge of 2.5% of the unpaid balance will be due. Federal, state, county, township and municipal governments and public school systems not served under special contract are subject to the Public Authority Delayed Payment provision, Supplement 21.

Applicable Riders

Monthly Charges computed under this schedule shall be adjusted in accordance with the Commission-approved riders on Sheet Number 104-1 that apply to Demand Metered commercial and industrial service. Nothing in this tariff excepts eligible customers from other riders or applicable tariffs.

Generation Service

Customers receiving service under this schedule may select competitive service from a CRES Provider or Standard Offer Service. The Company requires that Company-owned metering be installed to monitor the customer's load. A customer that selects Standard Service Offer or is dropped to the Standard Service Offer by a CRES Provider, will be served through a separate standard service offer product procured in an auction, and the customer's load will not be served by the default standard service offer.

The Company will serve a customer receiving Standard Service Offer under this schedule and procure supply for such customers in PJM-administered markets until the auction is held or if the auction is not successful (i.e. no bids are evaluated or no bids are approved by the Commission). A customer receiving Standard Service Offer under this schedule must provide written notice to the Company to switch to a CRES Provider at least sixty (60) calendar days before the end of the supply period covered by an auction or the period for which the customer must stay on the standard service will be extended 6 months and a subsequent auction will be held to procure standard service for the customer's load. The customer must stay on the standard service for the period from when the customer begins receiving Standard Service Offer under this schedule through the supply period for the product procured in the auction. The Company will provide information about any upcoming auction including the timeline and auction process details to procure the standard service offer product on the following site: <https://aepohiocbp.com/>.

Transmission Service

Customers receiving service under this schedule shall pay the charges established for Demand Metered Service under the Basic Transmission Cost Rider.

Terms of Contract

Contracts under the Schedule shall be made for an initial period of not less than 10 years including the Load Ramp Period leading up to full Contract Capacity. The Company may, at its option, require a longer initial term of contract if substantial additional investments are made in order to serve the customer. After the initial term, Contracts shall

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AEP Ohio

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P.U.C.O. NO. 21

Schedule DCP
(Data Center Power)

remain in effect unless terminated by either party by providing written notice to the other party no later than three (3) years prior to the requested date of termination. After the initial term, either party may request a modification to the Contract Capacity by providing written notice to the other party no later than three (3) years prior to the requested modification date. During the initial term of the Contract, the customer will be financially responsible to pay the minimum charges regardless of the customer choosing to curtail, reduce, suspend, or terminate service. If after completion of the fifth year of the Contract the customer chooses to pay an exit fee equal to minimum charges for 36 months after notice of termination, the customer can thereafter terminate the contract.

The customer shall agree with the Company in advance its Load Ramp Contract Capacity and a final Contract Capacity value to be used for the remaining initial term of the contract. A new contract will be required for any load additions in excess of 1,000 kW.

The Company shall not be required to supply capacity in excess of the Contract Capacity except by mutual agreement. To the extent the Customer's actual monthly peak usage exceeds the Contract Capacity, the Customer's Contract Capacity shall be automatically increased, subject to the Company's ability to provide the higher level of capacity.

Nothing in this Schedule limits the requirement that a customer sign a Letter of Agreement or Contribution in Aid of Construction agreement for customer-specific investment.

To sign a contract under this Schedule, the customer must designate a specific site at which its Data Center project will be constructed and served by the Company, and the customer must own or have the exclusive right to use the land for this purpose.

Collateral Requirement

The customer, if not having both (a) a credit rating of at least A- from S&P Global Inc. ("S&P") and A3 from Moody's Corporation ("Moody's") and (b) cash and cash equivalents on an audited balance sheet prepared in accordance with Generally Accepted Accounting Principles ("GAAP") ("Liquidity") greater than ten times the Collateral Requirement, must provide a guarantee or collateral at the time of signing the contract equal to 50% of the total minimum charges for the full term of the contract ("Collateral Requirement"), calculated based on AEP Ohio's rates in effect at the time the Collateral Requirement is provided. The Collateral Requirement must be provided in one or more of the following forms:

1. A guarantee from the ultimate parent or a corporate affiliate of the customer for the full Collateral Requirement, so long as the guarantor has both (a) a credit rating of at least A- from S&P and A3 from Moody's and (b) Liquidity greater than ten times the Collateral Requirement; or
2. A standby irrevocable letter of credit ("Letter of Credit") for the full Collateral Requirement. The Letter of Credit must be issued by a U.S. bank or the U.S. branch of a foreign bank, which is not affiliated with the customer or its guarantor, with a Credit Rating of at least A- from S&P and A3 from Moody's. Such security must be issued for a minimum term of 360 days. The customer must cause the renewal or extension of the security for additional consecutive terms of 360 days or more no later than 30 days prior to each expiration date of the security. If the security is not renewed or extended as required herein, the Company will have the right to draw

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Schedule DCP
(Data Center Power)

immediately upon the Letter of Credit and be entitled to hold the amounts so drawn as security. The Letter of Credit must be in a format acceptable to and approved by the Company.

3. Cash for the full Collateral Requirement.

The amount of the Collateral Requirement will be reduced by one year's minimum charges for each year the customer is energized and makes on-time electric service payments under the contract.

If the financial condition of the customer or guarantor changes – or market conditions (including ownership/structural changes) change – over the term of the contract, the Company may request updated information to reevaluate the customer and its collateral requirements, which may be adjusted accordingly.

Customer-Owned Generation and Emergency Conditions

The Customer's facilities shall not be connected to any source of power other than the delivery point specified in the Contract, without written notice and mutual agreement between the Company and the Customer. Emergency or standby generation that is not designed to operate in parallel with the Company's system is not subject to this requirement.

The Customer is required to reduce its demand upon the Company's system during an RTO or Company-declared emergency event (including but not limited to applicable NERC Energy Emergency Alert level declarations by PJM). The Company will endeavor to provide the customer with as much advance notice as reasonably possible of an upcoming PJM or local emergency interruption. If an emergency situation requires an immediate action by AEP Ohio, the customer may be involuntarily interrupted immediately without notification. These types of interruptions will be deemed forced for purposes of air permits associated with any customer-owned generation. The Customer shall provide documentation, including copies of air permits, supporting their ability to meet this requirement. The customer is responsible for ensuring current contacts for notification in case of emergency interruptions are on file with AEP Ohio.

At its discretion, the Company may require that Company-owned metering be installed to monitor the customer's generation. The Company reserves the right to inspect the customer's relays and protective equipment at all reasonable times.

Special Terms and Conditions

This schedule is subject to the Company's Terms and Conditions of Service.

Customers served under this tariff agree to written attestation as part of its Contract that the customer will follow all applicable technical operating requirements, such as not intentionally or unintentionally cycling load in a way that creates an imbalanced or unacceptable system frequency, and other requirements that will be maintained and periodically updated for the safety of the larger system. Upon detection of any activities outside of the technical requirements, the Company has the right to disconnect.

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P.U.C.O. NO. 21

Schedule MDC/FLT
(Mobile Data Center/Flexible Load Tariff)

Definitions

For purposes of this schedule:

“Contract” means the service agreement entered into by the customer and the Company in accordance with this schedule.

“Contract Capacity” means the customer specified amount of monthly peak load requirements for each month as set forth in the contract for service.

“Mobile Data Center” means a centralized facility used for the management, storage, processing, and dissemination of data and information (including mining of cryptocurrency) through the use of computer systems, servers, networking equipment, and related components that has an aggregate monthly maximum demand of greater than 1,000 kW and has load that is portable and/or distributable, including but not limited to structures that are not affixed to the ground or easily removed from a location.

“Single Location” refers to an area that is owned, operated, or leased by the Data Center customer which can include a contiguous lot to the area with the customer’s metering point may be considered the customer-generator’s premises regardless of easements, public thoroughfares, transportation rights-of-way, or utility rights-of-way, so long as it would not create an unsafe or hazardous condition.

“Load Ramp Contract Capacity” means the mutually agreed monthly peak load requirements associated with the Load Ramp Period.

“Load Ramp Period” refers to the time of commencement of service until the customer reaches full contract capacity, which shall not exceed three years.

Availability of Service

Service pursuant to this schedule is available for general service to customers that operate a Mobile Data Center that will use, within the initial contract term, a monthly demand of greater than 1,000 kW at a Single Location. If the customer operates one or more Mobile Data Centers and Data Centers at a Single Location, Mobile Data Center/Flexible Load Tariff will apply to all electric distribution service provided for that customer account. Customers qualifying for this schedule that sign an electric service agreement or expand their current contracted capacity after the effective date of this tariff are required to take service under this schedule and will not be permitted to take service under other general service tariffs.

This schedule shall also apply to multiple Mobile Data Centers owned by a common parent company at a Single Location interconnected with the Company’s system within a 24-month period having an aggregate monthly maximum demand of greater than 1,000 kW.

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Schedule MDC/FLT
(Mobile Data Center/Flexible Load Tariff)

The terms and conditions of service under this this schedule shall apply upon a request for service by an eligible customer but service to customers under this schedule will not commence until the Company has sufficient capacity to meet the contractual load requirements.

Service under this tariff is applicable to customers who meet both of the following criteria:

- Have the ability to relocate quickly in response to short-term economic signals;
- Have highly variable load growth or load reduction as an individual customer and/or in aggregate with similar customers in the Company's service area.

Monthly Rate

<u>Schedule Code</u>	<u>Service Voltage</u>	<u>Distribution Demand Charge (\$/kW)</u>	<u>Excess Reactive Demand (\$/kVA)</u>	<u>Customer Charge (\$)</u>
<u>###</u>	<u>Secondary</u>	<u>\$7.01</u>	<u>\$1.25</u>	<u>\$9.40</u>
<u>###</u>	<u>Primary</u>	<u>\$6.33</u>	<u>\$1.21</u>	<u>\$138.50</u>

<u>Schedule Code</u>	<u>Service Voltage</u>	<u>Distribution Demand Charge (\$/kW)</u>	<u>Excess Reactive Demand* (\$/kVAR)</u>	<u>Customer Charge (\$)</u>
<u>###</u>	<u>Transmission</u>	<u>--</u>	<u>\$0.70</u>	<u>\$3,600</u>

*For each kVAR of reactive demand, leading or lagging, in excess of 50% of the kW metered demand.

Minimum Charges

The minimum monthly charge under this schedule shall be the sum of the customer charge, the product of the distribution demand charge and the monthly distribution billing demand, and all Commission-approved riders shown on Sheet Number 104-1.

Monthly Billing Demand

Billing demand in kW shall be taken each month as the single highest 30-minute integrated peak in kW as registered during the month by a 30-minute integrating demand meter or indicator, or at the Company's option, as the highest registration of a thermal-type demand meter. The customer will have no more than the Load Ramp Period to reach full contract capacity, during which time monthly billing demand shall not be less than 95% of the customer's Load Ramp Contract Capacity. After the Load Ramp Period, monthly billing demand established hereunder shall not be less than 95% of the greater of (a) the customer's Contract Capacity, or (b) the customer's highest previously established monthly billing demand during the past 11 months. Unless otherwise mutually agreed by the Company and the customer, the

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Schedule MDC/FLT
(Mobile Data Center/Flexible Load Tariff)

customer shall be billed under the provisions of this tariff using the Contract Capacity during all months of the initial term of contract should the customer fail to energize service. The monthly billing demand defined hereunder shall apply for purposes of billing under all applicable riders, regardless of any conflicting provisions in the rider.

Delayed Payment Charge

Bills are due and payable in full by mail, checkless payment plan, electronic payment plan or at an authorized payment agent of the Company within 21 days after the mailing of the bill. On all accounts not paid by the due date, an additional charge of 2.5% of the unpaid balance will be due. Federal, state, county, township and municipal governments and public school systems not served under special contract are subject to the Public Authority Delayed Payment provision, Supplement 21.

Applicable Riders

Monthly Charges computed under this schedule shall be adjusted in accordance with the Commission-approved riders on Sheet Number 104-1 that apply to Demand Metered commercial and industrial service. Nothing in this tariff excepts eligible customers from other riders or applicable tariffs.

Generation Service

Customers receiving service under this schedule may select competitive service from a CRES Provider or Standard Offer Service. The Company requires that Company-owned metering be installed to monitor the customer's load.

Below 25,000 kW

A customer that has an aggregate monthly maximum demand below 25,000 kW that selects Standard Service Offer or is dropped to the Standard Service Offer by a CRES Provider, will be served by the Company and the customer's load will not be served by the default standard service offer, and the Company will procure supply for such customers in PJM-administered markets.

25,000 kW and Above

A customer that has an aggregate monthly maximum demand of 25,000 kW or greater that selects Standard Service Offer, or is dropped to the Standard Service Offer by a CRES Provider, will be served through a separate standard service offer product procured in an auction, and the customer's load will not be served by the default standard service offer.

The Company will serve a customer receiving Standard Service Offer under this schedule and procure supply for such customers in PJM-administered markets until the auction is held or if the auction is not successful (i.e. no bids are evaluated or no bids are approved by the Commission). A customer receiving Standard Service Offer under this schedule must provide written notice to the Company to switch to a CRES Provider at least sixty (60) calendar days before the end of the supply period covered by an auction or the period for which the customer must stay on the standard service will be extended 6 months and a subsequent auction will be held to procure standard service for the customer's load. The customer must stay on the standard service for the period from when the customer begins

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Schedule MDC/FLT
(Mobile Data Center/Flexible Load Tariff)

receiving Standard Service Offer under this schedule through the supply period for the product procured in the auction. The Company will provide information about any upcoming auction including the timeline and auction process details to procure the standard service offer product on the following site: <https://aepohiocbp.com/>.

Transmission Service

Customers receiving service under this schedule shall pay the charges established for Demand Metered Service under the Basic Transmission Cost Rider.

Terms of Contract

Contracts under the Schedule shall be made for an initial period of not less than 10 years including the Load Ramp Period leading up to full Contract Capacity. The Company may, at its option, require a longer initial term of contract if substantial additional investments are made in order to serve the customer. After the initial term, Contracts shall remain in effect unless terminated by either party by providing written notice to the other party no later than three (3) years prior to the requested date of termination. After the initial term, either party may request a modification to the Contract Capacity by providing written notice to the other party no later than three (3) years prior to the requested modification date. During the initial term of the Contract, the customer will be financially responsible to pay the minimum charges regardless of the customer choosing to curtail, reduce, suspend, or terminate service. If after completion of the fifth year of the Contract the customer chooses to pay an exit fee equal to minimum charges for 36 months after notice of termination, the customer can thereafter terminate the contract.

The customer shall agree with the Company in advance its Load Ramp Contract Capacity and a final Contract Capacity value to be used for the remaining initial term of the contract. A new contract will be required for any load additions in excess of 1,000 kW.

The Company shall not be required to supply capacity in excess of the Contract Capacity except by mutual agreement. To the extent the Customer's actual monthly peak usage exceeds the Contract Capacity, the Customer's Contract Capacity shall be automatically increased, subject to the Company's ability to provide the higher level of capacity.

Nothing in this Schedule limits the requirement that a customer sign a Letter of Agreement or Contribution in Aid of Construction agreement for customer-specific investment.

To sign a contract under this Schedule, the customer must designate a specific site at which its Mobile Data Center project will be constructed and served by the Company, and the customer must own or have the exclusive right to use the land for this purpose.

Collateral Requirement

The customer, if not having both (a) a credit rating of at least A- from S&P Global Inc. ("S&P") and A3 from Moody's Corporation ("Moody's") and (b) cash and cash equivalents on an audited balance sheet prepared in accordance with Generally Accepted Accounting Principles ("GAAP") ("Liquidity") greater than ten times the Collateral Requirement, must provide a guarantee or collateral at the time of signing the contract equal to 50% of the total minimum charges for the full

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term of the contract ("Collateral Requirement"), calculated based on AEP Ohio's rates in effect at the time the Collateral Requirement is provided. The Collateral Requirement must be provided in one or more of the following forms:

1. A guarantee from the ultimate parent or a corporate affiliate of the customer for the full Collateral Requirement, so long as the guarantor has both (a) a credit rating of at least A- from S&P and A3 from Moody's and (b) Liquidity greater than ten times the Collateral Requirement; or
2. A standby irrevocable letter of credit ("Letter of Credit") for the full Collateral Requirement. The Letter of Credit must be issued by a U.S. bank or the U.S. branch of a foreign bank, which is not affiliated with the customer or its guarantor, with a Credit Rating of at least A- from S&P and A3 from Moody's. Such security must be issued for a minimum term of 360 days. The customer must cause the renewal or extension of the security for additional consecutive terms of 360 days or more no later than 30 days prior to each expiration date of the security. If the security is not renewed or extended as required herein, the Company will have the right to draw immediately upon the Letter of Credit and be entitled to hold the amounts so drawn as security. The Letter of Credit must be in a format acceptable to and approved by the Company.
3. Cash for the full Collateral Requirement.

The amount of the Collateral Requirement will be reduced by one year's minimum charges for each year the customer is energized and makes on-time electric service payments under the contract.

If the financial condition of the customer or guarantor changes – or market conditions (including ownership/structural changes) change – over the term of the contract, the Company may request updated information to reevaluate the customer and its collateral requirements, which may be adjusted accordingly.

Customer-Owned Generation and Emergency Conditions

The Customer's facilities shall not be connected to any source of power other than the delivery point specified in the Contract, without written notice and mutual agreement between the Company and the Customer. Emergency or standby generation that is not designed to operate in parallel with the Company's system is not subject to this requirement.

The Customer is required to reduce its demand upon the Company's system during an RTO or Company-declared emergency event (including but not limited to applicable NERC Energy Emergency Alert level declarations by PJM). The Company will endeavor to provide the customer with as much advance notice as reasonably possible of an upcoming PJM or local emergency interruption. If an emergency situation requires an immediate action by AEP Ohio, the customer may be involuntarily interrupted immediately without notification. These types of interruptions will be deemed forced for purposes of air permits associated with any customer-owned generation. The Customer shall provide documentation, including copies of air permits, supporting their ability to meet this requirement. The customer is responsible for ensuring current contacts for notification in case of emergency interruptions are on file with AEP Ohio.

At its discretion, the Company may require that Company-owned metering be installed to monitor the customer's generation. The Company reserves the right to inspect the customer's relays and protective equipment at all reasonable times.

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Schedule MDC/FLT
(Mobile Data Center/Flexible Load Tariff)

Special Terms and Conditions

This schedule is subject to the Company's Terms and Conditions of Service.

Prior to receiving service Mobile Data Center customers will be required to provide a sworn statement, under penalty of perjury, that neither the customer nor its corporate parent or affiliates are affiliated with or acting on behalf of any foreign adversary as defined in 15 C.F.R. § 7.4. If AEP Ohio has a good faith belief that a Mobile Data Center customer has provided false information in response to this requirement, AEP Ohio has the right to immediately disconnect service to the Mobile Data Center permanently or until adequate proof is shown to satisfy AEP Ohio that the Mobile Data Center customer meets this requirement.

Customers served under this tariff will provide written attestation as part of its Contract that the customer will follow all applicable technical operating requirements, such as not intentionally or unintentionally cycling load in a way that creates an imbalanced or unacceptable system frequency, and other requirements that will be maintained and periodically updated for the safety of the larger system. Upon detection of any activities outside of the technical requirements, the Company has the right to disconnect service.

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Data Center RFP

Background

1. “Data Center customers” (or “DC customers”) refers to the class of customers that take retail generation service from AEP Ohio under Schedule DCP and the class of customers that take retail generation service from AEP Ohio under Schedule MDC/FLT and have an aggregate monthly maximum demand of 25,000 kW or greater (the “Tariff Schedules”). The “Tariff Start Date” is the date on which the DC customer begins receiving retail generation from AEP Ohio under the Tariff Schedules due to either a customer enrollment or a customer drop.
2. If one or more DC customers takes retail generation service from AEP Ohio under the Tariff Schedules, AEP Ohio, through its Auction Manager, will issue a request for proposals (“RFP”) to select winning supplier(s) to serve the load of the DC customer(s) beginning June 1 or December 1 (each a “Supply Start Date”). The supply period during which the winning supplier(s) will serve the load of DC customers will be for six months (June 1 through November 30 or December 1 through May 31). Winning supplier(s) provide full requirements supply for the load of DC customers available for bid (“DC Supply”). A DC customer is subject to a minimum stay of at least 6-months as further described in Paragraph 5.
3. AEP Ohio will hold up to two (2) auctions each year: one in the Spring and one in the Fall. The exact dates and timelines for each auction will be determined and released prior to each auction; however, it is expected that the Spring auction would occur in May and the Fall auction would occur in November. If no DC customer(s) are taking retail generation service from AEP Ohio under the Tariff Schedules, an auction under the RFP will not be held.
4. In a given year, if at least one DC customer has a Tariff Start Date on or between April 1st through September 30th, then a Fall auction with a Supply Start Date on December 1st will be held. In a given year, if at least one DC customer has a Tariff Start Date on or between October 1st through March 31st, then a Spring auction with a Supply Start Date on June 1st will be held. The September 30th and March 31st deadlines, which are approximately sixty (60) calendar days prior to the respective Supply Start Date, are necessary to ensure there is sufficient time to complete all auction-related activities provided in the Sample Schedule under Paragraph 22. AEP Ohio will procure supply for a DC customer in PJM-administered markets from the DC customer’s Tariff Start Date until the Supply Start Date. If a Fall or Spring auction is set to be held, and if additional, eligible customers take service under the Tariff Schedules by the date by the deadline by which bidders must cure any deficiencies related to qualification materials (the “Cure Deficiency Deadline for Qualifications”), then the load for these additional DC Customer(s) will be included in the DC Supply available for bid in that auction.
5. Specifically, a DC customer is subject to a minimum stay that begins on the Tariff Start Date and ends on the last day of the 6-month supply period during which the DC customer load is served by the winning supplier(s) in an auction under this RFP. In this way, the minimum stay term covers the 6-month supply period during which the winning supplier(s) in an auction under this RFP serves DC customer load, plus any time leading up to the auction during which AEP Ohio procures supply for this DC customer in PJM-administered markets.
6. A DC customer must notify AEP Ohio if they intend to no longer take retail generation service from AEP Ohio under the Tariff Schedules at least sixty (60) calendar days before the end of the minimum stay period. This deadline will correspond with the September 30th and March 31st deadlines that trigger

whether an auction will be held as described in Paragraph 4. If a DC customer does not notify AEP Ohio by the deadline, the minimum stay period will be extended for an additional 6-month period and an auction will be held to select winning supplier(s) to serve the load of the customer for a 6-month supply period (or if a Fall/Spring auction is already planned to be held, the load for this DC customer will be included in the DC Supply available for bid).

7. AEP Ohio has retained NERA Economic Consulting to serve as Auction Manager.

RFP Overview

8. The RFP Rules, to be finalized by the Auction Manager in conjunction with AEP Ohio, will govern the auctions held under the Data Center RFP (“DC RFP”). An overview of the process and requirements for participation in the auction under the DC RFP is provided in this section.
9. A Master Data Center Supply Agreement (“DC Agreement”), to be finalized by the Auction Manager in conjunction with AEP Ohio, will provide the obligations of winning suppliers and the definitions and details related to DC Supply. The DC Agreement will be based on and substantially in the form of the Master SSO Supply Agreement approved for use in AEP Ohio’s current CBP.
10. In each auction, AEP Ohio will seek to procure a single 6-month contract for full requirements supply for the load of DC customers available for bid. This RFP is expected to have a single winning bidder.
11. The Auction Manager, in conjunction with Commission Staff, may determine that the load available for bid should be split into two or more tranches, each tranche representing a fixed percentage of the load of a DC customer available for bid (i.e., two tranches each representing 50% of the load) if this change is expected to foster bidder interest. In this case, the RFP may result in more than one contract and winning bidder.
12. To participate in the DC RFP, an interested party will be required to meet all applicable qualification requirements as a participant in the company’s competitive bidding process (“CBP”) for Standard Service Offer (“SSO”) supply. To become a Qualified Bidder, an interested party must: (i) provide information required by an Expression of Interest Form, including evidence that it is qualified by PJM as a Market Buyer, a Market Seller, and a PJM Load Serving Entity (“LSE”); and (ii) may be required to provide information required by a Credit Application and submit to a creditworthiness evaluation under the terms of the DC Agreement.
13. Only Qualified Bidders are eligible to submit a Bid Proposal. A Bid Proposal includes a partially executed DC Agreement, a Bid, a Binding Bid Agreement, and financial guarantees sufficient to support the Qualified Bidder’s Bid. A “Bid” is a price in U.S. Dollars per megawatt-hour (“MWh”) at which the bidder is willing to serve the DC load available for bid during the entirety of the 6-month supply period.
14. A bidder that wins in an auction under this RFP for which results are approved by the Commission becomes a “DC Supplier”. A DC Supplier will assume all responsibilities of an LSE and is responsible for providing full requirements service and to bear all costs that are associated with this responsibility. Full requirements service includes, without limitation, energy, capacity, ancillary services, certain transmission services, as well as any other service as may be required by PJM. AEP Ohio will provide distribution services and will be responsible for Network Integration Transmission Service (“NITS”) charges and for other non-market-based FERC-approved transmission charges. AEP Ohio will be responsible for provision of any Ohio renewable energy resource requirements.

15. Payments to DC Suppliers for each MWh of DC Supply will be the supplier's approved Bid plus the PJM day-ahead price for energy.
16. All DC RFP auction results and winning bids will be subject to the approval of the Public Utilities Commission of Ohio ("PUCO" or "Commission"). Results of an auction under this RFP will be communicated to Commission Staff and AEP Ohio on the day that the auction is held, and results will be reviewed by the Commission at its next scheduled meeting.
17. If the results are approved, AEP Ohio and a DC Supplier will execute the DC Agreement and a DC Supplier will be required to post financial guarantees under the DC Agreement.
18. If no Bids are evaluated or approved by the Commission, AEP Ohio will procure DC Supply from PJM-administered markets. If an auction is held for multiple tranches and the auction results in one or more tranches being unfilled, AEP Ohio will procure supply for the unfilled tranches from PJM-administered markets. If a DC Supplier defaults, AEP Ohio will procure the load being served by the defaulting DC Supplier from PJM-administered markets.

Information Provided to Bidders

19. There will be a dedicated page on the CBP website, www.AEPOhioCBP.com, devoted to providing information and documents related to the DC RFP.
20. As this information becomes available, AEP Ohio provides the estimated MW-measure of the load available for bid. The Auction Manager will provide an updated MW-measure no later than the due date for a bidder's Registration Materials. Available historical peak load contribution ("PLC") data may be provided, on a confidential basis, to prospective suppliers who complete an Expression of Interest Form.
21. The Auction Manager will respond to inquiries from bidders regarding the rules and requirements of the DC RFP.

Sample Schedule

22. Unless noted otherwise, a "day" is a business day, and all times refer to eastern prevailing time. A sample schedule for events for one auction of the DC RFP is provided below. The exact dates and timelines for each auction will be determined and released prior to each auction. The timelines and deadlines for each auction are approximate.

Table 1. Sample Schedule.

Event	Date
By March 31	No later than 60 calendar days ahead of the Supply Start Date
Auction under RFP Announced	Monday, April 7, 2025
RFP Issued	Monday, April 7, 2025
MW-Measure Announced	Expected on Monday, April 7, 2025
Qualification Due Date (Expression of Interest Form and Credit Application due)	Friday, April 25, 2025
Cure Deficiency Deadline for Qualifications	Tuesday, April 29, 2025
Deadline for any additional DC customers' load to be added to the auction	Tuesday, April 29, 2025
Qualified Bidders Notified Date	Wednesday, April 30, 2025
Auction Manager announces any update to the MW-Measure	Thursday, May 1, 2025
Amount of Financial Guarantees Announced	Thursday, May 1, 2025
Registration Due Date (financial guarantees and signed DC Agreement due)	Wednesday, May 7, 2025
Cure Deficiency Deadline for Registration Materials	Tuesday, May 13, 2025
Bid Window (Bids are due)	Tuesday, May 13, 2025
Auction Manager notifies AEP Ohio and the Commission of results	Tuesday, May 13, 2025
Expected Commission decision	within two (2) business days of Auction Manager notifying Commission of results
Winning bidder fully executes the Confirmation	within two (2) business days of Commission approval
Supply Start Date	Sunday, June 1, 2025

23. The Auction Manager, in consultation with AEP Ohio and Commission Staff, may make changes to the schedule as circumstances warrant or as appropriate. Any such change will be announced to bidders and posted to the DC RFP page of the CBP website.

Proposal Submission and Processing

Proposal Submission

24. The process to participate in the DC RFP will be based on and substantially the same as the process developed for the company's PIPP RFP in that interested parties will be required to provide Qualification Materials and Registration Materials to be eligible to submit a Bid. However, unlike the qualification requirements under AEP Ohio's PIPP RFP, an interested party will not be required to provide evidence of being certified by the Commission as a Competitive Retail Electric Service ("CRES") provider and registered in AEP Ohio's territory.
25. Bidders may begin providing materials in response to this RFP on the date the Auction Manager announces that an auction under this RFP will occur, in accordance with the requirements under the DC RFP Rules. Such materials are the bidder's "Proposal".
26. Bidders that have qualified in a prior auction under this RFP for AEP Ohio will be able to participate in an abbreviated process. Bidders that are current SSO Suppliers under AEP Ohio's CBP for SSO Supply will be able to participate in an abbreviated process.
27. A bidder will be required to submit Qualification Materials by the Qualification Due Date including:
 - One (1) copy of the completed Expression of Interest Form to confirm the bidder's non-binding interest to bid, to provide contact information, as well as to provide evidence that the bidder is a Market Buyer, a Market Seller, and a PJM LSE; and
 - One (1) copy of the completed Credit Application as well as all supporting financial and credit information required by such Credit Application.
28. The Expression of Interest Form will require the bidder:
 - To confirm its interest, on a non-binding basis, to bid in the auction under this RFP, and to agree to all rules and conditions associated with the auction as provided in the DC RFP Rules.
 - To provide the address of the bidder and contact information for: (i) one or more "Representatives" who will receive correspondence from the Auction Manager; (ii) a legal representative in Ohio authorized to accept service of process on behalf of the bidder; and (iii) an officer of the bidder, authorized to bind the bidder, who will execute the DC Agreement and the Confirmation. Such officer must be available on the dates when such documents are expected to be executed.
 - Show that the bidder is qualified by PJM as a Market Buyer, a Market Seller, and a PJM LSE.

All documents required by the Expression of Interest Form must be submitted to the Auction Manager and the Expression of Interest Form must be duly completed for the bidder to be qualified and for the bidder to be able to continue in the proposal submission process.

29. The Credit Application will require the bidder:
 - To state whether the bidder will be relying on its own credit standing or on the credit standing of a guarantor. Such guarantor must be incorporated or otherwise formed under the laws of a state of the United States and have a legal representative in Ohio authorized to accept service of process on behalf of the guarantor.

- To provide all available ratings from S&P Global Ratings (“S&P”), Moody’s Investors Service, Inc. (“Moody’s”), and Fitch Ratings (“Fitch”) for the entity on whose financial standing the bidder is relying.
- To provide the most recent audited annual financial statements for the entity on whose financial standing the bidder is relying. If available, the most recent SEC Form 10-K must be submitted in response to this requirement.
- To provide the most recent quarterly financial statements for the entity on whose financial standing the bidder is relying. If available, the most recent SEC Form 10-Q must be submitted in response to this requirement.

All documents required by the Credit Application must be submitted to the extent available and the Credit Application must be duly completed for the bidder to be qualified and for the bidder to be able to continue in the proposal submission process. The bidder submits to a creditworthiness evaluation on the basis of the information provided.

Proposal Processing

30. A bidder that fails to provide complete and compliant Qualifications Materials by the Cure Deficiency Deadline for Qualifications will not be qualified to bid and will not be able to continue in the proposal submission process. Any further submission from such bidder will not be considered or evaluated.
31. If a bidder’s Qualifications Materials are complete and compliant with all requirements, such bidder is a “Qualified Bidder”. Only Qualified Bidders are eligible to submit a Bid Proposal.
32. The Bid Proposal consists of the Bid Proposal Form and the Registration Materials. A bidder must submit Registration Materials on the Registration Due Date:
 - One (1) copy of the signature pages to the Data Center Agreement, signifying the bidder’s agreement to the terms of the standard contract without modifications or exceptions.
 - Financial guarantees in the form of cash or a letter of credit.
33. If a bidder fails to provide complete and compliant Registration Materials by the Bid Date, its Bid, or any further submission from such bidder will not be considered or evaluated.
34. As stated above, the Bid Proposal consists of the Bid Proposal Form and the Registration Materials. A bidder must submit the Bid Proposal Form during the Bid Window on the Bid Date. The Bid Proposal Form requires that the bidder:
 - Submit a single “Bid” where a Bid is a single price in U.S. Dollars per megawatt-hour (“MWh”) at which the bidder is willing to serve the entirety of the DC customer load available for bid during the entirety of the supply period;
 - Execute a Binding Bid Agreement, confirming that the Bid is the price at which the bidder is willing to serve the entirety of the DC customer load available for bid for a product during the entirety of the supply period and stating that the Bid must remain binding and valid for a period of five (5) business days after submission.

Bid Evaluation and Post Bid Process

35. A Bid is eligible to be evaluated if it is in the format required by the DC RFP Rules and if it is submitted during the Bid Window on the Bid Date by a bidder that: (i) provided complete and compliant Qualifications Materials by the Cure Deficiency Deadline for Qualifications; (ii) provided complete and compliant Registration Materials by the Cure Deficiency Deadline for Registration Materials; and (iii) provided a complete and compliant Bid Proposal Form.
36. After the close of the Bid Window, all Bids that are eligible to be evaluated are stacked from lowest to highest. Bids are selected on a price-only basis.
37. If the Commission approves the results, the winning Bidder(s) will proceed to the execution of the Confirmation under the DC Agreement with AEP Ohio within two (2) business days of Commission decision, following all instructions provided by AEP Ohio in this regard. The financial guarantees for bidders other than the winning Bidder are cancelled or returned generally within five (5) business days.
38. The Commission may publicly release the auction clearing price and the name(s) of the winning bidder(s) in the auction. The Commission may choose to release additional information.

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Summary: Testimony Direct Testimony of Matthew McKenzie electronically filed by
Mr. Steven T. Nourse on behalf of Ohio Power Company.