BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Commission's Review of Chapter 4901:1-22 of the Ohio Administrative Code Regarding Interconnection Services	**)** **)** **)** **)**	**Case No. 18-884-EL-ORD**

INITIAL COMMENTS OF OHIO POWER COMPANY

INTRODUCTION

By Entry dated January 29, 2020, the Public Utilities Commission of Ohio ("Commission") proposed amendments to Ohio Administrative Code Chapter 4901:1-22 for Interconnection Services. Ohio Power Company ("AEP Ohio" or the "Company") appreciates the opportunity to comment in this docket. AEP Ohio's comments are generally limited to updating the rules to incorporate IEEE standards and to ensure proper incorporation of Staff's proposed changes. Additionally, in response to the Commission's request for comment on specific questions, the Company provides its responses below.

COMMENTS

Section 4901:1-22-01

AEP Ohio suggests modifying the definition of "Area electric power system" ("Area EPS") to make clear that an electric distribution utility's ("EDU") distribution system is, itself, always an Area EPS. This change reflects the operational reality that every EDU's distribution system is an area EPS for the purposes of interconnecting to the grid. Thus, the Company proposes to modify the definition as follows:

> "Area electric power system" (Area EPS) means an EPS that serves Local EPSs, as defined in institute of electrical and electronics engineers (IEEE) standard 1547 (2018). An EDU's distribution system is considered an Area EPS for the purposes of these rules.

Section 4901:1-22-04

AEP Ohio recommends modifying 4901:1-22-04(B)(3)(k) & (j) to reflect the proposed definition of "point of common coupling". Specifically, the Company proposes the following modifications:

> (k) Limiting conductor ratings from the proposed point of ~~interconnection~~common coupling to the distribution substation.
>
> (l) Based on the proposed point of ~~interconnection~~common coupling, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

It is important to evaluate all interconnection requests at the point of common coupling. Conducting evaluations at the point of common coupling ensures that the impact of the entire local EPS if fully considered whereas, were the evaluation to occur at the point of interconnection, the Company would improperly evaluate the effect of the specific Distributed Energy Resource ("DER") on the local EPS as well as the area EPS. Thus, requiring the applicant to provide the EDU with information based on the point of common coupling is necessary to allow the Company to fully analyze and evaluate the effect of the interconnection on its system, thereby ensuring that the reliability and safety of the area EPS is not compromised by the requested interconnection.

AEP Ohio recommends that section (C)(7) be modified to allow the EDU to perform its initial review of an application prior to making a determination about when it will be able to connect the applicant's facility. Currently, section (C)(7) requires an EDU to send applicants a notice, within ten business days after the application has been received, if the EDU determines it cannot connect to the applicant's facility within the time frames provided in the chapter. EDUs have the same period to provide applicants with notice that the EDU received their application.

The Company is in the best position to determine when it will be able to connect the applicant's facility after it has performed its review of the application. As such, it is operationally impractical for the Company to determine it will be unable to connect the applicant's facility within the time frame provided in the chapter within ten business days after receiving the application and, therefore, the Company proposes to modify section (C)(7) as follows:

> (7) If an EDU determines that it cannot connect the applicant's facility within the time frames stated in this chapter, it will notify the applicant in writing of that fact within ten business days after ~~the application has been received~~completing the level 1 or level 2 criteria screens or the level 3 engineering studies of the application, as applicable.

Finally, AEP Ohio proposes a modification to section (E) to correct a typographical error. Currently, section (E) references paragraph (C) of Ohio Adm.Code 4901:1-10-28, which does not exist. It appears that this section intended to reference Ohio Adm.Code 4901:1-10-28(B)(8)(c). Therefore, the Company recommends current reference to paragraph (C) be changed to reflect paragraph (B)(8)(c).

Section 4901:1-22-05

The Company is unclear as to the intent of the term "photovoltaic power source" in the context of Section (B)(1)(d). For solar equipment, the interconnecting inverter, not the photovoltaic power source, generates the AC electricity. As such, the Company needs the information derived from the inverter to evaluate the potential impacts of the solar facility on the grid. Thus, to the extent the proposed rules seek to capture the solar facility's AC electrical generation characteristics, AEP Ohio proposes the following modifications:

> (d) For solar equipment, the ~~photovoltaic power source~~interconnecting inverter shall be clearly labeled in accordance with the standards listed in rule 4901:1-22-03 of the Administrative Code to identify the following:
>
> (i) ~~Operating~~Nominal current ~~(system maximum power current)~~.
>
> (ii) ~~Operating~~Nominal voltage ~~(system maximum power voltage)~~.

~~(iii) Maximum system voltage.~~

(iv) Maximum ~~S~~short-circuit current.

Section 4901:1-22-06

AEP Ohio suggests adding area EPS to section (B)(1)(d). Prior to the deletion of the term "spot network," the requirements of section (B)(1)(d) applied to area and local EPSs. The application of these requirements to both area and local EPS remain necessary to ensure the safety and reliability of the grid. Thus, the Company recommends modifying this section as follows:

> (d) For interconnection of a proposed DER to the load side of area or local EPS protectors, the proposed DER must utilize an inverter-based equipment package and, aggregated together with other inverter-based generation, shall not exceed the smaller of five percent of an area or local EPS's maximum load or fifty kilowatts.

Section 4901:1-22-07

Consistent with its comments to 4901:1-22-04(B)(3)(k) & (j), AEP Ohio suggests replacing "point of interconnection" with "point of common coupling" in section (B)(1)(a).

Additionally, AEP Ohio proposes the following modifications to Section (E):

> If the customer requests that the EDU perform a supplemental review, the customer shall agree in writing within fifteen business days of the offer, and submit a supplemental review deposit of twenty-five hundred dollars, or the application shall be deemed withdrawn. Within twenty-five business days following receipt of the supplemental review deposit, the EDU shall perform a supplemental review using the screens set forth in this rule and notify the applicant of the results. For interconnection of a proposed DER to ~~an~~ the load side of the local or area EPS protectors, the EDU may utilize different analytical procedures for conducting supplemental review than those set forth in this rule.* * *

This clarification is necessary to capture the use of local and area EPS protectors.

Section 4901:1-22-09

AEP Ohio recommends the Commission reject the addition of section (D)(1)(c). Further, the Company would recommend the Commission reject Staff's proposed deletion of current

section (D)(2). Currently, section (D)(1) is specific to the feasibility study agreement and section (D)(2) is specific to the actual feasibility study. The feasibility agreement and study are two distinct components of the Company's review, each with distinct requirements. Combining the agreement and study requirements in (D)(1) will only lead to confusion, delay securing the feasibility study agreement, and delay performing the feasibility study. As such, the Commission should reject Staff's proposed section (D)(1)(c) and deletion of section (D)(2).

Further, the Company recommends the following modification to section (D)(1) to clarify that this section is only applicable to the feasibility study agreement:

(1) No later than five business days after the scoping meeting, the EDU shall provide the applicant with a feasibility study agreement in accordance with the EDU's tariff to determine the feasibility of interconnecting the applicant's proposed at a particular point on the EDU's system. The feasibility study <u>agreement</u> shall include both of the following:

RESPONSES TO QUESTIONS POSED BY THE COMMISSION

(a) Staff has specifically drawn on IEEE Std. 1547-2018 in several definitions within the rules without fully adopting the standard due to compatibility lag between IEEE and Underwriters' Laboratories standards. What is the best method for adopting IEEE 1547-2018 in Ohio?

AEP Ohio suggests that the Commission wait to adopt IEEE 1547-2018 in the Ohio Administrative Code until version IEEE 1547-2018.1 is published. IEEE 1547-2018.1 provides the testing evaluation necessary for compliance with IEEE 1547-2018. Requiring parties to comply with IEEE 1547-2018 without the requisite testing standards would create significant operational and compliance challenges that would otherwise be resolved by IEEE 1547-2018.1. Therefore, the Company supports the Commission simultaneously adopting IEEE 1547-2018 and 1547-2018.1 into the Administrative Code after IEEE 1547-2018.1 is published.

(b) Relatedly, at the September 11, 2018 workshop, PJM Interconnection LLC (PJM) emphasized the importance of the ride-through requirements and encouraged the Commission to specifically adopt IEEE 1547-2018 and its ride through provisions during

this five-year review. Do stakeholders believe that the IEEE 1547-2018 ride-through provisions must be incorporated into Ohio Adm. Code Chapter 4901:1-22 at this time? If so, which category of ride-through requirements should be adopted in these rules and why?

AEP Ohio does not believe that the IEEE 1547-2018 ride-through provisions should be incorporated into the Administrative Code at this time given the lack of experience with ride-through provisions and the operational realities associated with them. The Company recommends EDUs and PJM work together to develop optimal settings for ride-through that protect the bulk power system and avoid damage to the distribution system or its customers. The rules must provide for the integrity of the system, which will be better accomplished after the EDUs and PJM have had time to implement and review the impacts of the ride-through provisions.

(c) PJM also encouraged the Commission to use this rule review proceeding to provide clarity regarding whether a request for interconnection is subject to Ohio or PJM jurisdiction. Is such clarification necessary at this time?

Yes, AEP Ohio believes it would be helpful for the Commission to clarify when the Commission believes it has jurisdiction over interconnection requests. Recent history shows it would be beneficial to all stakeholders to clarify jurisdiction over interconnection requests. For example, when there is a possibility of back feed onto the bulk power system through a distribution bus, PJM has interpreted that situation to require the application for interconnection to be reviewed by them. However, it is not clear whether the EDU needs to obtain PJM approval of those applications or if the EDU is simply required to notify PJM.

Further, the PJM interconnection process does not align with the Ohio interconnection process with respect to timing and application criteria. The lack of clarity as to the applicable jurisdiction over the interconnection request creates operational and timing complications that affect the Company's ability to process applications and connect the applicant's facility. Thus,

AEP Ohio recommends the Commission clarify when it believes it has jurisdiction over interconnection requests, which will allow the utilities to more efficiently process applications and connect applicants' facilities.

(d) With respect to Ohio Adm.Code 4901:1-22-03, are there any additional standards and codes that have become relevant to the interconnection and interoperability of DERs?

The EDU and DER use common communication at the point of common coupling. Although the Company does not have specific proposals for this rule making, AEP Ohio suggests that the Commission begin evaluating and developing cyber security standards applicable to this communication.

(e) During the workshop, two stakeholder groups expressed concerns about engineering challenges posed by DER interconnection within the state. Do these interconnection rules make technical sense from an engineering perspective? Do the rules strike an adequate balance between encouraging the state-wide proliferation of DER while maintaining safety and reliability of the distribution system on a local level? If not, how should the rules be changed and why?

AEP Ohio believes the rules are adequate and strike the appropriate balance. As long as the rules are followed, there are no unnecessary delays.

(f) Are the generation and capacity limits included in the level 1 and level 2 approval criteria still appropriate? Are EDUs denying applications for level 1 or level 2 interconnection based on applicants exceeding these limits?

Level 1 and level 2 approval criteria are fully adequate. When an applicant fails one or more of the level 1 or level 2 criteria items, AEP Ohio discusses alternatives with the applicant to resolve the item in order to approve the application. There have been very few cases where the means to mitigate the failed item was unacceptable to the applicant resulting in their withdrawal of the application.

(g) Please provide feedback with regard to the efficacy of the administrative procedures and processes set forth in the rules with regard to creating a uniform experience for consumers throughout the state. For example, is the application process adequately standardized? Are

applications being processed in a reasonably timely manner considering the complexity of review and necessity for various screens and studies, or are there unreasonable delays to achieving a fully operational status? Are costs adequately addressed?

AEP Ohio believes the application process is adequate and costs are adequately recovered. It is in all stakeholders' best interest to allow the EDU time to evaluate the applications and ensure the integrity of the distribution system is maintained. Given that, the Company processes applications in a timely manner based on the complexity of review.

(h) Finally, given that the rules are technically nuanced, should the Commission form a working group including various stakeholders to aid in the continued development of these rules, both now and through future review?

AEP Ohio does not believe a working group is necessary. The Company believes that reviewing the rules every five years is appropriate and adequate. If there are technologies or other emerging issues that drive a potential change to the rules or the application process, any party can raise those issues informally with the Company or Commission Staff. The Company believes such issues can be worked through amicably by all parties.

Respectfully submitted,

/s/ Tanner Wolffram
Steven T. Nourse (0046705), Counsel of Record
Christen M. Blend (0086881)
Tanner S. Wolffram (0097789)
American Electric Power Service Corporation
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215
Telephone: (614) 716-1608 / 1915/ 2914
Facsimile: (614) 716-2950
stnourse@aep.com
cmblend@aep.com
tswolffram@aep.com

(willing to accept e-mail service)

Counsel for Ohio Power Company

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing was electronically filed through the Docketing Information System of the Public Utilities Commission of Ohio on this 12th day of March, 2020. In accordance with Ohio Adm. Code 4901-1-05, the PUCO's e-filing system will electronically serve notice of the filing of this document on counsel for all parties.

Respectfully submitted,

/s/ Tanner Wolffram

Tanner S. Wolffram (0097789)
American Electric Power Service Corporation
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215
Telephone: (614) 716- 2914
Facsimile: (614) 716-2950
tswolffram@aep.com

Counsel for Ohio Power Company

Summary: Comments - Initial Comments of Ohio Power Company electronically filed by Tanner Wolffram on behalf of Ohio Power Company