

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

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

**REPLY COMMENTS OF
OHIO EDISON COMPANY, THE CLEVELAND ELECTRIC ILLUMINATING
COMPANY AND THE TOLEDO EDISON COMPANY**

I. INTRODUCTION

Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company (“Companies”) appreciate this opportunity to address the comments of interested stakeholders regarding Staff’s proposed amendments and questions regarding the rules for interconnection of Distributed Energy Resources (“DERs”).¹ In their initial comments in this proceeding, and in comments in other proceedings,² the Companies have supported local electric distribution utilities’ (“EDUs”) right to determine the appropriate standards to be applied to requests for interconnection of DERs to EDU grids. EDUs are responsible for the delivery of safe and reliable service to retail customers, subject to the Commission’s oversight. The safety and reliability of the local distribution system must take priority over other objectives and policies affecting the distribution system, whether they be to promote the proliferation of DERs, to enhance

¹ Failure of the Companies to respond to specific comments of any stakeholder on any given issue does not necessarily signify agreement nor waiver of the Companies’ right to address any topic subsequent pleadings in this proceeding.

² See, e.g., *Participation of Distributed Energy Resource Aggregation in Markets Operated by Regional Transmission Organizations* Comments of the FirstEnergy Companies and Eastern Kentucky Power Cooperative, Inc. Addressing the Responses of PJM Interconnection, LLC, to Commission September 5, 2019 Data Requests, Docket No. RM18-9, November 6, 2019.

optimization of the transmission system, or to create revenue opportunities for wholesale market participants. With these priorities in mind, the Companies reply to the Comments of other interested stakeholders.

II. REPLIES TO COMMENTS

The Companies' Reply Comments first address other stakeholders' responses to the Staff questions posed in the Commission's Entry, and then reply to specific and general amendments proposed by stakeholders.

A. Staff Questions

(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?

In its comments, Dayton Power and Light ("DP&L") urges that all applicants be required to adhere to the IEEE 1547-2018 standards for interconnection, claiming that is the "most efficient way to fully acclimate Ohio" to the new standards.³ The Companies respectfully disagree. As the Companies explained in initial Comments and others have noted, it is not yet possible to comply with IEEE 1547-2018. Moreover, some of the specific operating parameters of the new standards, such as ride-through discussed further below, require continued investigation regarding the impact on any given EDU's system before adoption into the Ohio Administrative Code would be appropriate. Thus, it is not feasible, much less efficient, to adopt IEEE 1547-2018. The Commission should reject DP&L's recommendation.

The Office of the Ohio Consumers' Counsel ("OCC"), on the other hand, urges the Commission to perform a cost-benefit analysis before adopting IEEE 1547-2018 in order to ensure

³ Comments of The Dayton Power and Light Company at p. 1. In these Reply Comments, the Companies cite to the initial comments filed by stakeholders as "[Stakeholder] Comments at p.X."

that non-DER customers do not pay higher electric rates as a result.⁴ The Companies agree with OCC's suggestion that DERs should pay for all incremental costs caused by the interconnection and operation of their DER.

(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?

Consistent with DP&L's recommendation that the Commission adopt the full IEEE 1547-2018 standard, DP&L recommends that the Commission adopt IEEE 1547-2018's ride-through standards, as the way to "be prepared in the event we see a large amount of DERs in the future."⁵ However, the Companies and others provided several reasons in initial Comments for why IEEE 1547-2018 should not be adopted, including but not limited to potential safety risks and the lack of industry consensus. One Energy has also noted potential safety risks.⁶

Also, equipment that complies with IEEE 1547-2018 is not yet available. Before industry standard inverters that comply with IEEE 1547-2018 can be appropriately designed, IEEE and Underwriters' Laboratories ("UL") must finish the balance of their work to get companion standards and testing in place. Meanwhile, each EDU needs the flexibility to make important decisions regarding the interconnection of an increasing number of DER installations to be integrated with its distribution system planning and operations. Therefore, the Commission should reject DP&L's recommendation.

⁴ OCC Comments at p. 3-4.

⁵ DP&L Comments at p. 2.

⁶ One Energy Comments at p. 3.

(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?

In initial comments on this question, stakeholders articulated a variety of positions, but none fully recognized that both the Commission and PJM may have concurrent standards and processes with respect to interconnection. For instance, One Energy states its position is that all interconnections of any size “are, and should be, the exclusive jurisdiction of Ohio, not PJM....”⁷ Duke Energy Ohio describes jurisdiction over DERs as shifting depending on whether they participate in wholesale markets.⁸ AEP Ohio notes that PJM has interpreted the situation where there is the potential to back feed electricity onto the bulk power system to require PJM’s approval.⁹ DP&L notes that any resource that intends to participate in the wholesale market or to be designated as a capacity or energy resource must go through the PJM process.¹⁰

The Companies believe that all of these positions are correct but incomplete, which indicates the need for further clarification. Exhibit A attached to the Companies’ Comments illustrates when the market participation or operation of DER triggers additional FERC jurisdiction. However, the requirements for physical interconnection to an EDU’s system are always Ohio jurisdictional, and should remain Ohio jurisdictional. The Companies urge the Commission to clarify that, as the Companies stated in their Comments, any applicability of PJM approval or the “PJM process” creates an additional layer of standards or process, not a displacement of the local EDU’s standards.¹¹

⁷ One Energy Comments at p. 4.

⁸ Duke Energy Ohio Comments at p. 3.

⁹ AEP Ohio Comments at p. 6.

¹⁰ DP&L Comments at p. 2.

¹¹ Companies’ Comments at p. 7.

(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?

AEP Ohio recommends that cyber security standards should be developed and added to the rules.¹² The Companies agree. As the industry in general, and Ohio in particular, moves into an era where EDUs' systems may need to communicate directly with customer DERs, cyber security becomes even more important. Moreover, web-connected third-party monitoring services for customer DERs also should require secure cyber interfaces that may be regulated through the Commission's rules.

One Energy proposes changes to the Level 3 review process, including firm deadlines.¹³ However, One Energy provides no facts demonstrating a need for its requested changes. One Energy provides only vague, unsubstantiated "examples" of situations it finds unacceptable, without specifics that can be addressed in reply comments.

One Energy also downplays the scope and complexity of Level 3 studies. Level 3 studies involve the largest and most complex interconnection studies, which often have the largest impact on safety and reliability and simply require the most time to study in order to design a safe interconnection. Level 3 interconnections also involve the most variability in circumstances. Thus, what One Energy mischaracterizes as a "quagmire of arbitrariness" is simply a reflection of the variability and complexity of these interconnections. And since every system—and indeed every circuit—is unique, it is not "without rhyme or reason," as One Energy suggests, to reach unique engineering conclusions on a case-by-case basis. Further, when necessary, the Companies will take extra time to figure out how a difficult problem can be solved. An arbitrary deadline could

¹² AEP Ohio Comments at p.7.

¹³ One Energy Comments at p. 4-5.

forestall the extra effort needed for the Companies to issue approval instead of denial. One Energy's 60 to 90-day proposal is overly aggressive, contrary to the complexity of the analyses involved,¹⁴ counterproductive to approval of DER interconnection, and should be rejected.

One Energy also proposes a reduced fee structure for Level 3 review, seeking to eliminate the per-kW fees altogether.¹⁵ One Energy compares Level 3 to Level 1 and finds the fee differences "stark," as if there's no difference between reviewing the interconnection of a 3,000 kW wind turbine and the interconnection of a 3 kW rooftop solar project. One Energy asserts "As a DER owner and operator, One Energy should not be a profit center for EDUs."¹⁶ Nothing could be further from the truth. The current fee structure is appropriate. Not all applications result in actual interconnections, and the up-front application fees are necessary to avoid stranded costs for preliminary analysis. The larger the installation, the more complex and time consuming the application review and preliminary set up for study. One Energy's proposal to eliminate the per-kW application fee or to fix the entire cost ignores the complexities of Level 3 review and should be rejected. Moreover, the Companies must be allowed to fully and timely recover any costs associated with the implementing the proposed rule amendments, including costs to accommodate change in a DER's mode of operations.

(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?

¹⁴ Illustrating the complexity of these reviews, PJM's "expedited review" of Small Generator (up to 20 MW) applications requires a minimum of 120 days. More complex interconnection reviews often exceed that time frame.

¹⁵ One Energy Comments at p. 4-5.

¹⁶ *Id.* at p. 5.

The Companies recommended that if DERs become aggregated, then utilities should have the ability to study the operational impacts of the aggregation to determine any detrimental effects and associated distribution system operational requirements, and to enforce those requirements along with full and timely cost recovery. Given that no other parties provided recommendations specifically in response to Staff's question, there is nothing on the record that would contradict the Companies' recommendation.

(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?

The Companies have no replies to any comments in response to this question.

(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?

The Companies agree with DP&L's observations that uniformity across the state may be unobtainable given each EDU's unique circumstances, and thus should not be expected. Taking One Energy's position on Question (d) above as partially applicable to this question, the Companies reiterate their response that variability and complexity along with unique circumstances will cause differences as noted above. With respect to costs, the Companies must be allowed to defer and fully and timely recover any costs associated with the implementing the proposed rule amendments, including costs to administer the application process, through their Government Directives Recovery Rider.

(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?

Stakeholders' comments indicated nearly unanimous support for establishment of such a working group. The Companies would actively participate if the Commission forms one to address the new technical challenges of increased DER as described by the Companies and others.¹⁷ However, the working group must not become a "design by committee" for individual interconnections. That role must be reserved for EDUs, who are experts on their own systems with responsibility for system safety and reliability.

The working group must also avoid addressing allocation (socialization) of costs caused by a given DER interconnection, or whether the rules should categorize "transactive energy" or "excess energy," as proposed by the Ohio Manufacturer's Association Energy Group ("OMAEG").¹⁸ The working group should focus on technical issues, and the Commission should reject OMAEG's recommendation.

B. Replies to Proposed Amendments

(a) 4901:1-22-08(C)(1)

Duke Energy Ohio proposes amendments that would require billing the DER applicant for interconnection costs after the costs are incurred. The Companies agree that applicants should be billed for all of the actual costs incurred. The Companies believe that providing an applicant with an estimated invoice up-front for the engineering studies and construction costs allows an applicant to have a reasonable expectation of the amount of costs that may be incurred, and allows the applicant to make an informed decision as to whether to proceed. Further, an applicant should be

¹⁷ See, for example, One Energy Comments at p. 6 (This team's focus should be on the *technical* issues of what can take place from an engineering perspective....").

¹⁸ OMAEG Comments at p. 4-5.

provided a true-up reconciliation after the fact so that only the actual costs are required to be paid. The up-front payment of these estimated costs is part of the process by which an applicant agrees to proceed with the project. It is also consistent with other Commission rules and the EDUs' tariffs, which require up-front payment of costs such as line extensions, special facilities, and premium services. The Companies respectfully suggest that no changes are needed to this provision to support an estimate/true up approach, which is consistent with the intent of Duke's proposal.

Except as noted above, the Companies generally support the specific rule amendments recommended by AEP Ohio, DP&L, and Duke Energy Ohio as improving the interconnection process and/or clarifying rule language for consistency with other industry terminology.

(b) Replies to Other General Recommendations

OMAEG, OCC, and One Energy each make recommendations that will not add value to the interconnection process in Ohio. OMAEG, for example, suggests that some way be found to identify net value to the distribution system from a customer's choice to install DER. OMAEG suggests: "1) Perform a system benefits analysis like what the Commission does for interconnection of new load (e.g., new neighborhood)....; and 2) Incorporate the process with the EDU's Non-Wires Alternative (NWA) process."¹⁹ However, neither of these processes currently exists in the manner that OMAEG suggests, and there certainly is no consensus on tools or models to measure such benefits. To the extent that OMAEG's system benefits analysis recommendation is referring to line extensions, OMAEG has not sufficiently drawn a parallel between the line extension process and the interconnection process to justify its recommendation.

¹⁹ OMAEG Comments at p. 3.

With respect to OMAEG's recommendation to incorporate NWA into the interconnection process, the Distribution Planning Workgroup Final Report ("PWG Final Report") – which has not been commented on by stakeholders much less approved by the Commission – makes no recommendations on the role of customer- or third party-owned DER upgrade costs to be borne by the EDU's other customers for NWA benefits. Indeed, OMAEG has the NWA process concept backwards. The process is not whether a customer's decision to install DER can find an NWA benefit, but rather whether a specific utility-identified need can be met with a more cost-effective NWA. Further, as the PWG Final Report notes, EDUs need to explore pilot programs to determine whether NWAs provide such benefits in workable applications.

OMAEG additionally recommends that non-confidential, detailed results from interconnection studies be made available to the public. The Companies disagree. First, such studies represent an agreement between a customer and the EDU that covers specific equipment installations at specific locations on the grid. The customer may consider the mere existence of such a study to be confidential. Second, each system impact study is unique and not transferrable to another DER and therefore is of little or no value to another customer's planning purposes. Even in the unlikely event that a DER should seek to connect the same equipment package to the same circuit, the mere passage of time alone would require a fresh study, not to mention the increased generating capacity and location on the circuit. Moreover, interconnection studies do not include system-level Hosting Capacity. Rather, they analyze whether a given generating capacity can be accommodated at a given location on a given circuit and what upgrades may be necessary to do so. Accordingly, OMAEG's recommendation will not yield useful information for other DER customers and would simply impose an administrative burden, the costs of which would need to be fully and timely recovered from customers.

OCC recommends initiating a new dispute reporting obligation on EDUs, while One Energy recommends a dedicated mediation process at the Commission. Both of these proposals are unnecessary due to the existing remedies available to customers and stakeholders. DER customers have the full benefit of the Commission's informal complaint process to address their concerns. One Energy asserts that its commercial and industrial customers, presumably with One Energy's support and advocacy, would find the process so unavailing that they would simply "give up." To the contrary, the informal complaint process is used by many residential customers each year to pursue and resolve disputes with utilities.

In support of its proposed new dispute reporting requirement, OCC offers a single example of a commercial entity's 2009 complaint. However, the parties to that case filed a joint motion to dismiss with prejudice because "their differences had been resolved amicably."²⁰ This is further evidence that the current processes work. Accordingly, these recommendations of OCC and One Energy should be rejected.

III. CONCLUSION

The Companies appreciate this opportunity to reply to interested stakeholders' initial comments. The Companies respectfully request the Commission consider and approve rule amendments in accordance with the Companies' recommendations and those included in the Companies' Comments filed in this proceeding.

²⁰ *In the Matter of the Complaint of Renewable Energy Services of Ohio, LLC*, Case No.09-429-EL-CSS, Opinion, March 24, 2010, 2010 Ohio PUC LEXIS 319.

Respectfully submitted

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Summary: Reply Reply Comments of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company electronically filed by Mr Robert M Endris on behalf of Ohio Edison Company and The Cleveland Electric Illuminating Company and The Toledo Edison Company