**BEFORE**

**THE PUBLIC UTILTIES COMMISSION OF OHIO**

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| In the Matter of the Application of Duke Energy Ohio, Inc. to Establish Minimum Reliability Performance Standards Pursuant to Chapter 4901:1-10, Ohio Administrative Code. | )  )  )  )  ) | Case No. 16-1602-EL-ESS |

**COMMENTS**

**BY**

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# I. INTRODUCTION

After investing more than $100 million for smart grid in the service territory of Duke Energy Ohio, Inc. (“Duke”),[[1]](#footnote-3) Ohioans should expect that Duke would be held to a higher service reliability standard. Smart grid was touted to regulators and consumers as investments intended to enhance service quality.[[2]](#footnote-4) Instead, Duke proposes lower reliability standards for the service it provides to customers. Under the law, Ohioans are entitled to adequate utility service at just and reasonable rates.[[3]](#footnote-5) Ohio law also requires the Public Utilities Commission of Ohio (“PUCO”) to set minimum service quality, safety, and reliability requirements for noncompetitive electric service in Ohio.[[4]](#footnote-6)

In a previous reliability standards case, the PUCO adopted a settlement agreement that required Duke to file an application for new reliability standards during 2016.[[5]](#footnote-7) On July 22, 2016, Duke filed an Application to reduce the standards for its reliability. These lower standards could adversely affect the quality of service that 630,000 Ohioans receive from Duke at their homes.

The reliability standards established in this proceeding address the quality of electric service Duke customers should receive during typical days, without major weather events or transmission outages. The standards are sometimes called the “blue sky” standards, i.e., standards for reliability during normal weather conditions, even though a certain amount of adverse weather should be considered as normal weather.[[6]](#footnote-8)

PUCO rules require electric companies to establish for the System Average Interruption Frequency Index (“SAIFI”) and the Customer Average Interruption Duration Index (“CAIDI”).[[7]](#footnote-9) SAIFI reflects the number of sustained interruptions in electric service the average consumer experiences over a predefined period of time. CAIDI represents the average number of minutes required to restore electric service to residential customers.[[8]](#footnote-10) Higher thresholds for SAIFI or CAIDI as minimum reliability standards mean that service to customers could be less reliable – there could be more interruptions to service and service restorations could take longer.

For Duke, the 2014 Settlement set a SAIFI standard of 1.05 and a CAIDI standard of 122.81 minutes for calendar years 2015 and 2016.[[9]](#footnote-11) In the Application, Duke has proposed to lower the reliability standards for service to residential customers. Duke proposes a SAIFI standard of 1.12 and a CAIDI standard of 134 minutes.[[10]](#footnote-12) Duke’s proposal for calculating the standards going forward results in allowing customers to experience more (in number) and longer (in duration) outages before Duke would be considered to have violated the standards. In these Comments, the Office of the Ohio Consumers’ Counsel (“OCC”) explains why the PUCO should reject the new standards proposed by Duke.[[11]](#footnote-13)

The PUCO’s rules require a hearing if the proposed reliability standards appear to the PUCO to be unjust or unreasonable.[[12]](#footnote-14) OCC requests that the PUCO hold such a hearing. The PUCO should also hold local public hearings so that consumers may have an opportunity to present their views directly to the PUCO.

# II. RECOMMENDATIONS

## A. Duke’s proposed reliability standards could harm Ohioans by allowing longer service interruptions and slower service restorations, providing lower quality of electric service to residential consumers.

To protect Ohioans, the PUCO must adopt rules that specify minimum service quality, safety, and reliability requirements for noncompetitive retail electric services supplied by electric utilities.[[13]](#footnote-15) To that end, the PUCO adopted Ohio Adm. Code 4901:1-10-10. This rule requires electric companies to periodically propose standards for service reliability. Duke’s current reliability standards were adopted in the 2014 Settlement.

In its Application in this case, Duke proposes revising its existing distribution service reliability standards. Duke recommends using trend-lines that are based on five years of actual historical performance data (2011-2015) to predict 2017 performance.[[14]](#footnote-16) Duke then added two standard deviations to the trend-line values to establish proposed standards.[[15]](#footnote-17) Duke’s use of five years of performance data with a trend-line and an additional two standard deviations is contrary to the PUCO Staff Guidelines for establishing reliability standards based on average historical performance over at least five years.[[16]](#footnote-18)

Duke claims that a trend-line and two standard deviations are necessary to account for variability for factors such weather, system design, and system configuration.[[17]](#footnote-19) Duke further asserts that while using the last five years’ performance data is an accurate reflection of its system automation and reliability improvement programs, five years of data is too limited for predicting future performance.[[18]](#footnote-20) Duke contends that two standard deviations are needed to increase the confidence level in the accuracy of the proposed standard.[[19]](#footnote-21)

Duke’s Application would lower the reliability standards for electric service provided to residential consumers. As a result, residential consumers could experience more frequent and longer outages, without Duke being subjected to PUCO enforcement actions.

The PUCO’s rules require electric utilities to establish reliability standards for both SAIFI and CAIDI.[[20]](#footnote-22) Duke’s existing reliability standards are a 1.05 SAIFI and a CAIDI of 122.81 minutes.[[21]](#footnote-23) In its Application, Duke proposed a SAIFI of 1.12 and a CAIDI of 134 minutes.[[22]](#footnote-24) Duke would like the PUCO to approve a less stringent SAIFI standard, meaning residential consumers could expect more outages. And the significantly reduced CAIDI standard recommended by Duke would mean that residential consumers can expect longer outages – more than 11 minutes (about nine percent) longer on average.[[23]](#footnote-25)

In evaluating the reasonableness of the proposed reliability standards, it is important to consider that the standards reflect only a portion of the outages that customers can have on an annual basis.  For example, the PUCO’s rules exclude from reliability standards the utility’s performance during major storms where the weather could significantly impact the number and duration of outages across the utility’s service territory. [[24]](#footnote-26) The reliability standards are specific to the distribution system and exclude outages that are associated with a failure in transmission facilities.[[25]](#footnote-27) Finally, the reliability standards exclude service interruptions of less than five minutes.[[26]](#footnote-28)

Therefore, the reliability standards are a partial indicator of the actual quality of electric service that Duke is obligated and responsible for providing to its customers under normal and routine operations of the distribution system.  Duke has direct control over most of the factors that influence its ability to meet these standards.

## B. Duke’s proposed reliability standards are unjust and unreasonable because consumers are paying rates for electric reliability that is superior to what Duke is now proposing to provide.

Ohio law requires the PUCO to protect consumers by adopting rules that specify the minimum requirements for electric service quality.[[27]](#footnote-29) The rules must address reliability and prescriptive standards for the inspection, maintenance, repair, and replacement of transmission and distribution systems by electric utilities.[[28]](#footnote-30) The PUCO’s rules make electric utilities responsible for establishing and complying with inspection, maintenance, repair, and replacement plans and programs that directly impact reliability of customers’ electric service.[[29]](#footnote-31)

Duke’s reliability standards for 2011 through 2014 were established by settlements in Duke’s first electric security plan case and its 2009 reliability standards case.[[30]](#footnote-32) The 2015-2016 standards were set in the 2014 Settlement. The PUCO Staff’s guidelines for filing reliability cases include using a five-year average historical performance baseline that is then adjusted to account for changes in the system geography, system design, technological advancements, and the results from customer perception surveys.[[31]](#footnote-33) Table 1 compares Duke’s standards and annual performance for the most recent five-year period, 2011-2015.[[32]](#footnote-34)

Table 1: Duke Reliability Standards/Performance 2011-2015[[33]](#footnote-35)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SAIFI | 2011 | 2012 | 2013 | 2014 | 2015 |
| Standard | 1.38 | 1.31 | 1.24 | 1.17 | 1.05 |
| Performance | 1.38 | 1.08 | 0.98 | 0.99 | 1.04 |
|  |  |  |  |  |  |
| CAIDI (Minutes) | 2011 | 2012 | 2013 | 2014 | 2015 |
| Standard | 111.90 | 115.02 | 118.14 | 121.25 | 122.81 |
| Performance | 107.00 | 103.26 | 117.80 | 108.28 | 117.32 |

Note that the CAIDI standard increases (reflecting less reliable service) in each year of the period. These increases permit Duke’s 2015 CAIDI performance, at 117.32 minutes, to meet the 2015 standard of 122.81 minutes, even while this performance failed to meet the CAIDI standards in effect for 2011 and 2012.

Since Duke’s distribution rates and reliability standards were last established, Duke’s customers have paid substantial amounts, through base distribution rates and reliability-related riders, that compensate Duke for operational costs associated with the inspection, maintenance, repair, and replacement of its distribution facilities. Hence, the proposed reliability standards should not be worse than the current standards, which were established shortly after the last base distribution rate case.[[34]](#footnote-36) But Duke has proposed less stringent SAIFI and CAIDI standards in the current Application.

Residential customers should get what they have paid for through the base distribution rates,[[35]](#footnote-37) the Distribution Capital Investment Rider (“DCIR”),[[36]](#footnote-38) and the smart grid program that were last approved by the PUCO, i.e., improved reliability from Duke. In its most recent electric security plan case, Duke noted that customers require “a higher degree of reliability, performance, and response.”[[37]](#footnote-39) And Duke asserted that the programs funded with consumer money through the DCIR would enhance the reliability of its distribution system.[[38]](#footnote-40)

Duke’s proposal would yield the opposite result – more money paid by residential customers for lower service quality and reliability. This is not equitable for residential consumers. The PUCO should not let this happen.

## C. Duke’s proposed lower reliability standards are inconsistent with the promised improved service reliability that was to be achieved through distribution system improvements residential consumers are paying for through the Distribution Capital Investment Rider on their electric bill.

In approving the DCIR, the PUCO specifically noted that it would be detrimental to the state’s economy for reliability to take a negative turn before it encouraged Duke to proactively and efficiently modernize distribution infrastructure.[[39]](#footnote-41) The PUCO approved DCIR spending caps of $17 million in 2015, $50 million in 2016, $67 million in 2017, and $35 million for the first five months of 2018.[[40]](#footnote-42)

Yet despite the vast amount of additional consumer money the PUCO authorized Duke to spend through the DCIR, reliability is taking a negative turn. Instead of consumers getting the reliability improvement that Duke promised, they actually have been receiving degraded service reliability. For example, the average CAIDI performance for 2011-2015 is substantially less than the average CAIDI performance for 2005-2009. Between 2005 and 2009, the average CAIDI performance was 92.92 minutes.[[41]](#footnote-43) But as shown in Table 1 above, the average CAIDI performance between 2011 and 2015 is 110.73 minutes. This means that the restoration times for the average outage across Duke’s entire service territory is almost 18 minutes (more than 19 percent[[42]](#footnote-44)) longer now than it was just six years ago – and it is getting worse. The DCIR should be discontinued if Duke fails to use the additional money collected from consumers in an efficient and prudent manner that results in improved CAIDI performance for consumers.

## D. Duke’s proposed standards do not comply with the PUCO Rules and the PUCO Staff’s Guidelines for establishing reliability standards for electric service to residential consumers.

The PUCO requires supporting justification for reliability performance standards

based on historical system performance, system design, technological advancements,

service area geography, and the results of customer perception surveys.[[43]](#footnote-45) In addition, the

PUCO Staff has provided guidance concerning how reliability standards should be

established.

Duke’s proposed reliability standards are based on use of a trend-line of the actual reliability performance over the last five years with two standard deviations to account for variations.[[44]](#footnote-46) But using trend-lines to predict future performance standards is not reasonable and is inconsistent with the PUCO Staff’s Guidelines, which use five years of actual historical performance, as discussed above.  Trend-lines are more speculative than average historical performance and can lead to errors in assessing future reliability performance. This is especially true when there is not a linear and steady rate of increase or decrease in reliability performance over time.[[45]](#footnote-47)

In addition, adding two standard deviations to the adjusted trend-lines is inappropriate because it results in standards that are not a realistic projection of the actual performance of Duke’s distribution system. While reliability standards should be achievable, an unrealistically high cushion between the standard and the current performance can lead to degradation in reliability performance. Table 2 below compares Duke’s proposed standard deviation cushion for SAIFI, 0.33 interruptions, with the major event day exclusion for SAIFI for the years 2013-2015.

Table 2

|  |  |  |  |
| --- | --- | --- | --- |
| **Duke Energy Ohio** | **2013** | **2014** | **2015** |
| SAIFI After Exclusions | 0.98 | 0.99 | 1.04 |
| SAIFI Before Exclusions | 1.32 | 1.29 | 1.38 |
| MED Exclusion | 0.34 | 0.30 | 0.34 |
| Proposed STD Cushion | 0.33 | 0.33 | 0.33 |

Duke’s proposed standard deviation cushion for SAIFI is approximately equal to or greater than the major event day exclusion for SAIFI in all three years. This proposed standard deviation cushion goes far beyond addressing year-to-year variations in blue-sky reliability. It is large enough to fully address Duke’s entire major event reliability impacts where SAIFI is concerned over the past three years.

The reliability standards should accurately reflect the reliability performance that customers are paying for and that Duke is legally responsible for providing.[[46]](#footnote-48) Large variances between the standards and actual performance leads to declining reliability for customers as evidenced by the decline in both the proposed SAIFI and CAIDI standards.

Duke should have established a baseline for CAIDI and SAIFI using the average performance between 2011 and 2015. The PUCO’s Rules and the PUCO Staff’s Guidelines do not support use of the two standard deviations proposed by Duke.[[47]](#footnote-49) Rather, adjustments to the five-year average performance should be made because of the following system design and technological advancements:

* Duke deployed Distribution Automation Circuit Reconfiguration (“DACR”) technology on several circuits between 2011 and 2015 where the results are not fully included in the five-year average performance. Duke should have proposed a downward adjustment to the five-year average performance to reflect the reliability improvement that DACR was supposed to provide consumers for 2017 and beyond. The PUCO should require Duke to amend its Application to establish new reliability standards that properly support this DACR adjustment.
* Duke continues to deploy DACR technology using funding from the DCIR. Duke should have proposed an ongoing annual adjustment to the five-year average performance to account for the continued reliability improvement that DACR is touted to provide. The PUCO should require Duke to amend its Application to establish new reliability standards that properly support this ongoing DACR adjustment.
* Duke has modified the design of its distribution system based on the incremental funding provided through the DCIR. Duke should adjust the five-year average performance to reflect the improved reliability performance that would be associated with the DCIR spending of $17 million in 2015. The PUCO should require Duke to amend its Application to establish new reliability standards that properly support including in the five-year average performance the consumer-funded investments made in 2015 through the DCIR.
* Duke continues to spend funds supplied by consumers through the DCIR for incremental design changes to the distribution system in 2016 through 2018. Duke should have adjusted the five-year average performance to reflect the reliability improvements that the DCIR is supposed to provide. The PUCO should require Duke to amend its Application to establish new reliability standards that properly support an annual adjustment to the reliability standards that reflects the investments being made between 2016 and 2018 that are by consumers though the DCIR.

## E. Duke’s proposal to reduce the reliability standards for Ohioans’ electric service is unjust and unreasonable, and the PUCO should conduct a hearing on the Application.

Ohio Adm. Code 4901:1-10-10(B)(6)(e) provides that if it appears to the PUCO that the proposals in the application may be unjust or unreasonable, the PUCO shall set the matter for hearing. At the hearing, the burden of proof to show that the proposals in the application are just and reasonable shall be upon the electric utility.

OCC has presented the PUCO with cause for a hearing under Ohio Adm. Code 4901:1-10-10(B)(6)(e). As discussed above, Duke’s proposal would unreasonably reduce the quality of electric service to Ohioans, who are still paying millions of dollars extra each year for improvements to Duke’s distribution system and smart grid. This is unjust and unreasonable. The PUCO should schedule a hearing on the Application.

## F. The PUCO should also conduct local public hearings on Duke's proposal so that consumers have an opportunity to testify.

In addition to the hearing provided under its rules, the PUCO should schedule local public hearings to receive input directly from consumers. Although Duke conducted quarterly customer perception surveys as required by the 2014 Settlement,[[48]](#footnote-50) only about 100 customers responded to the surveys each quarter.[[49]](#footnote-51) So, there are likely consumers who were not included in the survey. The PUCO should solicit additional input from consumers.

The PUCO should schedule at least one local public hearing in Cincinnati, and possibly others. The local public hearing(s) should be conducted in the evening, so that more consumers would be able to attend. The local public hearing(s) would help the PUCO be better informed about consumers’ views on the reliability of service provided by Duke.

# III. CONCLUSION

Ohioans have paid hundreds of millions of dollars for improvements to Duke’s distribution system through the numerous charges added on to their bills. Yet, Duke’s proposal indicates that there is little or nothing to show for these expenditures. Instead of raising the bar for service reliability, Duke is asking to be held to lower reliability standards for service to residential consumers. For consumers this could mean more and longer outages before the PUCO can hold Duke accountable. This is not equitable. Higher customer charges and reduced service quality is unacceptable. Duke failed to meet its burden of proof in this case.

In accordance with Ohio Adm. Code 4901:1-10-10(B)(6)(e), Duke’s Application for proposing lower reliability standards for service to residential customers is unjust and unreasonable. The PUCO should set this matter for hearing.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that a copy of these Comments was served on the persons stated below via electronic transmission, this 22nd day of February 2017.

*/s/ Terry L. Etter*

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1. From Duke’s previous SmartGrid rider cases, its electric customers have paid a total of $88.5 million and its gas customers have paid a total of $29.1 million. *See* Case No. 10-2326-GE-RDR, Opinion and Order (June 13, 2012) at 13 (electric customers pay $19.2 million and gas customers pay $9.2 million); Case No. 12-1811-GE-RDR, Opinion and Order (March 27, 2013) at 5 (electric customers pay $28.5 million and gas customers pay $12.3 million); Case No. 13-1141-GE-RDR, Opinion and Order (April 9, 2014) (“13-1141 O&O”) at 7 (electric customers pay $41.8 million and gas customers pay $7.0 million). [↑](#footnote-ref-3)
2. *See* Case No. 10-2326-GE-RDR, Stipulation and Recommendation (February 24, 2012), Attachment 1 (showing that, based on MetaVu’s audit in that case, the benefits from Outage Detection ($0.050 million), Outage Verification ($0.410 million) and Outage Reductions ($0.370 million) ­– a combined total of $0.93 million – represented more than 10% of the estimated benefits from the electric SmartGrid program ($8.003 million) for 2013). [↑](#footnote-ref-4)
3. R.C. 4905.22. [↑](#footnote-ref-5)
4. R.C. 4928.11. [↑](#footnote-ref-6)
5. *In the Matter of the Application of Duke Energy Ohio, Inc., to Establish Reliability Targets,* Case No. 13-1539-EL-ESS, Opinion and Order (September 17, 2014) (“Reliability Order”) at 5. *See id.,* Stipulation and Recommendation (July 25, 2014) (“2014 Settlement”) at 4. [↑](#footnote-ref-7)
6. *See, e.g., In the Matter of the Commission-Ordered Investigation of Ameritech Ohio Relative to Its Compliance with Certain Provisions of the Minimum Telephone Service Standards Set Forth in Chapter 4901:1-5, Ohio Administrative Code*, Case No. 99-938-TP-COI, Opinion and Order (July 20, 2000) at 12 (where the PUCO emphasized that severe storms in Ohio are neither unforeseeable nor extraordinary: “Heavy rains occur frequently, as do high winds and lightning.”). [↑](#footnote-ref-8)
7. Ohio Adm. Code 4901:1-10-10(B)(1) and (B)(2). [↑](#footnote-ref-9)
8. Institute of Electrical and Electronic Engineers (“IEEE”) Guide for Electric Power Distribution Reliability Indices, IEEE Std 1366-2012, (Revision of IEEE Std 1366-2003) at 5 (May 31, 2012). [↑](#footnote-ref-10)
9. 2014 Settlement at 4. [↑](#footnote-ref-11)
10. Application at 4. [↑](#footnote-ref-12)
11. The procedural schedule for this case was established by Entry issued on January 4, 2017. [↑](#footnote-ref-13)
12. Ohio Adm. Code 4901:1-10-10(6)(e). [↑](#footnote-ref-14)
13. R.C. 4928.11(A). [↑](#footnote-ref-15)
14. Application at 3. [↑](#footnote-ref-16)
15. *Id*. Duke states that the two standard deviations represent a 94.5 percent confidence level in meeting the reliability standards. *Id.* [↑](#footnote-ref-17)
16. *See* [http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/#sthash.gLyjltVG.hcwu93k5.dpbs](http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/" \l "sthash.gLyjltVG.hcwu93k5.dpbs). [↑](#footnote-ref-18)
17. Application at 3. [↑](#footnote-ref-19)
18. *Id.* at 4. [↑](#footnote-ref-20)
19. *Id*. [↑](#footnote-ref-21)
20. Ohio Adm. Code 4901:1-10-10(B). [↑](#footnote-ref-22)
21. 2014 Settlement at 4; Reliability Order at 4. [↑](#footnote-ref-23)
22. Application at 4. [↑](#footnote-ref-24)
23. 134 ÷ 122 = 1.091. [↑](#footnote-ref-25)
24. Ohio Adm. Code 4901:1-10-10(B)(4)(c). [↑](#footnote-ref-26)
25. *Id*. [↑](#footnote-ref-27)
26. Ohio Adm. Code 4901:1-10-01(V). [↑](#footnote-ref-28)
27. R.C. 4928.11(A). [↑](#footnote-ref-29)
28. *Id*. [↑](#footnote-ref-30)
29. Ohio Adm. Code 4901:1-10-27(E). [↑](#footnote-ref-31)
30. The SAIFI standard for 2011-2014 was set in the electric security plan case. *See* Case No. 08-920-EL-SSO, Stipulation and Recommendation (October 27, 2008) at 16-17. The CAIDI standard for 2011-2014 was established in Duke’s 2009 reliability standards case. *See* Case No. 09-757-EL-ESS, Second Revised Stipulation and Recommendation (May 25, 2010) at 6. [↑](#footnote-ref-32)
31. *See* [http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/#sthash.gLyjltVG.hcwu93k5.dpbs](http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/" \l "sthash.gLyjltVG.hcwu93k5.dpbs). [↑](#footnote-ref-33)
32. Ohio Adm. Code 4901:1-10-10(C) requires Duke to file an Annual Report with actual performance data for 2016 by March 31, 2017. [↑](#footnote-ref-34)
33. For performance data, see Application at 3. [↑](#footnote-ref-35)
34. *In the Matter of the Application of Duke Energy Ohio, Inc. for an Increase in Electric Distribution Rates*, Case No. 12-1682-EL-AIR, et al., Opinion and Order (May 1, 2013) (adopting stipulation filed April 2, 2013). [↑](#footnote-ref-36)
35. *See id.* [↑](#footnote-ref-37)
36. *In the Matter of Application of Duke Energy Ohio, Inc. for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan, Accounting Modifications, and Tariffs for Generation Service*, Case No. 14-841-EL-SSO, Opinion and Order (April 2, 2015) at 66, 72. [↑](#footnote-ref-38)
37. Case No. 14-841-EL-SSO, Direct Testimony of Marc W. Arnold (May 29, 2014) at 10. *See also id.* at 13. [↑](#footnote-ref-39)
38. *Id.* at 20-35. [↑](#footnote-ref-40)
39. *Id*. at 71. [↑](#footnote-ref-41)
40. *Id*. at 72. [↑](#footnote-ref-42)
41. Case No. 09-757-EL-ESS, Second Stipulation and Recommendation (May 25, 2010) at 6. [↑](#footnote-ref-43)
42. 110.73 ÷ 92.92 = 1.192. [↑](#footnote-ref-44)
43. Ohio Adm. Code 4901:1-10-10(B)(4)(a). [↑](#footnote-ref-45)
44. Application at 4. [↑](#footnote-ref-46)
45. <https://support.office.com/en-us/article/Choosing-the-best-trendline-for-your-data-1bb3c9e7-0280-45b5-9ab0-d0c93161daa8> [↑](#footnote-ref-47)
46. R.C. 4928.11. [↑](#footnote-ref-48)
47. *See* Ohio Adm. Code 4901:1-10-10; [http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/#sthash.gLyjltVG.hcwu93k5.dpbs](http://www.puco.ohio.gov/puco/index.cfm/rules/pending-rules/staff-guidelines-for-electric-utility-reliability-standards-under-rule-4901-1-10-10-b/" \l "sthash.gLyjltVG.hcwu93k5.dpbs). [↑](#footnote-ref-49)
48. Application at 5-6. [↑](#footnote-ref-50)
49. *See* Attachment (b) to Duke’s response to OCC RPD-01-002. [↑](#footnote-ref-51)