BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Establishment of 4901: 1-10-10(B) Minimum Reliability Performance Standards for Ohio Power Company	))))	**Case No. 16-1511-EL-ESS**

Reply Comments of AEP Ohio

On June 30, 2016 Ohio Power Company (AEP Ohio) filed an application to reset its minimum reliability performance factors in Case No. 16-1511-EL-ESS. On December 14, 2016, the Commission ordered a procedural schedule for a technical conference as well as deadlines for filing comments on the application by any interested parties which was due January 26, 2017. In the same order a deadline for filing of comments by Commission Staff was set at February 10, 2017, and reply comments are due February 23, 2017. On January 19, 2017, AEP Ohio held a technical conference at the offices of the Commission to present the facts around the filing and to answer any questions interested parties may have regarding the proposed reliability standards. In attendance were members from the Commission Staff (Staff) as well as members from the Office of the Ohio Consumers Council (OCC). On January 26, 2017 OCC was the only interested party that filed comments regarding the application. On February 10, 2017 Staff filed their comments regarding the application. AEP Ohio's reply comments regarding Staff's and OCC's comments in regards to AEP Ohio's Minimum Reliability Performance Standards are below.

I. OCC Comments

A. AEP Ohio's proposed reliability standards are reasonable and appropriate based on the supporting analysis provided in the application.

AEP Ohio proposes a standard based on very recent reliability trends as stated in the application. By basing the proposed values on the most recent three years of reliability data, of which AEP Ohio performed well below their minimum reliability performance numbers, AEP Ohio is ensuring that the proposed standards are set using the most recent programs as well as current rate structures.

OCC is apparently opposed to any downward adjustment to the metrics based on any circumstances; in addition to being unreasonable and illogical, that position is not consistent with the rules or precedent. OCC also implies that AEP Ohio would expect to decrease customer satisfaction by allowing its crews to take longer to restore outages than it does today. OCC fails to recognize the many types of existing outage factors, many of which the Company cannot prevent nor control the length of time to place back into service. A prime example is the outages caused by Trees Outside Rights-of-Way (ROW). While AEP Ohio attempts to remove potential danger or hazard trees from outside the ROW, it is not always possible due to lack of customer consent or geographical constraints. Historically, the number of interruptions and the number of customer outage minutes caused by Trees Outside ROW has increased since 2012. Interruptions of this type are generally very time consuming to repair and many times requires a separate tree crew called to the location following the line crew's initial assessment. Outages outside of the control of AEP Ohio continue to increase and contribute to a higher CAIDI value. Therefore, AEP Ohio proposed reliability standards that are based on current reliability trends and must reflect those current trends in order to set a standard that would be acceptable to AEP Ohio.

B. AEP Ohio's application is consistent with distribution system improvements that customers pay for through riders

OCC correctly points out that customers pay for several riders which provide reliability benefits to customers. One of these as mentioned by the OCC is the Distribution Investment Rider (DIR). Since the DIR does help improve reliability, AEP Ohio as a part of their application for proposed reliability standards included a DIR improvement factor into their calculations. The proposed improvement factor accounts for the improved reliability which customers can expect from programs such as the DIR. While the DIR Program is designed to improve reliability in certain outage categories, AEP Ohio must show a SAIFI and CAIDI reliability value which accounts for a multitude of various outage causes. While the DIR will improve reliability, it also impacts SAIFI and CAIDI negatively as well. For example, for the five years of 2008 – 2012, the average customer minutes of interruption (CMI) for the outage cause code category of Scheduled Outages was roughly 10,560,000 minutes. Work from the DIR Program contributed to that CMI average increasing to roughly 14,230,000 minutes from the years of 2013 – 2015. Increasing CMI of over roughly 3,670,000 minutes has a negative impact on reliability performance and AEP Ohio's proposed reliability standards, even though the general customer experience is improving. Customers are normally informed of scheduled outages. Customers understand and generally appreciate that AEP Ohio is working diligently to improve their distribution system. The OCC states that customers deserve the reliability they pay for. AEP Ohio is showing that customers are getting what they pay for, and more scheduled outages leading to 'lower standards' are part of what is included in that price. Therefore, AEP Ohio understands OCC's concern around what appears to be 'lower reliability standards,' although the

proposed reliability standards must be looked at holistically and not just at the pieces which are addressed through things like Riders.

C. AEP Ohio's proposed standards application does comply with the Commission's Rules and Staff's Guidelines for establishing reliability performance values

1) AEP Ohio's Historical Average

AEP Ohio followed all Ohio Administrative Code Rules when making the application for proposed reliability standards. AEP Ohio utilized three years of historical reliability data versus the five years of historical reliability data. The decision was supported by five clear and positive reasons illustrating the benefits to customers. The OCC quotes all five reasons AEP Ohio mentions of why it would be better to use the most recent three years of historical reliability and then simply states that all five reasons are not sufficient to support using a three year average without any further explanation. While the OCC does not like the fact that AEP Ohio used three years of historical performance, it does not make it non-compliant with the rules. The Commission should not reject AEP Ohio's application for using a three year average due to all five of the reasons stated in the initial application. In addition, the current AEP Ohio Reliability Standards are based on a 4 year average which is less than the five year average the OCC is recommending.

The OCC continues to suggest that AEP Ohio should have proposed an adjustment factor for its prototype database for collecting tree outside the right-of-way information. The database OCC is referring to is a prototype and was used in a portion of AEP Ohio's service territory to test its functionality. AEP Ohio began testing

collection of information around the end of 2015. This database is no longer maintained, therefore AEP Ohio does not recommend an adjustment factor from this program.

The OCC additionally adds that AEP Ohio ignored the results of customer surveys when filing its proposed reliability standards application. This is clearly not the case. AEP Ohio addresses the results of its customer satisfaction surveys at length in its application. AEP Ohio agrees with the OCC in that 32% of customers survived indicated that restoring the power quickly when outages occur was one of the most important items to customers. AEP Ohio does not agree with the OCC in that a proposed standard of a higher CAIDI means that customers would be losing the same service they have today from AEP Ohio. CAIDI is the average of the duration of outages, therefore if AEP Ohio is seeing an increase in outages which take longer to restore, then CAIDI will naturally increase. As in the example used above regarding an increase in outages from trees outside rights-of-way, CAIDI will naturally increase due to the nature of the outage and the length of time to restore the outage. This does not equate to AEP Ohio putting less priority on outage restoration time as the OCC implies.

The OCC states in their comments that AEP Ohio should have proposed standards which report on momentary outages "MAIFI" in addition to the current SAIFI and CAIDI standards. The OCC is overstepping their bounds when suggesting that AEP Ohio should be held to yet another standard that is not currently in the Ohio Administrative Code. Being able to track an additional metric does not directly correspond to good customer service or customer satisfaction. The OCC does not supply any reason to add an additional metric which would purport better customer service. Therefore AEP Ohio does not plan to propose any additional standards at this time.

OCC discusses gridSMART improvements for phase I and phase II being left out of AEP Ohio's application for proposed reliability standards. AEP Ohio did not propose any adjustments to its standards for the gridSMART Phase I area because the project has been in place for over 5 years and the benefits are accounted for using the most recent historical system average. If gridSMART Phase I were not in place it would be expected that the proposed standards would have been filed with less stringent values. The gridSMART Phase II project was only recently just approved and since AEP Ohio's application was filed in the summer of 2016, any reliability improvement values for the gridSMART Phase II project would have been premature at the time of filing. Currently AEP Ohio is just starting the planning of gridSMART Phase II and would not expect to see reliability improvements for quite some time. AEP Ohio does not believe OCC's suggestion of adjusting the reliability standards yearly would be a good use of Staff and AEP Ohio's time. Filing newly proposed reliability standards each year to accommodate OCC's request would be burdensome for AEP Ohio and most likely not the best use of company time for ratepayers. Instead AEP Ohio does discuss gridSMART reliability measurements in the gridSMART filing itself which it must meet in order to demonstrate its effectiveness and to ensure ratepayers are paying for a system which meets expectations of performance.

2) AEP Ohio's Variation Factor

AEP Ohio's application proposes an adjustment factor of 12% due to AEP Ohio's use of a shortened timeframe for historical performance. Since AEP utilized a shorter timeframe there is concern that AEP Ohio would not have used a timeframe supporting a normalized weather pattern with respect to storms. It is possible that the

weather in the past three years has been mild with regards to both the number of storms and storm intensity as well as mild winter precipitation which would affect the reliability of distribution lines. In order to account for the possibility of increased storms in the upcoming years, which could negatively impact AEP Ohio's reliability performance without any change on AEP Ohio's behalf, AEP Ohio recommended an increased adjustment factor.

The OCC continues to discuss both AEP Ohio's PowerOn Advantage and PowerOn Restore System as well as AEP Ohio's SCADA Systems and declares that AEP Ohio has declined to quantify any reliability impacts attributed to these items. While AEP Ohio agrees that there is some minimal reliability benefit to these programs, there is not a significant enough benefit by either program to propose a reliability adjustment. For example, SCADA allows AEP Ohio to view information by circuit at the substation level. AEP Ohio would be able to see when a circuit is out in real time due to SCADA monitoring. In addition, SCADA allows control to try and close a breaker if the fault may have been cleared off of the line. On normal, non-storm days, SCADA generally cannot be used to close a breaker and re-energize a circuit since most times a permanent fault occurred on the distribution line which requires a truck roll to fix and place the system back in working order. Since SCADA is best used to restore power to circuits during storm events, some of which are already excluded due to major event days, AEP Ohio would not expect enough of a reliability impact to the system to propose any type of adjustment. SCADA does not prevent outages or help self-heal, the distribution system reliability impacts would be minimal. In addition, AEP Ohio has SCADA on 1,112 feeders, only 20 SCADA systems were added since the historical

reliability average was used in the proposed standards. This means that the performance of all the SCADA systems are currently reflected in the proposed reliability standards except for less than 2%, which would not warrant any type of adjustment at this point.

3) DIR Adjustment

The OCC mentions that AEP Ohio's adjustment for the DIR Program does not reflect the cost of the Rider. While the DIR Program does have a component which consists of reliability improvements, the DIR also consists of a large component which allows for a capital recovery mechanism to allow AEP Ohio to maintain system operations. AEP Ohio recommended a DIR improvement factor based on facts and values reported to the Staff and fully stands behind those values as a representation of the DIR improvements.

D. The Commission does not need to hold public hearings on AEP Ohio's proposed reliability standards application

AEP Ohio filed and supported its application fully for new reliability standards. Conducting hearings to solicit public opinion are unnecessary for the Commission to proceed with a merit decision. There is no legal requirement for public hearings on this matter and interested parties have already had a full opportunity to articulate their views and recommendations. In short, there is no basis to support OCC's request for public hearings and it should be denied.

E. Public Hearings on AEP Ohio's proposed reliability standards are not needed

The OCC asks the Commission to hold public hearings regarding AEP Ohio's proposed reliability application. AEP Ohio does not see the need to hold public hearing

regarding the matters in this case. Most people, no matter how educated, do not understand SAIFI or CAIDI reliability measurements. AEP Ohio believes the Commission look at AEP Ohio's most recent customer surveys instead of holding Public Hearings, which typically attract customers who have had reliability issues. These surveys illustrate customers are generally satisfied with AEP Ohio's service. The surveys sample a broader set of customers and would better align itself with a broader set of AEP Ohio customer opinions and not solely those who may have had a recent reliability issue. Therefore, AEP Ohio does not see a need for Public Hearings around the setting of the SAIFI and CAIDI standards.

II. Staff Comments

A. Enhanced Service Reliability Rider

Staff in their comments takes the position that AEP Ohio should make an adjustment for the increased reliability experienced from the Enhanced Service Reliability Rider (ESRR). Staff's charts shown on page 3 demonstrate the effectiveness of the ESRR program and the benefit customers see due to the ongoing program. AEP Ohio agrees with Staff in the fact that the ESRR has made a significant impact on outages from trees inside ROW. In reviewing Staff's calculations, AEP Ohio has determined that Table 4 on page 4 is consistent with AEP Ohio values. On Table 5 AEP Ohio believes there is a typo for the value of Customer Minutes Interrupted for 2010 – 2014 Averages. AEP Ohio believes that the value of 226,596,907 should be 226,593,907 and this was simply mistyping a '6' in the place of the '3'. In looking at Staff's proposed methodology in determining a reduced SAIFI value and reduced CAIDI value, AEP

Ohio has several concerns with the methodology around determining the proposed SAIFI and CAIDI values.

First, the CAIDI value is determined by the total number of Customer Minutes of Interruption divided by the number of Customers Interrupted. Staff determined in Table 4 that the Avoided Service Disruptions from 2010 – 2014 were 15,779,174 for the total number of Customer Minutes of Interruption and 100,596 for the number of Customers Interrupted. Staff determined that the average CAIDI value from 2010 – 2014 was 143.07 using the averages of the total number of Customer Minutes of Interruption divided by the number of Customers Interrupted. Staff then attempted to determine an improvement factor of CAIDI by using the Avoided Service Disruptions, but Staff only applied the Avoided Service Disruptions on the Customer Minutes of Interruption and omitted the Avoided Service Disruptions on the number of Customers Interrupted. Staff's CAIDI Calculation with Improvement shows to be 133.11 but instead should be 142.14 based on correctly applying both improvement factors to the calculation (See Table 1).

Table 1*

Staff's CAIDI w/ Improvement 133.11 =	$\frac{\text{226,596,907 - 15,779,174 (Ave CMI minus Avoided CMI)}}{\text{1,583,763 (Average Customers Interrupted 2010 - 2014)}}$
Revised CAIDI w/ Improvement **142.14**=	$\frac{\text{226,596,907 - 15,779,174 (Ave CMI minus Avoided CMI)}}{\text{1,583,763 - 100,596 (Ave Customers Interrupted 2010 - 2014 minus Avoided CI)}}$

* Values shown are for illustration purposes only

When the CAIDI is corrected to a 142.14 the actual CAIDI improvement over the baseline is 0.93 versus Staff original value of 9.96. Therefore AEP Ohio does not agree with Staff's proposed CAIDI Improvement over the baseline due to an oversight in the calculation of the value.

Second, AEP Ohio refutes Staff's calculations of the ESRR savings based on the years used in the calculations and how they are applied. Current standards are based on the years used from 2009 – 2012. Therefore finding an improvement factor for the years from 2010 - 2014 and applying to a standard in which three of those years are already reflected in the values is inappropriate. The current standard in place already reflects the ESRR benefits for the years of 2010, 2011, and 2012. Taking those benefits and applying them in addition to the historical reliability would double count the benefits of the ESRR program. Therefore, AEP Ohio believes the methodology the Staff proposed in comments are inappropriate based on utilizing overlapping years.

Third, Staff calculated the values for SAIFI and CAIDI improvements based on the incorrect year sets. Staff calculated the improvement factors for SAIFI and CAIDI regarding the ESRR impact, Staff incorrectly applied the Avoided Service Disruptions on the years which were reflected the avoided service disruptions (2010 -2014) versus applying the Avoided Service Disruptions on the years used as the baseline for the data (2005 – 2009). Staff should have calculated the SAIFI and CAIDI Standards against the years of the baseline of 2005 – 2009 instead of using the averages for 2010 – 2014 as reflected in Table 5 in Staff's comments. Therefore, the numbers reflected above in Table 1 are to illustrate one miscalculation made by Staff, and do not reflect the correct

number set supported by AEP Ohio. AEP Ohio suggests the values Staff utilized in Table 5 should reflect the averages from years 2005- 2009 to be valid.

Fourth, while AEP Ohio agrees with Staff that the ESRR program has a positive impact on vegetation inside ROW, by using the current performance standard as a baseline (2009 – 2012 performance) and not the most recent historical performance values, current distribution system performance is not realized. As mentioned in previous comments, scheduled outages have increased over the past several years and negatively impact reliability although it is a benefit to the customer. Scheduled outages are now one of the top 5 highest outages ranked by customers interrupted and can be seen on Chart 6 in Staff's comments. Using a baseline of data, last refreshed in 2012, does not account for any current distribution performance issues and is not an acceptable approach. AEP Ohio's application for proposed standards includes ESRR performance improvement because it's based on the years 2013- 2015. As indicated on Charts 1, 2, and 3 in Staff's comments, 2013-2015 yield the lowest activity for tree inside ROW outages. These improvements are fully accounted for in AEP Ohio's current proposed application. AEP Ohio believes it to be senseless to use an older set of data and impose an average improvement factor to develop a reliability standard instead of utilizing the most recent and best customer tree outage performance data to set the standard.

Fifth, ignoring the calculation errors mentioned previously, Staff is recommending through the adjustment of the ESRR Rider a standard value which is not reasonable to AEP Ohio. Staff is recommending a SAIFI standard of 1.12. AEP Ohio's SAIFI Performance as reflected in Table 3 in Staff's Comments, AEP Ohio would have missed that Standard in both 2015 and 2014. As mentioned before, those years reflect

the best customer improvement in regards to tree inside ROW outages. Proposing a standard which does not reflect current system performance and would set the Company up for failure is not an reasonable approach to AEP Ohio. For CAIDI, Staff recommends a performance factor of 140.00. AEP Ohio's performance on Table 3 in Staff's Comments show again that AEP Ohio would have missed that standard for 2 of the last 3 years. It is unreasonable to propose a reliability standard that the Company would not have been able to meet in the last three years. Therefore, AEP Ohio must reject Staff's ESRR adjustment as proposed.

B. gridSMART Rider

AEP Ohio agrees with Staff's comments in that AEP Ohio has committed to certain reliability improvement from gridSMART Phase II. The inclusion of a gridSMART reliability adjustment in the next standards application is reasonable to AEP Ohio as long as the next application is filed at such a time when the program is well underway and has shown some performance history. As an example, AEP Ohio would not be ready to refile its standards application in the summer of 2017 and include a gridSMART performance improvement factor. AEP Ohio asks for a reasonable amount of time to refile a standards application and include an adjustment for gridSMART for that application.

C. Distribution Investment Rider

AEP Ohio has one minor correction to Staff's comments under the DIR section. On page 9 the second paragraph first sentence should replace the work 'SAIDI' with that of 'SAIFI.' This is a minor edit and does not change the meaning of this section. Otherwise AEP Ohio agrees with Staff's comments in this section.

D. Conclusion and Recommendations (Staff's Comments)

AEP Ohio appreciates Staff's comments, but finds that it is unreasonable for Staff to propose Standards that it would not have been able to meet in the last three years of performance by AEP Ohio. Standards should be set on historical reliability, and Staff is setting the new standards on historic data for years through 2012 and does not account for any recent changes or performance issues on AEP Ohio's system. Examples given in this document include worsening performance from Scheduled Outages and well as Trees Outside ROW. AEP Ohio must insist that the reliability standards use current historical data to reflect the current operating conditions of AEP Ohio's distribution facilities. Also as mentioned for several reasons above, AEP Ohio cannot accept Staff's adjustment for the ESRR improvements. There are several flaws AEP Ohio has pointed out when developing those values, and therefore AEP Ohio cannot support using those values in their standard.

Conclusion

In conclusion, AEP Ohio urges the Commission review AEP Ohio's comments in full when determining AEP Ohio's reliability standards. While AEP Ohio has been able to prove programs such as the ESRR improve customer experience, there are good reasons why AEP Ohio should submit an application for reliability standards that are not lower than the current standards. Staff's comments regarding Chart 6 illustrate the top 6 outage causes ranked by customers interrupted. AEP Ohio only can proactively mitigate for 2 of the 6 outage causes. AEP Ohio therefore stands behind its application for proposed reliability standards based upon the comments made in this document and for the reasons described in this document. AEP Ohio urges the Commission to adopt the proposals in the Company's application.

Respectfully submitted,

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CERTIFICATE OF SERVICE

In accordance with Rule 4901-1-05, Ohio Administrative Code, the PUCO's e-filing system will electronically serve notice of the filing of this document upon the following parties. In addition, I hereby certify that a service copy of the foregoing *Reply Comments of AEP Ohio* was sent by, or on behalf of, the undersigned counsel to the following parties of record this 23rd day of February 2017, via electronic transmission.

/s/ Steven T. Nourse
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Summary: Reply - Reply Comments of AEP Ohio electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company