

**BEFORE
THE OHIO POWER SITING BOARD**

In the matter of the application of AEP Ohio Transmission Company for a certificate of environmental compatibility and public need for 138kV Trent-Vassell 138kV Transmission Line Project.))) Case No. 11-1313-EL-BSB)))
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**REPLY BRIEF OF APPLICANT
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I. INTRODUCTION

Applicant AEP Ohio Transmission Company (“AEP Transco,” “Company,” “AEP” or “Applicant”) proposes to construct a 765/345/138 kV switching substation located in Sunbury, Ohio. The proposed facility will provide numerous benefits to the community, including reinforcement of the Central Ohio Transmission Grid and to other regional transmission systems. The Vassell substation will be integral to the future expansion of the Ohio AEP Transmission system, as it will provide the foundation for other planned major projects. Beyond system economy and reliability, the proposed Vassell Station Project will provide tax benefits to the local school district and community.

Staff made a number of modifications in its post-hearing brief that respond to the evidence provided by the Applicant. The Applicant is appreciative of the Staff’s willingness to recognize this evidence and make those necessary changes. Other conditions were not discussed by the Staff and should be treated as discussed in the Applicant’s post hearing brief.

The Intervenor’s brief focuses on allegations that Applicant failed to provide adequate data or do a complete analysis in providing its proposal to the Board. Intervenor provide no expert testimony to counter any of the evidence provided by the Applicant or found by Staff. Intervenor merely raise a series of “what ifs” without any record support. The Board should not allow Intervenor’s “what if” questions to deter the Board from relying upon the record evidence and the sound practices of the Applicant in creating and presenting the Application in this case. Ultimately, the Board should grant the certificate with the conditions agreed to between the Staff and the Applicant due to the benefits to the community and transmission system as a whole.

II. ARGUMENT

A. Construction of the Proposed Vassell Station Project Represents the Minimum Adverse Environmental Impact Insofar as the Preferred Site is the Best Location for the Facility.

Intervenors argue that Applicant has failed to satisfy its burden under ORC 4906.10(A)(3) to demonstrate that its proposed facility represents the minimum adverse environmental impact and under ORC 4906.06(A)(4) to show that its proposed location is best suited for the facility because “AEP did not perform a meaningful search for a substation site that would pose the least public harm” or “propose any alternate sites for the Board to consider.” See Intervenors’ Post-Hearing Brief at p. 7. On the contrary, Applicant hired an outside consulting firm, URS, to conduct a thorough site selection study. See generally Application Appendix 03-01 Site Selection Study at pp. 1-9. The site selection study identifies major siting criteria and uses an evaluation process to compare alternatives that avoid or minimize adverse effects to the extent practical. Utilizing quantitative and qualitative criteria, environmental, socio-economic, cultural, and engineering/construction factors were taken into consideration when evaluating the data collected to ensure that the Preferred and Alternate Sites represent the minimum adverse economic impact. Intervenors fail to provide differing evidence to prove otherwise in their effort to discount the completeness of Applicant’s site selection study. Simply stating that Applicant failed to conduct a meaningful site selection study doesn’t mean that it is true.

The site selection study provided quantitative and qualitative siting criteria against which five viable locations were evaluated to determine the Preferred and Alternate Sites. Ten acres of woodlot found on Site 1 were the only quantitative ecological criteria identified as far as the five potential sites were concerned. *Id.* at p. 8. As for Intervenors’ argument that the Application fails to comply with ORC 4906.06(A)(4) because the Application does not provide a statement

as to why the Preferred Site is the best location for the facility, the Site Selection Study goes on to discuss that Sites 1, 2 and 3 are owned by AEP and would not require land appropriation for the substation. *Id.* Moreover, Sites 2 and 3 were identified as being excellent choices due to the fact that they balance land availability with low potential impacts and were in close in proximity to the 765 and 345 kV transmission interconnections. *Id.* Ultimately, Sites 2 and 3 were identified as the Preferred and Alternate Sites after more detailed engineering and informal coordination with OPSB Staff. *Id.* at p. 03-2. Staff in its OPSB Staff Report of Investigation concluded that the Applicant has sited and designed the Vassell Substation Project to minimize potential impacts while balancing the need of the facility. See Staff Ex. 1, OPSB Staff Report of Investigation at p. 17. Staff further found that land use is predominantly agricultural on and around the site, the Preferred Site minimizes impacts to cultural resources and the Preferred Site does not require the vehicular crossing of any stream channels. *Id.* Staff concluded that the Preferred Site represents the minimal adverse environmental impact. *Id.* at p. 18.

1. The Site Selection Study Evaluates all Practicable Sites, Routes, and Route Segments for the Proposed Facility Identified within the Project Area Pursuant to OAC 4906-15-03(A).

Pursuant to OAC 4906-15-03(A), the applicant shall conduct a site and route selection study prior to submitting an application for an electric power transmission line or electric power transmission substation. Furthermore, OAC 4906-15-03(A) provides that the study shall be designed to evaluate all practicable sites, routes, and route segments for the proposed facility within the project area. Additionally, ORC 4906.06(A)(4) requires that the Application contain a statement of reasons why the proposed location is best suited for the facility.

Applicant's expert witness, Daniel Zambory, testified that the proposed Vassell Station Project will allow AEP to mitigate forecasted system deficiencies and prevent the grid from

collapsing during credible double contingencies in addition to providing benefits to the entire AEP system. See AEP Exhibit 1, Application at pp. 02-01 to 02-07 and January 24, 2012 Tr. at pp. 57-58. The need for the proposed facility is predicated on a number of reasons, the most important of which is grid reliability and sustainability. See generally AEP Ex. 1, Application at pp. 02-01-02-07. After establishing the basis for the project needs as outlined in the Application, the Applicant undertook the task of evaluating various site locations for the purpose of narrowing the scope of the site selection study. It was determined that while other 765 kV and 345 kV line crossings do occur in and near Central Ohio, no other station site or construction alternative performed as well as the Vassell site option to mitigate all deficiencies. The Preferred Site of the proposed Vassell Station Project ensures the necessary grid support and reliability while mitigating all identified deficiencies described in the Application. Moreover, because the Vassell Station Project requires the interconnection to both a 765 and 345 kV line, the proposed Preferred Site ensures that the project represents the minimum adverse environmental impact, as siting the project on Site 1, 4 or 5—or anywhere else for that matter—could have comparable clearing impacts to accommodate the associated transmission lines.

Intervenors argue that Applicant “may not restrict its search to just one or two potential sites. AEP is required to make a genuine effort to look for and study all practicable sites to find a site that minimizes the harmful effect of its substation.” See Intervenors Post-Hearing Brief at p. 8. Intervenors’ characterization of the process is incomplete. The Applicant did not restrict its search to just one or two potential sites. Mr. Zambory testified that he “tested the electrical needs and [determined that the Preferred Site] is the best location in terms of performance.” January 24, 2012 Tr. at p. 72. Moreover, Mr. Zambory testified “[w]e’ve done multiple studies over multiple years” and started “as early as 2007 looking for a solution to [mitigate all identified

deficiencies].” January 24, 2012 Tr. at p. 73. The first step in the site selection study was to determine the best location for the substation in relation to the infrastructure of the entire transmission system. Then, the site selection study identified five *different* potential locations for the proposed facility and provided an in-depth analysis of each site based on quantitative and qualitative criteria. The evaluation of this data resulted in identifying Sites 2 and 3 as the best choices for the proposed Vassell Station Project because they balance land availability with low potential impacts. See AEP Ex. 1, Application Appendix 03-01 at pp. 8. The site selection study evaluated all *practicable* sites, routes, and route segments for the proposed facility as required by O.A.C 4906-15-03(A). The potential project sites included in the half-mile radius site selection study were the only practicable options for purposes of meeting the identified needs set forth for the Vassell Station Project. Ultimately, grid reliability and sustainability were the focus of the justification for the project, so it was determined that the scope of the study had to be limited. The only argument presented by Intervenors is essentially based on a “what if” observation. Intervenors want the Board to not act because there might be a better place somewhere else. Yet, Intervenors provided no expert analysis to prove this point. Additionally, Intervenors provided no witnesses to contradict the findings of the Company or the Staff to bolster their position. An accusation is not enough to sustain an argument in an adjudicatory hearing before the Board. The evidence supports the granting of the certificate and that the Company properly presented its Application to the Board.

The five locations evaluated in the site selection study met the proper criteria for a study; ultimately, it was determined that Site 2 was the best location to meet the needs of the project and Site 3 would serve as an excellent alternative. The site selection study states:

Desktop and windshield review of these fallow field sites suggests limited potential impacts. The property appears to have sufficient acreage to accommodate the substation

while avoiding or minimizing impacts to ecological and cultural resources through flexibility in placement of equipment, if resources are identified during subsequent field reconnaissance. While six residences are located within 1,000 feet of Sites 2 and 3, existing wooded areas and fence rows provide some visual screening. The size of the overall property also provides opportunities for a set-back from other properties and opportunity for additional screening, if required. Sites 2 and 3 appear to be excellent candidates for selection as the preferred site. It may be possible to utilize these two sites as both the preferred and alternate sites, which appears to be the best scenario.

The record shows that Sites 2 and 3 are best suited for the project. There is no evidence offered to the contrary. The Application satisfies the criteria set forth in ORC 4906-15-03(A) and ORC 4906.06(A)(4).

2. The Site Selection Study Was Limited to a Half-Mile Radius to Ensure the Project Need Was Met and to Reduce Significant Environmental Impacts.

Intervenors argue that AEP's explanation for limiting its study is inadequate and misleading and that AEP's application does not explain why the substation must be located there. See Intervenors' Post-Hearing Brief at p. 9. This is not the case. AEP Transco's Application clearly states the reasoning for limiting the site selection study to a half-mile radius. Specifically, p. 2 of the Site Selection Study provides that:

AEP considered areas within 0.5 mile of the transmission line intersection to be the most suitable for the switching substation in order to limit required loops from the existing lines and associated potential impacts. The locations of the village of Sunbury, the village of Galena, and Big Walnut Creek to the west and the diverging nature of the existing lines to the east further supported use of a 0.5 mile radius as the basis for the study.

Intervenors argue that AEP Transco's Application fails to evaluate or explain its rejection of alternate sites available outside the half-mile radius of the intersection of the existing 765 kV and 345 kV transmission lines in Berkshire Township. Intervenors seem to misunderstand the data presented in the Site Selection Study insofar as the consequences of widening the scope of the site study are concerned. The ORC requires that the selected Preferred Site represents the

minimum environmental impacts. Not only would it be impractical to consider locations beyond the half-mile radius, but it would require additional measures to be taken to clear right-of-ways to facilitate the interconnection of the 765 and 345 kV transmission lines. This would have significant ecological, archeological and environmental impacts beyond those associated with siting the proposed facility at the Preferred Site. For example, Applicant's witness, Scott Joseph, testified that the proposed 765 kV right-of-way is 200 feet wide and the two proposed 345 kV rights-of-way are 150 feet wide. Each mile of new 765 and 345 kV interconnection transmission lines required for the proposed facility requires the clearing of approximately 60 acres of right-of-way for the 200 feet of right-of-way. January 24, 2012 Tr. at pp. 205-206. On the other hand, Applicant's typical 138 kV right-of-way is only 100 feet wide. Thus, one mile of 100 foot-wide right-of-way necessary for a 138 kV transmission line requires the clearing of approximately 12 acres. Simply put, the acreage required for the station footprint stays generally the same no matter the location, but the acreage required for the transmission line increases with distance from the existing infrastructure. Applicant's witness, Aaron Geckle, testified that "in the siting and the routing world it is difficult to overcome length," because increased length results in higher potential and generally greater realized impacts to land use, ecological, and cultural features in the path, as well as greater costs to the Applicant. January 24, 2012 Tr. at p. 17. Ultimately, Applicant determined that the interconnection needs coupled with the effort to reduce environmental construction impacts resulted in the defined scope of the site selection study.

Intervenors further argue that Applicant failed to evaluate and explain its rejection of alternate sites available within a half-mile radius of the necessary intersection of the Kammer-Dumont 765 kV line and the Hyatt-Corridor 345 kV line. This is not true. Intervenors'

argument is predicated on their mischaracterization of the criteria outlined in Table 2 of the site selection study. See AEP Ex. 1, Application Appendix 03-01 at p. 6. Picking out data from Table 2 to bolster their argument that the Applicant did not perform a thorough site selection study indicates that Intervenors fail to understand the study as a whole. The quantitative data comparison illustrated in Table 2 suggests that ecological, land use and cultural constraints are limited. Very few quantitative attributes provide significant differentiation between the site candidates. The most effective system of ranking the candidates, and ultimately selecting the preferred and alternate sites, is a comparison of the positives and negatives associated with each site. *Id.* at pp. 6-7. The study goes on to detail the positive and negative aspects of each of the identified sites. *Id.* at pp. 7-8.

In regard to Site 1, the the site selection study states that “while technically possible to develop, [Site 1] would require engineering compromises to deal with the Marathon pipeline. Stream, wetland, and floodplain issues would also have to be address as well as a significant amount of tree removal. The combination of ecological, land use, and engineering impacts seem to diminish the practicality of Site 1 significantly compared to the other candidates.” *Id.* at p. 7. In reference to Site 4, the site selection study acknowledges that “[t]he site compares favorably to the other candidates in terms of potential impacts evaluated through desktop review and windshield survey.” However, the study continues, “[t]he proposed facility at Site 4 would likely have greater aesthetic impacts to surrounding areas than other candidates [. . .] The property is not owned by AEP and AEP has indicated that preliminary discussions with the landowner have not been positive. This would adversely impact the project schedule and AEP does not typically choose to appropriate land for projects when other company-owned [properties] are available. *Id.* The study goes on to find that the lack of a receptive land owner

leads to several unknowns associated with the property. Thus, Site 4 is ranked slightly below Sites 2 and 3. *Id.* at p.7-8. The relatively minor difference in the length of intersecting lines to tie into the substation on site 4 did not overcome the other considerations for the site, including the fact that the owner of site 4 had no desire to sell the property.

In reference to Site 5, the site selection study states “this was the only site with an identified cultural resource, although the size of the site suggests it may be possible to avoid the archaeological site, if necessary. This site is not owned by AEP and availability is unknown. Based on its greater distance from the 345 kV line than the other candidates and its ownership situation, Site 5 is less desirable than Sites 2 and 3 for the proposed substation.” *Id.* at p. 8. Intervenor selectively ignore the portions of the Application that clearly evaluate and explain the rejection of alternate sites within the identified study area.

Intervenor attempt to discredit AEP’s effort to acquire Site 4 or other sites in the study area, and argue that Applicant’s site selection study was a disingenuous attempt to satisfy the application requirements and that it is “egregious” that the Applicant did not include an in-depth analysis of Site 4, which was unavailable property. Intervenor’s Post-Hearing Brief at p. 18. Although Intervenor characterize the Applicant’s attempt to purchase the Site 4 property as “lukewarm,” it nevertheless made an effort to acquire the property. *Id.* The owners were simply not interested in selling the land.. Further negotiating with an unreceptive occupying owner or engaging in land appropriation to set an individual off their land, as Intervenor’s brief suggests, when a comparable practicable adjacent property is officially for sale, shows a complete disregard for adjacent land owners. In fact, the very suggestion of moving the preferred and/or alternate site to a comparable, yet unavailable property shows nothing more than a desire of the Intervenor’s to move the project further from their property. An appropriate site without an

occupying residence and without other potential wetland concerns existed and was selected by AEP and supported by Staff.

Land availability is a major siting factor for most substation projects due to schedule requirements as dictated by planning studies. This project is no exception. The site selection study clearly states that “Sites 2 and 3 are on the same AEP-owned property [265 acres]. Use of these sites would not require potential land appropriation for the substation site and would be unlikely for all or most of the 765 kV and 345 kV interconnections.” *Id.* at p. 7. The Board should recognize the fact that the area selected offers the best location to address all of the conditions for certification without the compounding issues related to land acquisition.

If land ownership was the only factor considered by the Applicant, then the Preferred or Alternate Site would have been located on Site 1. Applicant’s witness, Scott Joseph, testified that Site 1 was purchased by AEP in 2005. January 24, 2012 Tr. at pp. 207 and 232. Figure 07-1 of the Application shows the “Limits of Ecological Survey Area.” Delineated wetlands and streams are shown on this property, which was purchased by AEP before the proposed and alternate site. In reference to Site 1, the site selection study states, “The site includes the most wooded area of the candidates and would require spanning a wetland and stream area between the 345 kV and 138 kV substations. An area of 100-year floodplain is situated along the western edge of the site.” The fact that AEP made two property acquisitions and sited the station Preferred and Alternate sites on the second property clearly infers a sequential evaluation during the property acquisition phase and, ultimately, the site selection process.

Intervenors go so far as to suggest that sites to the north are better than the proposed sites due to “wide expanses” supposedly illustrated on Intervener Exhibit 2. This assertion is not based in fact. In reality, Intervener Exhibit 2 shows similar surrounding areas as those

surrounding the proposed sites, including the Village of Sunbury, Big Walnut Creek to the West and scattered rural residences along local roads. Selecting sites at the suggested locations essentially trades shorter 138 kV, 100-foot wide right-of-way with longer 200-foot wide 765 kV right-of-way and two 150-foot wide 345 kV rights-of-way. Suggesting ambiguous and largely fictional alternatives in other locations in any direction clearly shows flawed logic on the part of Intervenor. Intervenor's witness, Alvin Barkeloo, admitted that he has never been before the Ohio Power Siting Board for approval of a certificate of a major utility facility. January 24, 2012 Tr. at p. 265. AEP, on the other hand, does have that experience and provided evidence justifying the sites selected with record evidence. Again the Intervenor's "what if" arguments are not adequate support for its arguments in this matter before the Board. These types of assertions represent a transparent attempt to move the Preferred and Alternate Sites to any other location without regard for the total impacts associated with the project. It is the responsibility of the Applicant and the Board to evaluate impacts rather than opinions.

3. The Applicant Provided an Alternate Site for the Proposed Facility Pursuant to OAC 4906-5-04(A).

OAC 4906-5-04 provides that each proposed site/route shall be designated as a preferred or alternate site/route. Each proposed site/route shall be an actual and a viable alternative on which the applicant could construct the proposed facility. Thus, practicable sites are only those that can be reasonably constructed within the limits of permitting, scheduling and cost. The goal of the site selection study was to identify viable site locations based on the identified siting criteria, while avoiding or limiting impacts to sensitive land uses, ecological, and cultural features in the project vicinity. See AEP Ex. 1, Application Appendix 03-01 at p. 1-2. Intervenor makes the jump from practicable to possible in an attempt to suggest that AEP has not performed a meaningful search for its substation site. While any spot within the Applicant's

service territory may be possible for the project, it is certainly not practicable. AEP Transco and URS utilized a systematic approach to identify and evaluate potential substation sites. The site selection study provides that given the size and proximity requirements, observations led to the conclusion that there were a limited number of locations where it was practical to place the substation without impacting woodlots or demolishing buildings. *Id.* at p. 2. The fact that the site selection study formally compared five sites, rather than 10, 20 or 100 doesn't make it any less meaningful. In fact, the professional opinions of AEP and URS in the record introduced size and proximity requirements within the site selection study for the very purpose of evaluating all practicable sites rather than all possible ones. These experts indicated that formally evaluating additional sites beyond the selected study area would obviously result in sites that were poor in comparison to the ones included in the study. Moreover, the fact that the Applicant provided a Preferred and Alternate Site on the same parcel of land (measuring 265 acres) does not make the site selection study or process of evaluating potential site locations any less meaningful. There is no applicable authority that requires that an Applicant offer a Preferred and Alternate Site on two different parcels of land. Intervenors' overbroad argument fails to recognize the actual proposal made in the Application. The sites presented in the Application are not "one in the same." First, as previously stated, the property owned by AEP stretches over 265 acres, giving the Company the opportunity to work with a large amount of land to minimize associated impacts. Second, AEP presented two completely different Preferred and Alternate Substation Layouts. The Preferred substation layout portrayed a 765 kV Yard and a 345/138 kV Yard of the overall substation. The Alternate substation layout portrayed a 345/138 kV Yard and a 138 kV Yard of the overall substation. Each substation layout was unique and represented two completely different engineering designs and overall electrical functions. The engineering design or

application of 345/138 kV Yard of the Preferred Layout cannot be utilized for the engineering design or application of the 765/345 kV Yard of the Alternate Layout and vice versa. Therefore, the Preferred and Alternate Sites took two distinctly different options for consideration for the Vassell Station Project, determined the best layout for each on a 265 acre plot of land to comply with the requirements of the Board. The Applicant satisfied all applicable conditions and the Board should approve the certificate.

B. The Application Complies with OAC 4906-5-03(D).

Intervenors argue that the Applicant had an obligation to quantify the direct and indirect effect of the proposed facility on its neighbors, including the Barkeloos, in the form of monetary loss from the alleged devaluation of their property due to the presence of the substation. OAC 4906-5-03(D) specifies that Applicant is to provide the costs and benefits and direct and indirect effects of siting decisions in monetary and quantitative terms *whenever doing so is practicable*. Emphasis added. Intervenors make no showing that an application needs to consider the personal finances and position of area landowners. It is impracticable to quantify the direct and indirect effects of an individual area home/business owner near the proposed facility. It should also be noted that O.A.C. 4906-15 goes into greater detail on how an Applicant should present its Application. Those provisions, followed by the Applicant in this case, contain sections on financial data (O.A.C. 4906-15-05 in AEP Ex. 1 at 5-1 to 5-2), and socioeconomic and land use impact analysis (O.A.C. 4906-15-06 in AEP Ex. 1 at 06-1 to 06-22). That discussion in the Application includes impact on area landowners and the tax benefit that will be enjoyed in the area. Beyond this fact, there is no evidence to suggest that the proposed Vassell Station Project will have any affect on property values of adjacent property owners, so to even to the extent that the Applicant could provide this information, there is no way that the Applicant could quantify

the effect of the proposed facility in monetary terms. The Application complies with the criteria set forth in OAC 4906-5-03(D) and all of the Administrative and Revised Code.

C. The Applicant is Conducting a Low Frequency Noise Study to Supplement Its Application as Requested by Staff Pursuant to OAC 4905-15-06(G).

The Applicant did not provide data relating to C-weighted noise because it was determined that C-weighted noise would provide no meaningful information. This determination was based upon the fact that there are no applicable C-weighted criteria and there will be no excessive low frequency noise generated by the facility. Applicant's expert witness, James Cowan, testified that substations such as the proposed facility do not generate any kind of noise between 20 and 40 hertz. Substations start to generate noise at around 60 hertz and the dominant noise starts at about 120 hertz. January 24, 2012 Tr. at p.116. Mr. Cowan further explained that performing a test on C-weighted or low frequency noise, which is categorized as being between 20 to 40 hertz, would be futile as "we would come up with nothing." Id at p. 115.

Notwithstanding that fact and contrary to Intervenor's argument that Applicant "refused to perform a complete study," Applicant is in the process of requesting that its manufacturers calculate low frequency responses and or perform actual testing in connection with the transformer equipment that will be used for the substation. See Intervenor's Post-Hearing Brief at p. 21. Applicant will provide the requested A-weighted and C-weighted low frequency study measurements/model to Staff as soon as the data is available. It should be noted that Applicant was aware of Staff's questions regarding low frequency noise; however, Applicant was not aware that it was an issue until recently. Contrary to Intervenor's position that the Applicant reneged on promises made to Staff in response to Staff's Supplemental Questions issued on November 8, 2011, Applicant has had every intention of responding to these information requests. As no facility exists on which to perform tests and the transformer manufacturers did

not have the applicable low frequency data before the Noise Study deadline, it was impossible for Applicant to include the requested information in the report. Applicant will provide preliminary predictions of the low frequency noise levels based on the current data that is available. Once Applicant receives additional data from its manufacturers, it will provide updated predictions. While Applicant has and continues to comply with requests by Staff for information regarding low frequency noise, the low frequency study we will perform will clearly show how low frequency noise has not and will not be an issue going forward.

Intervenors mischaracterize Mr. Cowan's testimony in their Post-Hearing Brief insofar as they maintain that Mr. Cowan agreed with blanket statements contained in a paper that was entered into evidence over Applicant's objection, which Mr. Cowan had no opportunity to review. Intervenors argue that Mr. Cowan agreed with the rationale that C-weighted noise studies should be conducted independently of A-weighted noise studies where low frequency noise is excessive. See Intervenors Post-Hearing Brief at p. 23. This is true. Mr. Cowan agreed with the statement that A-weighted assessments of annoyance from noise are inadequate and lead to incorrect regulatory decisions, but Intervenors mischaracterize Mr. Cowan's testimony. Mr. Cowan testified that that this should be qualified and that he doesn't agree with it as a stand-alone statement. Mr. Cowan went on to state that he would "qualify it by saying that low-frequency noise levels need to be excessive." January 24, 2012 Tr. at p. 93.

Intervenors' Post-Hearing Brief inaccurately states that "[a]ccordingly, an A-weighted assessment fails to adequately predict the amount of annoyance from substation noise." See Intervenors Post-Hearing Brief at p. 23. This is not true. An A-weighted assessment *does* accurately predict the annoyance from substation noise; the key quality is the level of sound that emanates from a substation when evaluating low frequency sound and the potential for low

frequency sound to be an issue. January 24, 2012 Tr. at p. 97. According to Mr. Cowan, “just because something has frequency components that are below 250 hertz does not directly imply that it’s a problem; we also need to address how loud that is and what the level is.” Id. Again, Intervenor’s Post-Hearing Brief mischaracterizes Mr. Cowan’s testimony. Mr. Cowan explained that one has to “either measure it or perform a study” to determine how loud frequency components are. Id. Just because they are below the threshold of 250 hertz, it doesn’t necessarily mean that they are audible and are therefore problematic. Intervenor’s argue that Applicant should have to provide a C-weighted noise study based on a paper written about theories regarding *excessive* low frequency noise.¹ It is clear, however, from Mr. Cowan’s testimony that the low frequencies are not excessive in the instant case. In fact, the frequencies from the substation will not even be audible at neighboring residences due to the fact that they will be lower than the measured background noise levels. January 24, 2012 Tr. at p. 104. In conclusion, even though Applicant maintains that a low-frequency study is inapplicable to the determination of noise related to the proposed Vassell Station Project, it will nevertheless provide the requested information pursuant to OAC 4905-15-06(G).

D. The Applicant Should Not Be Required to Install Walls Around Its Substation Equipment As It Is Impractical and Serves No Noise Reduction Purpose.

While infrequent, noise associated with transmission lines may be elevated during very damp conditions and may increase up to 10 dBA higher than noise predicated in the Noise Study and may be audible at the closest residences. See Noise Study at p. 5. Applicant’s expert witness, James Cowan, testified that he agreed that when conditions are very damp, humid, or

¹ The Board should not place weight on a document introduced by Intervenor through a Company witness and not its own witness. While Applicant witness Cowan testified to know of the author, reliance upon that article for the basis of a Board finding should be avoided.

foggy, there could be an increase in noise associated with transmission lines of up to 10 dBA. January 24, 2012 Tr. at p. 104. Mr. Cowan further testified that in the event that the noise level increases during very damp conditions, the noise generated from the proposed facility would only be raised to a comparable level to the minimum measured background noise at the closest residences. January 24, 2012 Tr. at pp. 104-106. Contrary to Intervenor's argument, this would hardly constitute an impact requiring mitigation. It would be impractical to build walls to reduce noise from transmission lines as suggested by Intervenor in their Post-Hearing Brief. See Intervenor's Post-Hearing Brief at pp. 24-25. Intervenor argues that walls should be built around the substation equipment, including the control houses, as during damp conditions, the substation's noise will double in sound. Id. at p. 25. This is incorrect. Building walls around the other substation equipment would not reduce the overall noise levels at the closest residences because in the worst-case scenario, during very damp conditions, the increased noise levels would be inaudible. Notwithstanding that fact, the only increased noise sources are the transmission lines. It is not possible to build walls around transmission lines and requiring the Applicant to build walls around the other substation equipment would prove to be futile. Therefore, Intervenor's argument that Applicant should build walls around its substation equipment is unreasonable.

E. The Applicant will Provide Adjacent Landowners an Opportunity to Share Concerns with the Lighting and Landscaping Plan for the Vassell Facility.

The Applicant will provide adjacent landowners an opportunity to share concerns with the lighting and landscaping plan for the Vassell Facility. As Applicant's expert witness, Matthew Hales, testified, the key to providing a lighting plan with respect to the proposed Vassell Station Project is safety. January 24, 2012 Tr. at pp. 135. Mr. Hales testified that AEP Transco would be amenable to meeting with adjacent homeowners to the proposed Preferred Site

to hear their concerns about the proposed lighting plan and to the extent that the company can make accommodations to address those concerns, it will, so long as the safety of the facility and the safety of those working in and around the substation is not jeopardized. See Staff's Post-Hearing Brief at pp.18-19. January 24, 2012 Tr. at pp. 139-141.

F. The Applicant is Amenable to Adding a Condition Prohibiting Blasting, as Blasting is Not Required for the Construction of the Proposed Facility.

The Application specifically delineates that no blasting will take place in connection with the construction of the proposed facility and related that to Staff in a memorandum docketed on December 1, 2011 by AEP Transco. AEP Expert Witness, Matthew Hales, testified that as such, AEP Transco would be agreeable to including a condition prohibiting blasting in the construction of the proposed Vassell Station Project. January 24, 2012 Tr. at pp. 136-137.

G. Estimations of Electric and Magnetic Fields Derived From the Proposed Facility at Nearby Residences are Unnecessary as Levels are Virtually Undetectable at That Distance.

Intervenors argue that the Applicant failed to provide estimated EMF levels in Intervenors' yard and therefore, the Application is deficient and does not meet the requirements of OAC 4906.10(A)(3), which requires that the proposed facility must represent the minimum adverse environmental impacts. Intervenors' Post-Hearing Brief at p. 31. The Staff agreed that there would be no measurable magnetic fields at any residence near the Vassell substation. Staff Ex. 1 at 24. Intervenor provides no evidence to the contrary. Intervenors also fail to take into account that Applicant's expert witness, Louis Hosek, testified that while the Application does not include specific estimations of electric and magnetic fields ("EMF") present at Intervenors' home or other adjacent properties, it is immaterial because magnetic levels drop off drastically past certain distances and that once you are about the distance of a football field away from the source, you have almost no magnetic field exposure. Mr. Hosek also testified that electric fields

are shielded by almost everything. January 24, 2012 Tr. at pp. 194-195. The Intervenor's argument is nothing but a red herring that should not be entertained by the Board.

Intervenor's argue that magnetic fields cannot be blocked by anything "to any great degree." Intervenor's Post-Hearing Brief at p. 29. However, the magnetic fields diminish by the Inverse Square law. The laws of physics provide that over distance (even without being blocked), magnetic fields will be reduced in a predictable fashion. January 24, 2012 Tr. at p. 195. The Barkeloo's residence is at such a distance from the proposed Preferred Site of the Vassell Station Project that the fields from the facility would be diminished to a level approaching zero. One does not need to know the calculated fields to know that—just the distance. It is clear from the Application and the evidentiary record that the Barkeloo's property is approximately 800 feet from the proposed substation—more than two football fields away. Applying the inverse square law, one can determine with complete certainty that the field at the Barkeloo's home would be essentially zero.

Intervenor's also argue that Mr. Hosek was unable to testify whether the Applicant estimated the EMFs from the substation's transformers or switches and the Application does not provide this information. Intervenor's Post-Hearing Brief at p. 29. Equipment/fields have a certain level of addition and/or cancellation, but regardless of that, fields at the Barkeloo's residence, at that distance, would be essentially zero irrespective of what or how much equipment is involved in the substation. Furthermore, there is no authority that requires the Application to include this information and in any event, it is not necessary to determine the source of the EMFs to come to this conclusion. In this case, distance is the only important factor.

Intervenor's maintain that Applicant failed to calculate the cumulative effect of exposure

to both the substation EMF levels and every day household appliances. Intervenors' Post-Hearing Brief at p. 29. Fields do not accumulate. There is an additive effect between lines and/or equipment. There is also a cancellation effect between EMF fields depending on how the equipment is configured and the relative phasing. A person is only exposed to EMF levels while they are in the field (provided there is a field large enough to measure). When a person leaves the field, there is no residual effect. But again, there is virtually no exposure from the substation at the Barkeloo's residence. The Barkeloos will be exposed to EMFs dominated by the Earth's natural magnetic fields or from wiring or appliances while in or around their home.

Intervenors cite to the discussion of a publication by the World Health Organization ("WHO") in the Application but take WHO's publication out of context. See Applicant's Ex. 1, Application at p. 06-16 and Intervenors' Post-Hearing Brief at p. 32. The publication was referenced in the Application to illustrate the fact that there have been Epidemiological Studies of childhood leukemia and associations of fields of 3-4 milligauss or more; not that fields of more than 3-4 milligauss are unhealthy. It is not a standard or a guideline. Intervenors skew the information contained in the Application to bolster their argument that exposure to EMFs in excess of 3-4 milligauss can cause health risks. While fields from the lines or substation would not be that high at the Barkeloo's property line, appliances and wiring would be that high based on general knowledge about EMFs.

The record of evidence provided by the Applicant and Staff show that magnetic fields would not be measurable at any residence near the substation. The Board should approve the certificate.

H. The Application Provides That No Known Golden Winged Warbler Habitat Has Been Identified at the Proposed Preferred Site Location and No In-Stream Work will be Done in Connection with the Construction of the Vassell Station Project; Therefore, Any Conditions Regarding These Issues are Inapplicable.

The Application provides that no golden winged warbler habitat was identified and therefore a condition regarding the species is inapplicable. Intervenor's argue that there is a possible bush at the Preferred Site that may contain this habitat. Intervenor's fail to acknowledge, however, that that ecological studies and agency coordination have taken place on the site and have conclusively found that no known golden winged warbler habitat exists. The possibility of scattered bushes does not equate to habitat suitable to support this species. The Applicant's consultant, URS, conducted a field study and coordinated with ODNR regarding this species. ODNR concurred that suitable habitat was not present and no further studies are warranted. See Application Appendix 07-2, Table 1. The Board should not require a condition limiting construction timing to address an issue the evidence does not support. The condition has an impact on construction without a basis for the requirement and should be denied.

Intervenor's additionally argue that a condition regarding in-stream work should be kept even though the Application provides that no in-stream work will be done in connection with the construction of the Vassell Station Project and Applicant's expert witness, Aaron Geckle, testified to this effect. Intervenor's' Post-Hearing Brief at p. 33 and January 24, 2012 Tr. at pp. 48. Intervenor's further argue that in his testimony, Mr. Geckle could not provide any other reason—other than the fact that it is inapplicable—to eliminate this recommended condition. *Id.* That is true. There are no other reasons to include such a condition; therefore, it should not be incorporated with the other conditions for the issuance of the Certificate.

I. The Applicant Should Not Be Required to Comply With OPSB Staff's Proposed Conditions 34, 35 and 36.

Intervenors argue that the Applicant should be required to comply with Conditions 34-36 outlined in OPSB Staff's Report of Investigation concerning the proposed substation's potential interference with adjacent property owner's radio, telephone and television reception. Applicant's expert witness, Dave Klinec, testified that today's technological advancements ensure that there will be no signal degradation to adjacent property owner's radio, telephone or television reception. January 24, 2012 Tr. at pp. 149-153. Mr. Klinec further testified that low-voltage lines and loose hardware on older equipment were found to be the cause of one instance of television interference and approximately ten instances of radio interference over the course of his 30-year career. January 24, 2012 Tr. at pp. 149-150.

Intervenors argue that Mr. Klinec has performed RI/TVI studies in the past, so he should be required to perform these studies in connection with the proposed Vassell Station Project. Intervenors' Post-Hearing Brief at pp. 35-36. Intervenors fail to note, however, that Mr. Klinec testified that he performed these studies along a 765 kV transmission line right-of-way, which, by its length and nature, can cause radio and television signals to change. In contrast, the instant case involves a fixed substation location that won't interfere with radio or television signals. Therefore, studies similar to the ones performed along a transmission line right-of-way will be useless in providing interference data. In his testimony, Mr. Klinec discussed the signal strength of television stations in the greater Columbus area and indicated that the close proximity of the Vassell Station Project and adjacent neighbors to these stations will ensure no degradation of television signals. January 24, 2012 Tr. at pp. 152-153. Intervenors point out that Mr. Klinec testified to the fact that in the aforementioned instances of radio and television interferences he has been involved with during his time with AEP, these interferences were readily detected and

corrected so it is not unreasonable for the Certificate to require the Applicant to do so. Intervenor's Post-Hearing Brief at p. 36. However, Mr. Kline testified that there is no way that the proposed facility will interfere with these services, so there is no reason to require the Applicant to perform these studies. Furthermore, the Applicant has learned over the years how little facilities like the Vassell Station Project impact radio, television and telephone reception and that in conjunction with the technologic advancements made in distributing these services, provide little to no justification for requiring the Applicant to perform surveys. The proposed conditions appear to be a solution in search of a problem. Those types of problems are rare if not non-existent around substations and are addressed when discovered. The Board should not be issuing conditions to a major utility facility on issues without any factual basis for concern and no history of going unaddressed in the rare cases it is discovered. The Board is not in the business of dictating such unnecessary conditions.

J. The Vassell Station Project Application for a Certificate of Environmental Compatibility and Public Need was Deemed Complete upon its Submission to OPSB Staff for Consideration; The Applicant will continue to Supplement its Application at Staff's Request.

Intervenor's further argue that the application is incomplete—however, Chairman Snitchler, in a letter to Applicant, communicated that the Application was complete and ready for review by the OPSB Staff. The letter, which was docketed on July 29, 2011, stated in pertinent part, “[t]his letter is to inform you that the above referenced application, filed with the Ohio Power Siting Board (Board) on July 29, 2011 has been found to comply with Chapters 4906-01, et seq., of the Ohio Administrative Code (OAC). This means that the Board's Staff has received sufficient information to begin its review of this application.” The letter also stated that during the course of its investigation, “the Staff may request additional information to ensure a full and fair assessment of this project.” Intervenor's argue that due to the fact that Staff has thirteen

conditions calling for plans and studies that would not be performed until after the Certificate is issued, the Application is incomplete. Intervenor's Post-Hearing Brief at p. 36-41. It is Applicant's position that it is adhering to the information requests from Staff according to the schedule they established. However, in some instances, the information has not or will not be available until after the Certificate has been issued; therefore, it was impossible for the Applicant to provide this information in the Application. Intervenor's argument is divorced from the reality of constructing a major utility facility. The Board Staff is present as a compliance arm of the Board's decisions, not a delegation of duties.

III. STAFF'S PROPOSED REVISED CONDITIONS

In its Post-Hearing Brief, the OPSB Staff recommended several modifications to its original recommended conditions described in OPSB Staff's Report of Investigation. See Staff Ex. 1, OPSB's Staff Report of Investigation at pp. 28-35. In its Post-Hearing Brief, Applicant outlined its suggestions and requests for clarification to many of these proposed conditions. AEP is appreciative of the Staff's review of the information in the record and changes made to the proposed conditions. Applicant is agreeable to the language and clarifications provided for in Staff's Post-Hearing Brief in connection with the following conditions.²

Applicant is amenable to the language that requires that these conditions apply to associated construction being performed in Conditions 4, 9 and 25. The Applicant agrees that it will obtain applicable permits and authorizations as construction advances in connection with associated construction being performed. Furthermore, the Applicant agrees to notify Staff of

² The Staff and Intervenor's did not raise any arguments with a number of the conditions opposed by the Applicant at the hearing. AEP would ask that the Commission handle the matters not addressed as indicated in Applicant's post-hearing brief based on the record evidence.

the start of a each phase of the construction process and agrees to participate in a pre-construction conference with Staff to ensure that all applicable permits and authorizations have been obtained. AEP is committed to working in a cooperative effort with the Board's Staff in its compliance review throughout the construction process.

In reference to the issues raised related to proposed condition 8, as indicated above, the Applicant is amenable to providing adjacent homeowners an opportunity to share concerns with the proposed Vassell Station Project landscaping and lighting plans prior to its submission to Staff.

The Applicant is amenable to changing the language of proposed Condition 14 to state that the Applicant shall remove only the tall-growing tree species and only allow for a very limited track for equipment movement within the right-of-way, with all stumps within 25 feet of stream IC to be left in place, and shall only use temporary culverts to cross streams if necessary, and only with prior approval from OPSB Staff.

The Applicant is agreeable to clarifying the language in Condition 24 to include restricting public access to the site with appropriately placed warning signs or other necessary measures and to the extent that "necessary measures" include fencing, the Applicant need only fence the equipment footprint, not the entire property.

As Conditions 26-29 apply to blasting requirements and the construction of the proposed facility will not require any blasting, the Applicant is agreeable to including a Condition that prohibits blasting on this project in case the need does arise.

IV. CONCLUSION

While the Applicant and Staff had different viewpoints on some of the proposed conditions, many now resolved through this process, the bottom-line is that both Staff and

Applicant supported the granting of the certificate in this proceeding. Specifically, Staff concluded that the Application complies with all of the criteria set forth in ORC 4906.10(A) and as such recommended that a certificate be issued in the instant case subject to Staff's Recommended and modified conditions. Staff Post-Hearing Brief at p. 23. Intervenor, on the other hand found that the Application was deficient insofar as the Applicant's Preferred and Alternate Sites do not comply with ORC 4906.10(A)(3) because they do not represent the minimum adverse environmental impact. However, the Applicant's detailed discussion above illustrates that the Preferred and Alternate Sites for the proposed Vassell Station Project do represent the minimum adverse environmental impact pursuant to ORC 4906.10(A)(3). Intervenor do not contest the sufficiency of the Application as far as the other criteria established in ORC 4906.10(A) are concerned.

Therefore, for the reasons set forth above, as well as the reasons set forth in Applicant AEP Transco's Post-Hearing Brief and the reasons set forth in the OPSB Staff's Post-Hearing Brief, Applicant AEP Transco respectfully requests that a recommendation be made that the Board issue a Certificate of Environmental Compatibility and Public Need for the proposed Vassell Station Project.

//s/ Erin C. Miller

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the Reply Brief of Applicant AEP Ohio Transmission Company was served upon the parties in this proceeding by sending a copy to the following persons by electronic service on this 5th day of March, 2012 addressed to:

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