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February 6, 2009

Klaus Lambeck, Chief
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RE: Case No. 08-170-EL-BTX
OSU-Roberts 138kV Transmission Line Project

Dear Mr. Lambeck:

On behalf of Columbus Southern Power Company (CSP), enclosed please find responses to the Staff's questions/clarifications (Set #1) docketed on January 23, 2009. As indicated in the response, two of the attachments are considered confidential and proprietary by CSP and were submitted under separate cover to Jon Pawley. Please let me know if you have any questions or concerns regarding CSP's responses.

Thank you for you attention to this matter.

Cordially,

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Roberts-OSU 138 kV Transmission Project
OPSB Case No. 08-0170-EL-BTX

1. Staff needs additional information in order to complete its review for the need of the project. Page 02-1.

a. Provide the source of the local annual and continued load growth numbers.

AEP's load metering is provided by internal company meters installed at various substations throughout the AEP system. Forecasted loads are based upon official company forecasts provided by AEP's Load Forecasting Organization. Transmission Planning Engineers make subtle adjustments as necessary to mimic realistic loading diversity based upon historical system peaks.

b. Provide the actual and forecasted loads for the years 2000 to 2015 (based on summer 2008 conditions). Please provide the forecasts from the Columbus and surrounding areas. Please provide the forecasts for Columbus and surrounding areas.

Since the approved loads for summer of 2008 are not yet available, the following historical and forecasted data is based upon 2007 loads. The following up-dated values are different than previously shared/documented numbers, since the following tables include updates with revised load data including 2007 actual data. The 3.6% and 2.1% growth rates in the table reflect the actual history in the table.

	* COLUMBUS SOUTHERN POWER * -LOAD DATA- (MW BASED ON AFTER-THE-FACT REPORTS & ALI DATA) Rev.7-2-08									
YEAR (peak day) (peak hour-EDT)	2000 (8-31) (5:00PM)	2001 (8-8) (5:00PM)	2002 (8-1) (5:00PM)	2003 (8-21) (5:00PM)	2004 (7-13) (5:00PM)	2005 (7-25) (2:00PM)	2006 (8-2) (6:00PM)	2007 (8-9) (3:00PM)	THREE YEAR AVE.(%) CHANGE	SIX YEAR AVE.(%) CHANGE
TOTAL CENTRAL OHIO (MW) (including City Municipal load)	3052.7	3373.3	3534.5	3525.4	3439.2	3823.5	3797.7	3808.3	3.6	2.1

Growth rates shared in the public meeting and in our Siting Application were based upon 2005 actual loads when the planning study was being prepared. The statement, "transmission load has grown at an annual rate of around 4.1%" reflects the growth rate from 2003 through 2005. The statement indicating "...load is expected to grow at an annual rate of at least 2.5% for the next several years" is based upon the 2005 actual peak load, historical growth,

and forward looking growth and economic indicators. In the 2005/06 time frame, the area seemed better poised for continued growth (2.5%) based upon the rapid development taking place in Columbus and vicinity.

The growth rate of 1.9% in the following forecast represents my "current" 10 year planning forecasted growth rate from 2008 to 2018. This value is scaled down from the previously forecasted 2.5% growth rate, given new economic and growth indicators. The lower growth rate still justifies the need to complete the proposed 138 kV line construction.

Forecast for Columbus and surrounding area, including the City of Columbus and City of Westerville:

PERCENT (%)	FORCAST (08S) EST.2008 LOAD (2007 * last year inc.)	FORCAST (09S) EST.2008 LOAD (2007 * last two year inc)	FORCAST (10S) EST.2009 LOAD (2007 * last three year inc)	FORCAST (11S)	FORCAST (12S)	FORCAST (13S) EST.2012 LOAD (2007 * six yr. incr.)	FORCAST (14S)	FORCAST (15S)	(18S) EST.2015 LOAD (13S scale up to yr. 2018)
1.9	3885.2	3994.6	4087.3	4160.0	4234.1	4309.4	4373.1	4437.7	4637.4

A load growth Table for AEP Distribution in the Northwest and Southwest quadrants of Columbus is prepared and being submitted by separate Confidential Correspondence.

2. Staff requires additional information in order to complete its review of the impacts on the local and regional transmission grid.

a. Please explain how the load flow base case was developed.

AEP uses the existing and proposed topology of the system, modeling various bus loads with individually metered points as well as system and zone load forecasts. Outside AEP system modeling is provided through the RFC development process including MMWG and ERAG information.

b. Is the Roberts-OSU 138 kV line listed in any PJM transmission studies as being a reliability problem or a future reliability problem, such as the PJM RTEP?

- If yes, provide the specific page of reports where the project(s) is mentioned and explain in detail how this project will affect the regional grid.
- If no, explain in detail why PJM does not need to be made aware of the project and how the project will not affect the regional grid.

No. AEP has not yet submitted the project to PJM for inclusion in the RTEP. When this project was approved by AEP Management in July of 2006, there was no requirement to submit company generated projects to PJM for inclusion in the RTEP. Only PJM generated projects were populated in the RTEP at that time. However, with FERC ORDER 890, it was approved that Transmission Companies/Owners, including AEP, would also be required to start providing RTEP information to PJM on projects generated by the Transmission Owners. This was to begin in January 2008. AEP is in the process of catching up on historical Planning Studies, and is currently drafting applicable forms to submit to PJM so the project is included in the PJM RTEP. The issues AEP has identified with the area were not identified by PJM as an issue since PJM is looking for single contingency issues to date. This project addresses double contingency issues as identified in the following transcription diagrams. This project will not affect the regional grid since it addresses only issues on the Columbus Area transmission grid.

AEP is required by PJM to plan and maintain a system that is single contingency reliable. As long as AEP meets the minimum PJM and FERC requirements, AEP is in compliance regarding contingency reliability. However PJM and FERC also support the Planning Guidelines of the Local Transmission Owner as well. AEP submitted FERC Form 715 indicates "The testing criteria for area transmission are single-contingency for the LV transmission system (23 kV to 88 kV) and single or double-contingency for HV transmission system (230 kV, 161 kV, 138 kV, and 115 kV)." Factors such as load density, duration to restore service after a contingency, and local grid integrity impact if an area will be planned with double contingency reliability. With the local high load density in Columbus, and the risk of long outages to restore underground transmission facilities, the subject 138 kV system supports the need to be double contingency reliability. Since certain EHV and Underground transmission facilities can result in extended facility outages (1-12 months, or longer), AEP feels it is necessary for the reliability of the local transmission grid and customer base to strive to provide this double contingency reliability in this area.

3. Provide transcription diagrams of load flow including; 2008 summer peak base-case (project in-service and out-of-service) and contingency conditions listed in Table 2.

Prepared and being submitted by separate Confidential Correspondence.

4. Please provide data and discuss the following:

a. Provide a list of Transmission or Generation upgrades completed in 2008 that may have had an impact on the proposed project.

This was investigated with various staff.

There are no significant generation sources in the area, and no area generation changes were completed in the local and surrounding areas in 2008. Regarding the AEP Transmission system, there were no upgrades made to the local or surrounding grid that will have an impact on the proposed project or the need for the project.

The result is a list of zero projects.

5. Please explain what the adverse effects would be if the line was not built, and what benefits would be to the AEP system and its customers for having the line built.

If the subject line was not built, some of the Columbus area transmission system would not be double contingency compliant. Being double contingency compliant means being able to have two major facilities out of service (or two major events occur), and still have voltage above the emergency level (92%), and equipment loading maintained at or below the equipment's emergency rating. Since some underground transmission contingencies in the Columbus area can take months to restore to service, double contingency planning is applied. If one of the double contingencies occurred as identified in Table 2, transmission voltages could dip below acceptable levels, resulting in area transmission and distribution customers not having adequate voltage to operate their systems, processes and household appliances. If systems/equipment did not drop off line automatically resulting from the low voltage, many customers could experience equipment damage due to machinery overheating and eventually failing. This in turn could have a lasting adverse effect on the production of some commercial and industrial customers.

Again, if the subject line was not built, we could expect the facility loadings identified in Table 2 to materialize should an applicable double contingency occur. This could lead to relay systems further automatically shedding some area loads (outages to customers) to alleviate the equipment overloads. In some cases, relays are set to prevent equipment from overloading, and may operate automatically to trip facilities out of service, potentially leading to a collapse of a portion of the local transmission system, though this is not likely. If the overloads were not severe and allowed AEP and PJM time to maintain the integrity of the local transmission system and keep facilities in service, measures would likely be taken to re-dispatch generation, switch system capacitors/reactors, and/or load shed (drop customers) until overload issues are mitigated. Load shedding would be considered a forced outage to some customers to protect the rest of the customers. If the double contingency would present long term issues, customers in the area would likely experience rotating outages, and/or customers would be asked to voluntarily curtail loads to help maintain the integrity of the local transmission system.

If the subject line is constructed, it would complete the project to restore double contingency reliability to the Columbus Transmission grid. This would benefit customers by having a system in place that is very robust and provides them the same quality of service, even if a double contingency would occur. Having a double contingency

reliable system benefits AEP by being able to take outages on applicable facilities when justified to perform emergency or routine maintenance, or to complete construction projects to provide service to additional customers. This in turn provides customers with more reliable service by not suffering from potential outages related to equipment failures that are caused by lack of maintenance.