

STATE OF ILLINOIS  
ILLINOIS COMMERCE COMMISSION

AMEREN TRANSMISSION COMPANY :  
OF ILLINOIS :

Petition for a Certificate of Public :  
Convenience and Necessity, pursuant to :  
Section 8-406.1 of the Illinois Public :  
Utilities Act, and an Order pursuant to :  
Section 8-503 of the Public Utilities Act, to :  
Construct, Operate and Maintain a New :  
High Voltage Electric Service Line and :  
Related Facilities in Various Counties in :  
the State of Illinois

Docket No. 12-0598

Direct Testimony of

**Rudolph "Rudi" K. Reinecke**

On behalf of

**Moultrie County Property Owners**

March 29, 2013



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21 of environmental and other potential impacts associated with the MCPO routes. I  
22 do not make specific routing recommendations to the Commission.

23 **Q WHAT EXHIBITS ARE YOU SPONSORING WITH YOUR TESTIMONY?**

24 A I am sponsoring the following exhibits:

- 25 · MCPO Exhibit 2.1 Map of MCPO route between Pana and Kansas
- 26 · MCPO Exhibit 2.2 Map of MCPO route between Mt. Zion and Kansas
- 27 · MCPO Exhibit 2.3 Route Segment Comparison Data for MCPO Pana  
28 to Kansas and MCPO Mt. Zion to Kansas
- 29 · MCPO Exhibit 2.4 Route Comparison Summary of All ATXI and  
30 MCPO Alternative Route Segments between Pana and Kansas
- 31 · MCPO Exhibit 2.5 Summary of High Sensitivities for All ATXI and  
32 MCPO Alternative Routes between Pana and Kansas
- 33 · MCPO Exhibit 2.6 Summary of Paralleling Opportunities for All ATXI  
34 and MCPO Alternative Routes between Pana and Kansas
- 35 · MCPO Exhibit 2.7 Curriculum Vita of Rudolph K. Reinecke

36 **II. ROUTING METHODOLOGY**

37 **Q WHAT WERE THE STEPS YOU USED TO IDENTIFY YOUR PROPOSED**  
38 **ROUTES?**

39 A There were four steps in developing the proposed MCPO routes. These steps  
40 were driven by the limited time associated with the December 31, 2012 date by  
41 which MCPO was to propose an alternative route and provide names and  
42 addresses of potentially affected land owners. First, I reviewed the testimony of  
43 ATXI Witness Ms. Donell Murphy with Environmental Resource Management

44 (ERM) (ATXI Exhibit 4.0 and the exhibits referenced in that testimony), for  
45 specific routing data and methodology that was employed for this project. The  
46 second step included developing a number of corridors that offered opportunities  
47 to parallel existing compatible corridors while avoiding urbanized areas. These  
48 routes were evaluated and further adjusted to minimize impacts to parks,  
49 recreational areas, wildlife refuges, woodlands, wetlands, cultural resources,  
50 airfields, airports, and airstrips. Ultimately, two routes were identified so that  
51 MCPO could acquire the names and addresses of property owners within one  
52 mile of these MCPO routes. The third step of the routing study included the  
53 review of digital spatial data obtained from ATXI-MCPO DR 3.05, Illinois  
54 Department of Natural Resources, Illinois State Archeological Survey, and field  
55 reconnaissance survey of the routes. The field work resulted in refining the  
56 routes and the review of the data confirmed that the MCPO routes did not have  
57 any unidentified impacts. The fourth step included tabulation of routing matrices  
58 for route comparisons referenced in this testimony and the attached exhibits.

59 **Q WHAT INFORMATION DID YOU UTILIZE FROM MS. MURPHY'S TESTIMONY**  
60 **TO DEVELOP THE MCPO ROUTES?**

61 A Ms. Murphy's testimony provided detailed descriptions of the public involvement  
62 process of the project. Ms. Murphy detailed the three phases of the public  
63 involvement process and results of each phase. The public involvement process  
64 for the project was used to obtain public opinion, values of specific opportunities  
65 and sensitivities that would be considered when developing the proposed  
66 transmission routing. Basically, the first two public involvement phases collected  
67 information of opportunities and sensitivities, and the final phase included an  
68 evaluation of routes to be proposed in the final filing.

69 The first two phases of public involvement included routing exercises which  
70 allowed the public to provide their input on routing opportunities and sensitivities.  
71 The results of the first phase identified and prioritized sensitivities into High,  
72 Moderate, and Low; the second public involvement phase ranked the sensitivities  
73 and opportunities.

74 **Q WHAT ARE SENSITIVITIES?**

75 A Sensitivities were defined by Ms. Murphy in ATXI Exhibit 4.3, page 6 as:

76 *“Sensitivities” can be characterized as those environmental –*  
77 *human (of the built environment) and natural – siting criteria*  
78 *including point locations, areas or features, which are taken into*  
79 *account with regard to location, construction or additional*  
80 *licensing/permitting procedures. Sensitivities include such things*  
81 *as existing residences, land use classifications, wetlands and*  
82 *stream crossings.*

83 **Q WHAT ARE OPPORTUNITIES?**

84 A. Opportunities were defined by Ms. Murphy in ATXI Exhibit 4.3, page 6 as:

85 *Opportunities include existing rights-of-way, section lines, property*  
86 *lines, and field lines. These features are characterized as*  
87 *opportunities in that they may be advantageous or more*  
88 *compatible for parallel co-location of a new transmission line – in*  
89 *simplest form, like features by like features.*

90 **Q WHAT WERE THE RESULTS OF THE PUBLIC INVOLVEMENT ROUTING**  
91 **EXERCISES CONDUCTED IN THE PUBLIC INVOLVEMENT PHASES?**

92 A The results of the phase one sensitivity evaluation identified the importance to  
93 route away from cemeteries, churches, drainage features, prime farmland,  
94 residential areas, and schools. The phase two sensitivity evaluation primarily  
95 emphasized routing around existing residences (35% of the public involvement  
96 attendees requested the route to avoid existing residences) and agricultural use

97 areas (47% of the public involvement attendees requested the route to avoid  
98 agricultural use areas), with a slight concern for wooded areas (6% of the public  
99 involvement attendees requested the route to avoid woodlands). Phase two  
100 meetings provided the only assessment of opportunities, which identified a first  
101 preference to parallel roads (57% of the public involvement attendees preferred  
102 the route to parallel roads), and secondly, to parallel property lines and section  
103 lines (34% of the public involvement attendees preferred the route to parallel  
104 property lines and section lines).

105 **Q DID YOU EVALUATE HOW THE FILED PRIMARY AND ALTERNATE**  
106 **ROUTES BETWEEN PANA AND KANSAS COMPLIED WITH THE PUBLIC**  
107 **INVOLVEMENT ROUTING EXERCISES?**

108 A Yes. I reviewed the ATXI filed routes utilizing recent aerial photographs to  
109 understand how ATXI incorporated the public involvement in the development of  
110 their filed routes.

111 **Q HOW DID THE ATXI ROUTES FROM PANA TO MT. ZION TO KANSAS**  
112 **INCORPORATE THE PUBLIC INVOLVEMENT RESULTS?**

113 A There appeared to be an emphasis on avoiding both residential and non-  
114 residential structures at the cost of routing through cultivated fields. Although  
115 there was effort placed on following roads and section lines, the ATXI routes did  
116 cross through the middle of numerous cultivated fields, between sections lines.  
117 Although this routing through cultivated fields appears to conflict with the public  
118 involvement requests, Ms. Murphy testifies in ATXI Exhibit 4.0 on page 19 that  
119 there is "inherent conflict associated with paralleling existing roadways while also  
120 minimizing the potential impact to existing residences since homes are more

121 typically located along roads in rural areas.” Ms. Murphy’s testimony in Exhibit  
122 4.0 on pages 10-11 explains that that the potential impacts associated with  
123 crossing cultivated fields is mitigated through the use of single shaft steel poles,  
124 as there would be reduced ground disturbance, compaction, and crop damage.

125 **Q WHAT INFORMATION FROM ATXI ROUTES FOR PANA TO MT. ZION TO**  
126 **KANSAS TO HELP ROUTE THE MCPO ROUTES?**

127 A The first thing I determined from ATXI routes is that the sensitivities should be  
128 identified and avoided where possible. However, the opportunities did not always  
129 provide routes that avoided sensitivities. Therefore, after identifying sensitivities,  
130 there may or may not be any opportunities to parallel that avoids sensitivities.  
131 Next, I realized that crossing cultivated fields was going to be a requirement in  
132 some cases to avoid impacting residential and non-residential structures. Based  
133 on Ms. Murphy’s testimony, this has been considered to be mitigated through the  
134 single pole design.

135 **Q ARE THE MCPO ROUTES COMPLETELY WITHIN THE ATXI’S PROJECT**  
136 **STUDY AREA?**

137 A No. Portions of both routes deviate out of ATXI’s Project Study Area.

138 **Q WHY DID YOU NOT ROUTE THE MCPO’S ROUTES WITHIN THE ATXI’S**  
139 **PROJECT STUDY AREA?**

140 A The purpose of the MCPO’s alternative routes is to increase the geographic  
141 diversity of the alternative routes available to the Commission for the portion of  
142 ATXI’s proposed transmission project from Pana to Kansas. The preliminary  
143 objectives of the routing study for both MCPO alternative routes were to consider  
144 paralleling opportunities between Pana and Kansas located to the north and

145 south of ATXI's filed primary and alternative routes in order to increase  
 146 geographic diversity. Utilization of these paralleling opportunities, along with the  
 147 need to avoid crossing Lake Shelbyville, resulted in the MCPO routes exiting the  
 148 ATXI's Project Study Area.

149 **Q WAS THERE ANY PUBLIC INVOLVEMENT IN THE VICINITY OF YOUR**  
 150 **PROPOSED MCPO ROUTES?**

151 A Yes. According to Ms. Murphy's testimony in ATXI Exhibit 4.1, there was public  
 152 involvement in all counties of MCPO's routes. MCPO's routes encompass  
 153 Christian, Macon, Shelby, Moultrie, Piatt, Douglas, and Coles counties. The  
 154 following table summarizes the public involvement within the counties of the  
 155 MCPO routes.

156 **ATXI's Public Involvement Locations within the MCPO Study Area by Phase**

Phase I			Phase II			Phase III		
County	Date	Location	County	Date	Location	County	Date	Location
Christian	5/2/12 5/16/12 5/16/12	Taylorville Taylorville Pana	Christian	7/23/12	Taylorville	Christian	10/1/12 10/2/12	Taylorville Pana
Macon	5/2/12 5/25/12	Decatur Mt. Zion	Macon	7/24/12	Mt. Zion	Macon	10/2/12 10/2/12	Mt. Zion Decatur
Piatt	5/24/12	Hammond	Shelby	7/24/12	Shelbyville	Shelby	10/2/12	Shelbyville
Moultrie	5/29/12	Sullivan	Douglas	7/25/12 7/26/12	Arcola Arcola	Douglas	10/3/12	Arcola
Coles	5/3/12 6/1/12	Charleston Charleston	Moultrie	7/25/12	Sullivan	Moultrie	10/3/12	Sullivan
Douglas	5/3/12 6/5/12	Arcola Arcola	Piatt	7/25/12	Hammond	Piatt	10/3/12	Hammond
Shelby	6/5/12	Moweaqua	Coles	7/26/12	Charleston	Coles	10/4/12 10/9/12	Charleston Charleston

157

158

159 **Q IN YOUR OPINION, IS IT SIGNIFICANT THAT THE MCPO ROUTES ARE NOT**  
160 **COMPLETELY WITHIN THE ATXI STUDY AREA?**

161 A Not in this case. There was public involvement in all the counties that the MCPO  
162 routes are located. Therefore, there were opportunities for the public to not only  
163 be informed, but be included in the routing exercises that provided routing  
164 information in this project. It is worth observing that ATXI has identified the  
165 public view of opportunities and high sensitivities based on the Phase I and  
166 Phase II public involvement meetings for the entire Illinois Rivers Project,  
167 therefore it is unlikely the public view of opportunities and sensitivities described  
168 by ATXI would have changed, even if more public meetings had been held.

169 **Q WHY DID YOU PROVIDE THE COUNTY, TOWNSHIP, RANGE AND SECTION**  
170 **NUMBERS TO MCPO FOR A ONE MILE BUFFER OF THE MCPO ROUTES**  
171 **THAT WERE FILED ON DECEMBER 31, 2012, AS CORRECTED ON**  
172 **JANUARY 2, 2013?**

173 A Due to the deadline, I understand was established on December 14, 2012, to file  
174 any alternative routes by December 31, 2012, there was a two week period to  
175 develop these routes, and to acquire the names and addresses of potentially  
176 affected property owners. Given this limited amount of time, there was  
177 insufficient time to fully analyze the proposed routes for all potential issues and  
178 for all environmental constraints. Additional digital routing data from ATXI, Illinois  
179 Department of Natural Resources, Illinois State Archaeological Survey, and field  
180 survey data could not be obtained in sufficient time to be used in this routing. To  
181 accommodate the missing data and allow for readjustment of the route, MCPO  
182 elected to use a corridor one mile on either side of the centerline of the initial  
183 routes and to identify the property owners within that corridor. The subsequent

184 analysis of the additional detailed data sets obtained by MCPO provided  
185 information which allowed refinement of the two initial routes within the corridor.

186 **Q DID YOU VISUALLY INSPECT THE MCPO ROUTES?**

187 A Yes. I conducted an aerial survey of both routes on January 24, 2013.

188 **Q WHAT OBSERVATIONS DID YOU MAKE ALONG THE MCPO ROUTES THAT**  
189 **RESULTED IN REFINEMENT OF THOSE ROUTES?**

190 A Largely, the MCPO routes were refined to (i) provide a better alignment that  
191 parallels existing transmission lines, roads, and section lines rather than being  
192 located on top of the existing opportunities; (ii) increase distances from both  
193 residential and non-residential structures; and (iii) decrease woodland and  
194 stream crossings.

195 **Q DID THE ANALYSIS OF THE ELECTRONIC DATA YOU OBTAINED FROM**  
196 **ATXI-MCPO DR 3.05, ILLINOIS DEPARTMENT OF NATURAL RESOURCES**  
197 **AND ILLINOIS STATE ARCHEOLOGICAL SURVEY NECESSITATE ANY**  
198 **FURTHER ROUTE REFINEMENTS?**

199 A No. The data obtained from ATXI-MCPO DR 3.05, the Illinois Department of  
200 Natural Resources, and Illinois State Archeological Survey confirmed the results  
201 of our initial routing exercise; there was nothing identified in these data sets that  
202 required a routing refinement.

203 **III. MCPO ROUTE DESCRIPTION**

204 **Q PLEASE DESCRIBE THE MCPO PANA TO KANSAS ROUTE.**

205 A This route originates at the northeast corner of the proposed Pana substation  
206 and heads due east for approximately 6,000 feet, following the section lines, until

207 it crosses an existing transmission line. At the transmission line, north of the  
208 existing Pana substation, this route heads south-southeast, through Section 10  
209 of Township 11 North, Range 1 East in Christian County, until it parallels the  
210 existing transmission line in Section 7 of Township 11 North, Range 1 East in  
211 Christian County. Then, the route parallels the existing transmission line  
212 approximately 32,800 feet until south of Tower Hill in Section 27 of Township 11  
213 North, Range 2 East in Shelby County. From there, the route generally heads  
214 due east, except in a couple of locations to route around structures, for  
215 approximately 97,300 feet until a point in the northwest quadrant of Section 26 of  
216 Township 11 North, Range 5 East in Shelby County. From this point the route  
217 makes a series of "stair-steps" to the north and east, passing through Sections  
218 23 and 24 of Township 11 North, Range 5 East and Sections 19 and 18 of  
219 Township 11 North, Range 6 East in Shelby County. At the western side of  
220 Section 18 of Township 11 North, Range 6 East in Shelby County, the route  
221 heads east approximately 12,500 feet to the eastern side of Section 15 of  
222 Township 11 North, Range 6 East in Shelby County. Next, the route heads north  
223 approximately 1,800 feet north in the same section and then turns east for  
224 another approximate 8,000 feet. At the northeast corner of Section 14 of  
225 Township 11 North, Range 6 East in Shelby County, the route turns and heads  
226 north to the Moultrie-Shelby County line, approximately 16,600 feet. The route  
227 parallels the county line to the west, until it enters Coles County at the middle of  
228 Sections 31 and 30 of Township 12 North, Range 7 East in Coles County. The  
229 route then heads in a more northerly direction along the east side of Moultrie  
230 County. The route traverses Sections 30, 19, 20, 17, 8, and 5 of Township 12  
231 North, Range 7 East in Coles County and Sections 32, 33, 34, and 27 of

232 Township 12 North, Range 7 East in Coles County before joining with ATXI's  
233 Primary Mt. Zion to Kansas route in the southwest quadrant of Section 27 of  
234 Township 12 North, Range 7 East in Coles County. From that point to the east,  
235 the MCPO Pana to Kansas line is the same as the ATXI Primary Mt. Zion to  
236 Kansas route.

237 **Q PLEASE DESCRIBE THE MCPO MT. ZION TO KANSAS ROUTE.**

238 A The MCPO Mt. Zion to Kansas route takes a northerly route through southern  
239 Piatt County and the middle of Douglas County before heading south to the  
240 Kansas substation. The route starts at the northeast corner of the proposed Mt.  
241 Zion substation and heads east approximately 10,500 feet along the south side  
242 of Sections 8, 9, and 10 of Township 15 North, Range 3 East in Macon County.  
243 Next, the route turns and heads north approximately 1,300 feet to avoid Hervey  
244 City. In the south central portion of Section 10, the route then heads east  
245 approximately 15,700 feet through Sections 10, 11, and 12 of Township 15  
246 North, Range 3 East in Macon County and to the middle of Section 7 of  
247 Township 15 North, Range 4 East in Macon County. At that point, the route  
248 heads generally north approximately 17,700 feet through Sections 7 and 6 of  
249 Township 15 North, Range 4 East in Macon County and Section 31 of Township  
250 16 North, Range 4 East in Macon County. At the northeast corner of Section 31,  
251 the route turns east, heads in an easterly direction approximately 81,500 feet  
252 through Sections 31, 32, and 33 of Township 16 North, Range 4 East in Macon  
253 County; 34, 35, and 25 of Township 16 North, Range 4 East in Piatt County;  
254 Sections 30, 29, 28, 27, 26, and 25 of Township 16 North, Range 5 East in Piatt  
255 County; and Sections 30, 29, 28, and 27 of Township 16 North, Range 6 East in  
256 Piatt County. In Section 27, the route started a "stair-step" to the southeast to

257 avoid Atwood. Through this southeast “stair-step”, the route traversed Sections  
258 27, 34, and 35 of Township 16 North, Range 6 East in Piatt County; Section 1 of  
259 Township 15 North, Range 6 East in Moultrie County; and Section 6 of Township  
260 15 North, Range 7 East in Douglas County. From Section 1, the route heads  
261 east approximately 90,800 feet, south of Tuscola. This easterly portion of the  
262 route traverses Section 6, 5, 4, 3, 2, and 1 of Township 15 North, Range 7 East  
263 in Douglas County; Section 6, 5, 4, 3, 2, and 1 of Township 15 North, Range 8  
264 East in Douglas County; and Section 6, 5, 4, 3, 2, and 1 of Township 15 North,  
265 Range 9 East in Douglas County. In the southwest corner of Section 6 of  
266 Township 15 North, Range 10 East in Douglas County, the route heads in a  
267 southern “stair-step” direction across Sections 6, 7, and 18 of Township 15  
268 North, Range 10 East in Douglas County. At the northeast corner of Section 18,  
269 the route heads east, paralleling the northern section lines of Sections 18, 17, 16,  
270 15, 14, and 13 of Township 15 North, Range 10 East in Douglas County and  
271 across Section 18 of Township 15 North, Range 11 East in Douglas County to  
272 the 2<sup>nd</sup> Meridian. The route turns south to parallel section lines as it crosses into  
273 Section 18. The remaining portion of the MCPO Mt. Zion to Kansas Route from  
274 this point is east of the 2<sup>nd</sup> Meridian Line. The route parallels on the east side of  
275 Sections 18, 19, 30, and 31 of Township 15 North, Range 14 West in Douglas  
276 County and to the middle of Section 6 of Township 14 North, Range 14 West in  
277 Douglas County. In the middle of Section 6, the route turns to the south-  
278 southeast and south for approximately 55,500 feet to parallel an existing  
279 transmission line corridor to the proposed Kansas substation. This portion of the  
280 route traverses Sections 6,7, 18, 17, 20, 29, 28, and 33 of Township 14 North,

281 Range 14 West in Douglas County and Sections 4, 9, 16, 21, and 28 of  
282 Township 13 North, Range 14 West in Douglas County.

283 **IV. MCPO ROUTE ASSESSMENT**

284 **Q WHAT ROUTING FACTORS DID YOU ANALYSE FOR THE MCPO ROUTES?**

285 A I prepared an environmental assessment of the routing factors documented in  
286 ATXI Exhibit 4.5, which is presented in MCPO Exhibit 2.3 for the two MCPO  
287 route segments. I used a 500 foot-analysis corridor (i.e., 250 feet on either side  
288 of the proposed centerline of the route) for this analysis. ATXI also used a 500-  
289 foot corridor for its analysis. However, the residential and non-residential  
290 structure assessment utilized an expanded corridor of 1,000 feet (i.e., up to 500  
291 feet on either side of the route centerline).

292 **Q DID YOU COMBINE AND TABULATE THE ENVIRONMENTAL SITING DATA**  
293 **FOR ALL POSSIBLE COMBINATIONS OF ATXI and MCPO ROUTE**  
294 **SEGMENTS BETWEEN PANA AND KANSAS?**

295 A No, not all. For the ease of comparing the different route segment combinations  
296 available between Pana and Kansas, I prepared tabular comparison data for nine  
297 route combinations, which is presented in MCPO Exhibit 2.4. This analysis did  
298 not include route combinations (i) MCPO Pana to Kansas and ATXI Primary  
299 Kansas to Mt. Zion, (ii) MCPO Pana to Kansas and ATXI Alternate Mt. Zion to  
300 Kansas, or (iii) MCPO Pana to Kansas and MCPO Mt. Zion to Kansas. These  
301 three alternatives were not included in this tabular analysis because they would  
302 be significantly longer and as a result have greater potential impacts.

303 Q HOW DO THE HIGH SENSITIVITIES, AS IDENTIFIED IN MS. MURPHY'S  
304 TESTIMONY COMPARE BETWEEN THE MCPO ROUTES AND THE ATXI  
305 PRIMARY AND SECONDARY ROUTES?

306 A I have made a route comparison analysis of these High Sensitivities for nine  
307 route combinations. The tabular data for the High Sensitivities for these route  
308 combinations is provided in MCPO Exhibit 2.5; however, I offer the following  
309 summary:

- 310 · There is only one cemetery within the 500-foot analysis corridor and it is  
311 located along the western portion of ATXI's Primary Mt. Zion to Kansas route  
312 segment, which is shared by the MCPO Pana to Kansas route segment.
- 313 · There are no churches located within the 500-foot analysis corridor of any of  
314 the routes between Pana and Kansas.
- 315 · The lowest number of residences within the 500-foot analysis corridor along  
316 all of the ATXI's routes is found along ATXI Alternate Pana to Mt. Zion and  
317 ATXI Primary Mt. Zion to Kansas; there are 37 residential structures along  
318 this route.
- 319 · All of MCPO route combinations have residential structure counts equal to or  
320 less than the lowest residential structure count found along ATXI Alternate  
321 Pana to Mt. Zion Route and the ATXI Primary Mt. Zion to Kansas Route. All  
322 MCPO route combinations have fewer than five residential structures within  
323 75 feet of the easement for the proposed transmission line, which is the band  
324 between 75 and 150 feet away from the route centerline. Whereas all ATXI  
325 route combinations have more than 13 residential structures within 75 feet of  
326 the proposed easement.

- 327           · All of MCPO route combinations, except the MCPO route combination of the  
328           ATXI Primary Pana to Mt. Zion Route Segment and MCPO Pana to Kansas  
329           Route Segment, have a lower number of non-residential structures within the  
330           500-foot analysis corridor than found along ATXI's best routes for non-  
331           residential structure count (i.e., ATXI Alternate Pana to Mt. Zion and ATXI  
332           Primary Mt. Zion to Kansas).
- 333           · All of MCPO's route combinations impact less prime farmland than the best  
334           ATXI route combination for prime farmland (i.e., ATXI Alternate Pana to Mt.  
335           Zion and ATXI Alternate Mt. Zion to Kansas).
- 336           · Generally, there are more stream crossings along the MCPO routes than the  
337           ATXI Routes, except along the MCPO Pana to Kansas route.
- 338           · All MCPO Route combinations utilizing the MCPO Pana to Kansas route  
339           segment impact more woodland. All other MCPO route corridors impact  
340           similar amounts of woodlands as ATXI routes.

341   **Q.    DID YOU CONDUCT AN OPPORTUNITIES ANALYSIS FOR ALL THE ROUTE**  
342   **COMBINATIONS BETWEEN PANA AND KANSAS?**

343   A    Yes. We mapped and categorized all of the opportunities that were paralleled for  
344   all route segments. The opportunities were categorized based on those  
345   identified in the Phase I of the public involvement for the project: Major roads,  
346   Pipeline and other utility rights-of-way, Property lines and section lines,  
347   Railroads, Secondary roads, and Transmission line rights-of way. Major roads  
348   were defined as U.S. and State Highways, Farm-to-Market roads, and Interstate  
349   Highways. Secondary roads included primarily county roads. Property lines were  
350   not able to be accurately determined, so only section lines were used. When a  
351   route paralleled multiple opportunities, the portion was categorized by the largest

352 compatible corridor (i.e., ranked in order of size: Transmission line, Major road,  
353 Railroad, Pipeline or other utility, Secondary road, and Section lines). The  
354 categorized lengths for each opportunity by all routes is provided in MCPO  
355 Exhibit 2.6.

356 **Q WHY DOES THE MCPO PANA TO KANSAS ROUTE CROSS MORE**  
357 **WOODLANDS THAN THE OTHER ROUTES?**

358 A This route has a more southerly route within the study area and based on the  
359 way the watersheds are aligned, there are more woodlands south of Lake  
360 Shelbyville along the Kaskaskia River. The other routes pass to the north of the  
361 lake where many of the streams into the lake do not contain expanses of wooded  
362 areas.

363 **Q DOES THE MCPO PANA TO KANSAS ROUTE RESULT IN SIGNIFICANT**  
364 **LOSSES TO WOODLANDS?**

365 A The calculated amount of woodlands for the MCPO Pana to Kansas was based  
366 on a 500-foot analysis corridor. The actual easement that will be cleared of trees  
367 will be 150 feet wide, so the estimated amount of woods to be impacted will be  
368 far less than the 304 to 329 acres identified in MCPO Exhibit 2.5. I have  
369 calculated the 150-foot easement to clear approximately 93.8 acres of  
370 woodlands. Additionally, to put this into perspective, the amount of woodland is  
371 between 4.8 percent and 6.6 percent of the total area within the 500-foot analysis  
372 corridor. This small increase in woodland impacts for the MCPO Pana to Kansas  
373 Route is the trade-off for reducing the impacts to the other High Sensitivities,  
374 such as significantly lower residential and non-residential structures, and prime  
375 farmland.

376 Q DO THE MCPO ROUTES AFFECT ANY KNOWN ENDANGERED OR  
377 THREATENED SPECIES OR HABITAT?

378 A There are no known endangered or threatened species located within the MCPO  
379 routes. The following protected species have known occurrences within the  
380 counties the MCPO routes are located. As stated in Ms. Murphy's testimony  
381 (ATXI Exhibit 4.0 on page 25 and 40), ATXI will consult to obtain all required  
382 permits or approvals prior to construction and perform any necessary or required  
383 field surveys along the approved route.

384 · The Eastern Prairie Fringed Orchid (*Platanthera leucophaea*) has an  
385 identified range in Chastain, Macon, Piatt, Moultrie, Shelby, Douglas, and  
386 Coles counties; however, there have not been any recorded.

387 · The Loggerhead Shrike (*Lanius ludovicianus*), a state threatened bird, has  
388 been recorded as occurring in Christian, Coles, Moultrie, and Shelby  
389 counties. None of these occurrences are located near the MCPO routes.

390 · The Upland Sandpiper (*Bartramia longicauda*) is a state endangered bird that  
391 has been recorded as occurring in Christian, Coles, Macon, and Shelby  
392 counties. None of these occurrences are located near the MCPO routes.

393 · The Piping Plover (*Charadrius melodus*), a federally endangered bird, is  
394 known to migrate through Moultrie and Shelby Counties.

395 Q WILL ANY PORTION OF THE MCPO ROUTES CROSS OR RUN IN THE  
396 VICINITY OF FOREST PRESERVES OR OTHER NATURAL AREAS?

397 A The MCPO routes do not cross any forest or nature preserves, nor any land and  
398 water reserves, owned and managed by either the Illinois Department of Natural  
399 Resources or the Illinois Nature Preserves Commission. The MCPO Pana to  
400 Kansas route crosses the Kaskaskia River, Embarras River, and the West

401 Branch natural areas and the MCPO Mt. Zion to Kansas route crosses the  
402 Embarras River natural area. As stated in Ms. Murphy's testimony, the crossing  
403 of any natural area would be consistent with State rules in that there is no  
404 specific preclusion to crossing such areas.

405 **Q WILL THE MCPO ROUTES CROSS OR AFFECT ANY JURISDICTIONAL**  
406 **WETLANDS OR WATERS?**

407 A Yes. However, the actual extent of impacts or effects will be subject to an actual  
408 field determination and delineation of these regulated waters; the calculations  
409 provided in MCPO Exhibits 2.3 and 2.4 are merely estimates from available data  
410 sources that do not delineate jurisdictional waters. After a field survey and  
411 designs of final pole placements, there may not be any regulated impacts to  
412 jurisdictional waters. The MCPO routes do not cross any navigable waters as  
413 defined by the U.S. Army Corps of Engineers under Section 10 of the Rivers and  
414 Harbors Act; Kaskaskia River is defined navigable at the Fayette County line,  
415 downstream of the study area.

416 **Q HAVE YOU IDENTIFIED ANY ADDITIONAL PERMITS THE MCPO ROUTES**  
417 **WILL REQUIRE THAT THE ATXI ROUTES WILL NOT NEED?**

418 A No.

## 419 **V. CULTURAL RESOURCES**

420 **Q ARE THERE ANY CULTURAL RESOURCE SITES WITHIN THE 500-FOOT**  
421 **ALANYSIS CORRIDOR OF THE MCPO ROUTES?**

422 A Yes. IES' Archeologist conducted a review of Illinois State Archaeological  
423 Survey (ISAS) and identified that the MCPO Pana to Kansas route has two

424 known archaeological sites within the 500-foot analysis corridor, while the MCPO  
425 Mt. Zion to Kansas route has four known archaeological sites.

426 **Q OF THESE SIX CULTURAL RESOURCE SITES WITHIN THE 500-FOOT**  
427 **ANALYSIS CORRIDOR, ARE ANY OF THESE CROSSED BY OR LOCATED**  
428 **WITHIN THE PROPOSED 150-FOOT EASEMENT FOR THE MCPO ROUTES?**

429 A Yes, one site is crossed by the MCPO routes. The easement along MCPO Mt.  
430 Zion to Kansas Route crosses Site 11DO78. The remaining five sites should not  
431 be directly or indirectly impacted by the proposed construction since they are not  
432 within the easement.

433 **Q DESCRIBE THE CULTURAL RESOURCE SITE THAT WILL BE CROSSED BY**  
434 **THE PROPOSED 150-FOOT EASEMENT ALONG MCPO MT. ZION TO**  
435 **KANSAS.**

436 A Site 11DO78 is described as a prehistoric period campsite that encompasses an  
437 approximate six acre area. When the site was first recorded in 1986, no cultural  
438 or temporal affiliation could be discerned. The site was assessed through  
439 surface collection and subsurface testing. During the delineation of the site, 10  
440 dart or arrow points, numerous stone implements, and many chert balls and  
441 flakes were encountered. At some point after the initial discovery of 11DO78, the  
442 site was revisited and was determined to be a multi-component lithic production  
443 site with no substantial signs of occupation. Through this site revisit, it was  
444 determined the site pertained to Early and Late Archaic, as well as, Early  
445 Woodland periods.

446 **Q IS THE SITE BOUNDARIES FOR SITE 11DO78 PROPOSED TO BE**  
447 **CROSSED BY THE EASEMENT FOR THE MCPO MT. ZION TO KANSAS**  
448 **ROUTE IDENTIFIED IN THE ISAS?**

449 A Yes. According to the current records available on the ISAS restricted website,  
450 the MCPO Mt. Zion to Kansas alignment clips the southern boundary of the site.  
451 Site records indicate that the vast majority of the site is located to the north and  
452 would not be affected by the MCPO Mt. Zion to Kansas route.

453 **Q WHAT IS THE LENGTH OF THE EASEMENT FOR THE PROPOSED MCPO**  
454 **MT. ZION TO KANSAS ROUTE AS IT CROSSES SITE 11DO78?**

455 A The proposed MCPO Mt. Zion to Kansas route crosses site 11DO78 for  
456 approximately 415 feet.

457 **Q WOULD THE PRESENCE OF THIS SITE ALONG THE MCPO MT. ZION TO**  
458 **KANSAS ROUTE PREVENT THE TRANSMISSION LINE FROM BEING**  
459 **CONSTRUCTED?**

460 A No. It is likely that the site is not eligible for listing and will not affect the design  
461 or pole placement. However, as ATXI continues its consultation with the Illinois  
462 Historic Preservation Agency for the entire project, additional surveys or  
463 coordination may be necessary for this site.

464

465

**VI. AIRPORTS**

466 **Q DOES ILLINOIS DEPARTMENT OF TRANSPORTATION'S AERONAUTICS**  
467 **DIVISION PROVIDE A LIST OF AIRPORTS THAT ARE REQUIRED TO**  
468 **COMPLY WITH THEIR HAZARD ZONING FOR AIRSPACE?**

469 A Yes. Under Title 92 Chapter I Department of Transportation, Subchapter b, Part  
470 16, Section 16 of the Illinois Administrative Code there is a list of airports which  
471 are required to comply with the hazard zoning.

472 **Q WHAT AIRPORTS WITHIN THE COUNTIES IN WHICH MCPO ROUTES ARE**  
473 **LOCATED ARE REQUIRED TO COMPLY WITH HAZARD ZONING?**

474 A Only three airports are on this list: Coles County Memorial Airport in Mattoon,  
475 Coles County; Taylorville Municipal in Taylorville, Christian County; and Shelby  
476 County Airport in Shelbyville, Shelby County.

477 **Q ARE ANY OF THESE ILLINOIS DEPARTMENT OF TRANSPORTATION**  
478 **LISTED AIRPORTS NEAR THE MCPO ROUTES?**

479 A No. Coles County Memorial Airport is located approximately 5.1 miles south of  
480 the MCPO Pana to Kansas route, which is where the route is the same as ATXI's  
481 Primary Mt. Zion to Kansas route. Taylorville Municipal Airport is located  
482 approximately 14.5 miles to the northwest of the proposed Pana substation.  
483 Shelby County Airport is located approximately 2.3 miles to the north of MCPO  
484 Pana to Kansas route.

485

486 Q WHAT IS THE OBSTRUCTION CLEARANCE HAZARD ZONING  
487 REQUIREMENTS ACCORDING TO TITLE 92 CHAPTER I, SUBCHAPTER B,  
488 PART 16, SECTION 16?

489 A There are two types of obstruction clearance requirements – one for the  
490 approach/departure or end of the runway and one for the cross section or side  
491 transition of the runway. The hazard zoning requires that there is no obstruction  
492 located within 3,000 feet or 150 feet above the runway elevation and if there is, it  
493 must not be above the 20:1 approach slope of the end of a runway. There also  
494 shall not be any side obstruction located within 5,000 or 150 feet above the  
495 runway elevation and if there is, it must not be above a 7:1 the side transition  
496 surface (i.e. side slope transition surface) parallel to the runway.

497 Q DO THE MCPO ROUTES COMPLY WITH THE HAZARD REQUIRMENTS FOR  
498 THE LISTED AIRPORTS?

499 A Yes. All of the listed airports are located beyond the distant requirements, both  
500 approach surface length and side transitional surface length.

501 Q DO YOUR MCPO ROUTES COME NEAR ANY NON-LISTED AIRPORTS?

502 A Yes. MCPO Mt. Zion to Kansas crosses near an abandoned and removed air  
503 field known as Henry Airport, to the west of La Place, 8,400 feet to the north of  
504 Adkisson private air strip, and 2,070 feet to the south of the Tuscola Airport.

505

506 **Q DOES THE TUSCOLA AIRPORT COMPLY WITH THE DISTANT**  
507 **REQUIREMENTS ESTABLISHED BY THE ILLINOIS DEPARTMENT OF**  
508 **TRANSPORTATION AERONAUTICS DIVISION, FOR BOTH APPROACH**  
509 **SURFACE LENGTH AND SIDE TRANSITIONAL SURFACE LENGTH?**

510 A The hazard requirements established in Title 92 Chapter I, Subchapter b, Part  
511 16, Section 16 do not apply to this airport. The approach surface length  
512 complies with the 3,000-foot limit to an elevation of 150 feet above the runway  
513 elevation. The MCPO Mt. Zion to Kansas Route is located within the 5,000-foot  
514 limit of the horizontal surface associated with the side transition zone. Therefore,  
515 a calculation of the actual side transition slope must be calculated to determine if  
516 the Route actually enters this hazard zone.

517 **Q WHAT IS THE CALCULATED TRANSITION SLOPES FOR BOTH THE**  
518 **APPROACH/DEPARTURE AND SIDE TRANSITION SLOPES FOR THE**  
519 **MCPO MT. ZION TO KANSAS ROUTE AROUND THE TUSCOLA AIRPORT?**

520 A This cannot be calculated accurately until the height and placement of the poles  
521 are designed, because the height of the pole and ground elevation affects this  
522 calculation. However, it can be estimated assuming the ground is relatively flat  
523 and the pole height varies between 80 and 140 feet. The side transition slopes  
524 for the MCPO Mt. Zion to Kansas at the nearest point to Tuscola Airport vary  
525 between 25:1 to 15:1 based on pole heights between 80 and 140 feet,  
526 respectively. The approach/departure distance exceeds the 3,000-foot distance;  
527 however, it varies between 125:1 and 55:1 based on pole heights between 80  
528 and 140 feet, respectively.

529 Q WOULD MCPO MT. ZION TO KANSAS ROUTE COMPLY WITH THE HAZARD  
530 REQUIREMENTS ESTABLISHED BY THE ILLINOIS DEPARTMENT OF  
531 TRANSPORTATION AERONAUTICAL DIVISION?

532 A Yes, I believe it would. However, ATXI should consider the hazard requirements  
533 and update the calculations when engineering the transmission line.

534 **VII. CONCLUSION**

535 Q DOES THIS CONCLUDE YOUR TESTIMONY?

536 A Yes.

537 Qualifications of Rudolph “Rudi” K. Reinecke

538 **Q WHAT IS YOUR EDUCATIONAL BACKGROUND?**

539 **A** I received my Bachelor of Science Degree in Rangeland Ecology and  
540 Management from Texas A&M University in 1994. I received my Master of  
541 Science Degree in Rangeland Ecology and Management from Texas A&M  
542 University in 1996.

543 **Q WHAT ARE YOUR PROFESSIONAL QUALIFICATIONS AND EXPERIENCE?**

544 **A** In short, I have more than 16 years of experience in environmental projects and  
545 surveys. I have extensive experience in the natural resources field through  
546 working at Texas Agriculture Experiment Stations, United States (U.S.) Forest  
547 Service, Texas Department of Transportation, Geo-Marine, Inc., and IES. The  
548 majority of my experience is in plant ecology, more specifically in plant  
549 taxonomy, vegetation sampling, vegetation community characterization, wetland  
550 delineation, and wetland mitigation. I also have experience with the National  
551 Environmental Policy Act (NEPA) process as an interdisciplinary team member  
552 and project manager. My professional qualifications are detailed in my CV, a  
553 true and correct copy of which is attached in MCPO Exhibit 2.7.

554 **Q WHAT KIND OF WORK HAVE YOU DONE WHILE EMPLOYED BY IES?**

555 **A** I have acted as the Project Manager for numerous environmental projects in  
556 Texas. I have been involved in a spectrum of projects, including: Wildlife Habitat  
557 Assessments for Bird Air Strike Hazards around airports; forage production to  
558 determine stocking rates; wildlife management plans; pipeline routing surveys  
559 (gas, water, sewer); Phase I Environmental Site Assessments; endangered  
560 species surveys (habitat and species specific); ecosystem restoration (both

561 planning and implementing); development planning (environmental surveys,  
562 permitting, mitigating, and monitoring); mitigation bank development and  
563 monitoring; and watershed health assessments for Integrated Natural Resource  
564 Management Plans. Additional examples of projects I have been involved in are  
565 provided in my CV, which is contained in MCPO Exhibit 2.7

566 **Q HAVE YOU PREVIOUSLY TESTIFIED IN PUBLIC UTILITY COMMISSION**  
567 **(“PUC” OR “COMMISSION”) PROCEEDINGS?**

568 **A** Yes. I have entered testimony in the Brown to Newton 345 kV Transmission Line  
569 Project, which is Texas PUC Docket Number 37464; in the Riley to Krum 345 kV  
570 Transmission Line Project, which is Texas PUC Docket Number 38140; in the  
571 Krum West to Anna 345 kV CREZ Transmission Line Project, which is Texas  
572 PUC Docket Number 38597; in the Gray To White Deer 345-Kv CREZ  
573 Transmission Line Project, which is Texas PUC Docket Number 38650, and in  
574 the Lobo to Rio Bravo to North Edinburg 345-Kv Transmission Line Project,  
575 which is Texas PUC Docket Number 40728.