circumstances, "such would not necessarily be the case if an aircraft was experiencing engine failure in the case of a multi-engine airplane or engine problems in a single-engine airplane" (Id. l.18-21). Dr. Emanuel testified that a large transmission line located so close to the Tuscola Airport is an obstacle that could be fatal at such critical times when an airplane would have difficulty climbing or even maintaining a constant altitude (Id. l.21-23). It should be obvious that a high-voltage transmission line supported by towers 80 to 140 feet tall, just 2070 feet from the runway, poses risks to student pilots learning to control small airplanes. As a result of these risks and impacts, Dr. Tom Emanuel stated that the University of Illinois Institute of Aviation "strongly requests that no additional obstructions be built in the vicinity of the Tuscola Airport as a matter of public safety" (Id. p.3, l.26-27). Staff witness Rockrohr testified that these concerns expressed by Dr. Emanuel were a negative impact applicable to the MCPO route (Tr. p.351, l.13-16).

Summary. Based on all the evidence and testimony in the record, the Channon and Staff routes clearly outperform the MCPO route on social and land use impacts. The admittedly greater impact to prime farmland, the excessive splitting of farm tracts, the placement of multiple dead-end turns in the middle of single tracts, and the risks posed to students of the University's aviation program, all underscore the deficiencies of the MCPO route on this factor.

7. Number of Affected Landowners and Other Stakeholders.

The Commission's prior finding. The Commission did not separately evaluate this criteria in its Final Order in the underlying proceeding.

Staff testified that longer routes have more negative impacts on landowners. On this criteria, Staff witness Rockrohr testified, "If the routes are equal in all other ways and length is the

only difference, then I would say, yeah, a longer route would have more negative impacts" (Tr. p.356, l.11-14). As Mr. Rockrohr testified in connection with the Meredosia to Pawnee segment, "As a result of eliminating the 25 miles in question, construction costs and maintenance costs would be lower, many land acquisitions will be avoided, and there will be less impacts on landowners" (ICC Staff Ex. 2.0, p.8, l.161).

MCPO's data shows its route impacts 40% more farmland than the Channon/Staff routes. MCPO Ex. 1.3 (RH) shows that the MCPO route from the Option 1 site has 3,978 acres of cultivated cropland in its 500-foot corridor, whereas the Channon route has 2,860. That is almost 40% more affected farmland, by MCPO's own admission. On total "agricultural use acres," MCPO rates its route "inferior" and the Channon route "superior" (MCPO Ex. 1.3 (RH)).

The MCPO route is also 9 miles longer than the Channon/Staff routes, and cuts right through the middle of 103 farms, four times as many as the Channon/Staff routes. Those property owners will be more adversely affected than if the route were placed on property lines. Also, the MCPO route travels within a half-mile or quarter-mile of multiple communities, resulting in greater impact on a higher number of citizens.

In regard to individual property owners, MCPO witness Reinecke, who designed MCPO's route, testified that he did not know how many parcels of land the MCPO route easement affected (Tr. of 5/15, p.616, l.20-22). He testified he didn't think anybody would know that at this point (Id., l.5-8). He did not know how many landowners were affected by the easement area for MCPO's route (Id. p.617, l.9-12). Compare that to ATXI witness Murphy's testimony; she testified that ATXI early on identified every individual landowner affected by either of their proposed routes and personally invited them to participate in the public meeting process (Tr. of 5/15, p.766, l.10-14).

Again, in stark contrast, not only did the MCPO route designers not identify and contact individual property owners on the MCPO route, but there were never any public meetings held in relation to the MCPO route.

Summary. Based on the additional 9 miles of length in the MCPO route, the MCPO design which more negatively impacts farm owners whose farms are split, and the proximity of the MCPO route to multiple communities, it is clear that the Channon and Staff routes outperform the MCPO route in regard to the number of affected property owners and other stakeholders.

8. Proximity to Homes and Other Structures.

The Commission's prior ruling. The Commission found that this criteria favored the MCPO route in the underlying proceeding (Final Order, p.99). This is the only factor on rehearing that may marginally favor the MCPO route, but that is not entirely clear, primarily because MCPO never did the detailed, ground level assessment required to accurately identify homes and other structures.

MCPO's analysis, based on data points and aerial maps, provides an insufficient basis for the Commission to accept MCPO's structure counts. The Commission stated in its Final Order that it was hesitant to accept as accurate residence counts on another segment, in light of ATXI's testimony that a ground-level assessment of structures along the routes was not done (Final Order, p.119). Staff witness Rockrohr testified that this is a legitimate concern (Tr p.357, l.10), and that an analysis of residences and structures that is done simply by looking at aerial maps without such a ground-level assessment may well be inaccurate (Id. l.11-15). These observations apply with equal force to the MCPO route because neither ATXI, nor MCPO, nor Staff, has performed for the

MCPO route the same type of ground-level assessment of structures that ATXI performed for its own routing proposals.

MCPO's route designer Reinecke testified that his residential and non-residential structure counts were based on data "provided to us by Ameren" (Tr p.269, l.4-6). He testified that the "school site data were data dots. . . I did not visually confirm whether or not they are active schools at those specific points" (Id. p.253, l.12-14), and none of the three "schools" even exists. Regarding structures, Mr. Reinecke testified that he did not physically view structures other than by looking at them on an aerial map (Id. p.233, l.9-11). On rehearing, MCPO was asked in a data request to state the location by township and section of each residential structure within 500 feet of the MCPO route centerline. In response to the data request, MCPO stated, "MCPO does not have the requested information. MCPO has not performed the analysis required to make the determination." See MCPO response to DR Channon-MCPO 1.04(e), introduced into evidence as PDM Ex. 8.11.

Mr. Rockrohr testified that Staff reviewed the competing routes in the Mt. Zion to Kansas segment on the internet with aerial maps (Tr. p.356, l.19-21). Using aerial photography, he only found 3 homes in close proximity to the MCPO route centerline (Id. p.363, l.2-6). Yet even MCPO concedes that Mr. Rockrohr missed two homes for every one he found.[6] And while MCPO puts the

[6] While Mr. Rockrohr stated he found only 3 homes in close proximity to the MCPO route, which he defined as being within 400 feet (Tr. p.358, l.7-13), MCPO's position (PDM Cross Ex. 3) is that that there are at least 9 such homes within 400 feet.

number of residences on its route at 12, ATXI puts the number at 16.[7] As noted below, aerial maps show the number of residences on the MCPO route is at least 19, and likely more.

With no on-the-ground visual confirmation of the structures, MCPO's assertions about their number, location and type cannot reasonably be relied on. At a minimum, this lack of clarity in identifying structures cannot warrant approving the 9-mile longer and $17 million more expensive MCPO route as "least-cost," particularly when none of the homes in question need to be removed or relocated.

MCPO concedes there are errors in its listing of residences. Mr. Reinecke identified PDM Cross Ex. 3 as a listing he prepared of 12 residences in close proximity to the MCPO route (Tr. p.254, l.1-7). Mr. Reinecke testified that he was "certain" that the 12 residences listed on PDM Cross Ex. 3 "are all of the impacted residences on the MCPO routes running from the substation Option 1 or Option 2 sites" (Tr. p.275, l.22 - p.276, l.3). However, Mr. Reinecke confirmed that his list did not include a residence on Henry Road in Mt. Zion Township, Section 15 (Id. p.255, l.13-16). When asked if he had read Mr. Rockrohr's testimony identifying the Henry Road residence, Mr. Reinecke testified, "Not in detail" (Id., l.24) Mr. Reinecke testified, "I don't know that that is a residence" (Id. l.21-24). Mr. Rockrohr identified the Henry Road structure as a house on the MCPO route (Tr. p.360, l.18-24). Mr. Rockrohr also confirmed MCPO's list of 12 homes does not list the Henry Road home (Id. p.362, l.1-4).

MCPO acknowledged a second error, when Mr. Reinecke testified that on his list of 12 residences, 6 of the 12 were not located alongside an existing transmission line (Tr. p.256, l.18-22),

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[7] MCPO reports 12 residences in the 500-foot corridor (PDM Cross Ex. 3); ATXI reports 16 residences in proximity to the MCPO route in its response to DR Channon-ATXI 1.01, Attachment 1 (introduced into evidence as PDM Ex. 8.7).

leaving a balance of 6 that were. When asked to compare such testimony with his surrebuttal testimony (MCPO Ex. 4.0, p.3, l.84), where he testified that there are 8 residences on the MCPO route impacted by an existing transmission line, Mr. Reinecke could not explain the difference: "I don't know" (Tr. p.257, l.2-9). Mr. Reinecke testified that it appeared that he was missing two homes on his list of 12 (Id. p.257, l.22 - p.258, l.3). On re-cross examination, Mr. Reinecke later retracted that testimony, testifying that his earlier testimony that there were 8 residences on the MCPO route impacted by existing transmission lines "appears to be in error" (Id. p.275, l.8-16). He testified that his surrebuttal testimony on page 4, line 96, was also in error (Id. l.17-21).

MCPO's demonstrably false assertion that there are 3 schools on the Channon/Staff routes underscores the shortcomings of MCPO's analysis of structures. MCPO witness Reinecke identified PDM Cross Ex. 2 as a listing he prepared with the locations of three schools he claimed were proximate to the Channon hybrid route (Tr. p.245, l.5-13). However, when asked to confirm that none of the three listed schools actually exists, Mr. Reinecke testified, "I cannot confirm whether they exist or they don't" (Tr. p.245, l.14-17). The following discussion ensued:

> THE WITNESS: I did not confirm whether any of the schools were present.
>
> Q. If that is true, then how is it that you were able to answer this data request and tell us the exact distance in feet from the centerline that these three schools are located?
>
> A. I was relying on Ameren's data set provided to us for the location of the schools.
>
> Q. And if you looked at this before you submitted it in answer to our data requests, isn't it obvious to you that this information must be wrong because you have got two structures that would have to be demolished?
>
> A. I indicate that these are school sites. I do not know that there is an active school. I did not try to confirm this data.

(Id. p.247, l.1-16). When asked why he answered data requests showing specific locations for schools after he had determined he could not verify any structures were present at those locations,