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 the Counties of Adams, Brown, Cass, Champaign, Christian, Clark, Coles, Edgar, Fulton, Macon, Montgomery, Morgan, Moultrie, Pike, Sangamon, Schuyler, Scott and Shelby, Illinois.	**:**	**12-0598**

<u>SECOND ORDER ON REHEARING</u>

DATED: February 20, 2014

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SECOND ORDER ON REHEARING

By the Commission:

I. PROCEDURAL HISTORY

On November 7, 2012, Ameren Transmission Company of Illinois ("ATXI") filed with the Illinois Commerce Commission ("Commission") a petition seeking a Certificate of Public Convenience and Necessity pursuant to Section 8-406.1 of the Public Utilities Act ("Act"), 220 ILCS 5/1-101 et seq., authorizing ATXI to construct, operate, and maintain new 345 kilovolt ("kV") electric transmission lines running generally across Illinois from Missouri to Indiana. Pursuant to Section 8-406.1(i), ATXI also sought an order authorizing or directing the construction of the transmission lines pursuant to Section 8-503 of the Act. Petitioner did not seek authority to take property under Section 8-509 of the Act.

After notifying approximately 8,436 landowners, the Commission received petitions to intervene from roughly 80 organizations, businesses, individual landowners, and groups of landowners. Pursuant to Section 8-406.1(g), this matter was conducted under an expedited schedule. On August 20, 2013, the Commission entered an Order finding that ATXI possessed the managerial and financial resources to complete the proposed project. The Order also found generally that the type of project proposed by ATXI is necessary and appropriate under Section 8-406.1(f)(1) of the Act. Citing a lack of support in the record, however, the Order did not grant all of the approvals sought by ATXI. Generally, the Order approved seven of the nine proposed transmission line segments and three of the nine proposed substations. Attached to the August 20, 2013 Order, as well as to this First Order on Rehearing, is an Appendix A containing an

alphabetized list of parties and any abbreviations that they may be known by in either order.

On September 5, 2013, the Commission received the first of seven applications for rehearing pursuant to Section 200.880 of 83 Illinois Administrative Code 200, "Rules of Practice." Andrew and Stacy Robinette of Morgan County filed this application for rehearing pertaining to a one-half mile portion of a transmission line segment approved in the August 20, 2013 Order. This segment is between Meredosia and Pawnee, Illinois. In order to rule on the Robinettes' application for rehearing at a scheduled Commission meeting within 20 days of the application's filing as allowed by Section 200.880, the Commission considered the Robinettes' application at its September 18, 2013 meeting. After granting the Robinettes' application for rehearing on the morning of September 18, the Commission received three more applications for rehearing that afternoon and an additional three on September 19, 2013. At its October 3, 2013 meeting, the Commission granted the applications for rehearing of ATXI, MISO, PDM Coalition and CFT, and MSSCLPG. At the same meeting, the Commission denied the applications for rehearing of ACPO and Edgar DP. The rehearing applications of the Robinettes and MSSCLPG concern the same transmission line segment. Section 10-113(a) of the Act provides that any rehearing must be completed within 150 days after such rehearing is granted. Accordingly, the deadline for the Robinettes' rehearing is February 15, 2014 and the deadline pertaining to the other four granted applications for rehearing is March 1, 2013.

The subjects of this Second Order on Rehearing are the applications for rehearing filed by ATXI, PDM Coalition and CFT, and MSSCLPG. Although the Commission entered a First Order on Rehearing on February 5, 2014 resolving the Robinettes' application for rehearing, the Commission recognizes that the relief requested by MSSCLPG on rehearing overshadows the relief sought by the Robinettes. Specifically, if MSSCLPG prevails on rehearing and a route other than that adopted for the Meredosia-Pawnee segment in the August 20, 2013 Order is chosen, the Robinettes' request becomes moot. Therefore, the ultimate outcome for the Robinettes will not be known until the Commission decides the fate of MSSCLPG's rehearing request.

Pursuant to due notice, status hearings concerning the rehearing applications granted on October 3, 2013 were held at the offices of the Commission in Springfield on October 28 and November 19, 2013. Evidentiary hearings were held on December 17, 18, and 19, 2013. ATXI offered the testimony of Maureen Borkowski, President and Chief Executive Officer of ATXI and Senior Vice President of Transmission at Ameren Services Company ("Ameren Services"),[1] Jeffrey Hackman, Manager of Transmission Operations at Ameren Services, Dennis Kramer, Manager of Transmission Policy and Planning at Ameren Services, and Donell Murphy, a Partner with Environmental Resources Management ("ERM").[2] Staff submitted the testimony of Greg Rockrohr, a

[1] Ameren Services is the service company subsidiary of Ameren Corporation. Ameren Services provides various services to its affiliate Ameren operating utilities, including ATXI.
[2] ERM is a provider of environmental, health, safety, risk, and social consulting services.

Senior Electrical Engineer in the Energy Engineering Program of the Safety and Reliability Division of the Commission's Bureau of Public Utilities. Landowners Paul Bergschneider, Wayne Edwards, Rustin Godfrey, Garry Niemeyer, Stephen Rhea, and Jeff Spencer testified on behalf of MSSCLPG. Darrel Thoma, one of the managers of Dowson Farms, and Steven Lozarchak, President and Owner of the consulting engineering firm ENA Solutions, Inc., also testified on behalf of MSSCLPG. Kathleen Merner, Executive Director of MCCD, testified for MCCD. Paula Cooley, a landowner and pilot, testified on her own behalf. Landowners Justin Ramey and Ann Raynolds also testified on their own behalf. Landowner Eric Sprague testified on his own behalf as well. PDM Coalition offered the testimony of Bob Doan, the Community Development Coordinator for the Arthur Area Economic Development Corporation, Tom Emanuel, Interim Director of the University of Illinois Institute of Aviation, and Mary Burns, a Piatt County landowner. Moultrie PO called as witnesses James Dauphinais, a Managing Principle of Brubaker & Associates, Inc. ("BAI")[3] and Rudolph Reinecke, Vice President and Project Manager for the environmental consulting firm Integrated Environmental Solutions, LLC. Gan Properties indicates that it intends to continue to rely on the earlier testimony of its manager, Kenneth Skolnik.

ATXI, Brock-Jones, Paula Cooley, Corley, MISO, Moultrie PO, MSSCLPG, Justin Ramey and Ann Raynolds, Eric and Julia Sprague, and Staff each filed an Initial Brief. ATXI, Paula Cooley, MCCD, Moultrie PO, MSSCLPG, Eric and Julia Sprague, and Staff each filed a Reply Brief. PDM Coalition and CFT filed a joint Initial Brief and Reply Brief. Corley and Brock-Jones filed a joint Reply Brief. A Proposed Second Order on Rehearing was served on the parties. ATXI, Macon PO, Moultrie PO, MSSCLPG, Eric and Julia Sprague, and Staff each filed a Brief on Exceptions. PDM Coalition and CFT filed a joint Brief on Exceptions. The Briefs on Exceptions were considered in the preparation of this Second Order on Rehearing. The statutory deadline did not allow time for the subsmission of Briefs in Reply to Exceptions.

Pursuant to Section 2-107 of the Act, the Commission must accept from Illinois residents' comments on matters before the Commission through its website and toll-free telephone number. From August 20, 2013 and as of February 19, 2014, the Commission received approximately 142 comments. Several of those submitting comments did not identify which segment of the transmission line that they are concerned with. Of those who did identify their area of concern, a majority of them expressed their objection to constructing the transmission line in Piatt and Douglas Counties, along the route proposed by Moultrie PO.

II. DESCRIPTION OF ATXI AND THE PROJECT

ATXI was formerly known as Ameren Illinois Transmission Company. ATXI is an Illinois corporation with one employee and a wholly-owned subsidiary of Ameren Corporation. ATXI owns, operates, controls, and manages within Illinois certain transmission facilities for the furnishing or delivery of electricity, and is therefore a public utility within the meaning of Section 3-105 of the Act.

[3] BAI provides energy, economic, and regulatory consulting services.

The transmission project that ATXI seeks to construct consists primarily of a new 345 kV transmission line spanning from the Mississippi River near Quincy, Illinois to the Indiana border near Terre Haute, Indiana. This primary portion of the project runs through parts of Adams, Brown, Christian, Clark, Coles, Edgar, Macon, Montgomery, Morgan, Moultrie, Pike, Sangamon, Scott, and Shelby Counties. Another significant portion of the project is a new 345 kV transmission line that runs from Ipava, Illinois to Meredosia, Illinois where it connects with the previously described transmission line. The Ipava to Meredosia segment runs through parts of Brown, Cass, Fulton, Morgan, and Schuyler Counties. The third significant segment of the project wraps around the West and South sides of Champaign in Champaign County. This 345 kV transmission line terminates at Rising, Illinois on one end and at Sidney, Illinois on the other end. This part of the project is not connected to any other part of the project. ATXI refers to the portions of this project collectively as the Illinois Rivers Project, the planning for which began in 2006, if not earlier.

The Illinois Rivers Project consists of approximately 375 miles of new 345 kV transmission lines, nine new or expanded substations, and six 345/138 kV transformers. In accordance with Section 8-406.1(a)(1)(B)(viii), ATXI identified a "Primary Route" and an "Alternate Route." Both routes necessitate a permanent 150 feet wide right-of-way easement. The total easement area for the Primary Route contains approximately 6,800 acres. The total easement area for the Alternate Route contains approximately 7,100 acres. The majority of the easement area will only have over-hanging wires. The construction of single shaft steel poles with no permanent "down guys" or anchors will reduce the amount of land removed from use. In addition, ATXI represents that it plans to place the structures near or adjacent to existing property lines or use lines (i.e. agricultural field lines). ATXI anticipates that the Primary Route will cost approximately $1,091,600,000 to construct while the Alternate Route will cost approximately $1,167,500,000. Other parties that have intervened in this proceeding proposed alternative routes. The project will be placed in service over several years, with the earliest in-service dates expected in 2016 and the final portion of the project to be placed in-service by the end of 2019.

ATXI asserts that the proposed transmission lines and associated facilities are necessary in order to provide adequate, reliable, and efficient service to consumers. The Illinois Rivers Project is also, ATXI contends, the least cost means of satisfying the service needs of transmission customers within the MISO footprint. ATXI states that the Illinois Rivers Project represents four of six projects in Illinois that the MISO Board of Directors approved in December of 2011 as part of its Multi-Value Project ("MVP") Portfolio. MISO identifies the four projects as: 1) Palmyra Tap-Quincy-Meredosia-Ipava and Meredosia-Pawnee, 2) Pawnee-Pana, 3) Pana-Mt. Zion-Kansas-Sugar Creek, and 4) Sidney-Rising. The municipality names represent the locations of substations. ATXI adds that these four projects will enable the reliable delivery of renewable energy, including wind power, within the MISO footprint.

The nine segments at issue in the August 20, 2013 Order were: (1) Mississippi River-Quincy, (2) Quincy-Meredosia, (3) Meredosia-Ipava, (4) Meredosia-Pawnee, (5) Pawnee-Pana, (6) Pana-Mt. Zion, (7) Mt. Zion-Kansas, (8) Kansas-Indiana state line, and (9) Sidney-Rising. As referenced above, the Commission approved routes for all but two. The two for which insufficient evidence existed were the Pawnee-Pana and Pana-Mt. Zion segments. Of the nine proposed new or expanded substations, the Commission approved only those at Quincy, Meredosia, and Pawnee. The Commission found that the record did not support granting the requested relief regarding the new or expanded substations at Ipava, Pana, Mt. Zion, Kansas, Sidney, and Rising.

III. APPLICABLE STATUTORY AUTHORITY

The expedited consideration provided for in Section 8-406.1 of the Act is available only to public utilities seeking to construct a new high voltage electric service line and related facilities. Section 8-406.1(a) sets forth in detail the information required to be filed in support of the application. The statute further provides:

> (f) The Commission shall, after notice and hearing, grant a certificate of public convenience and necessity filed in accordance with the requirements of this Section if, based upon the application filed with the Commission and the evidentiary record, it finds the Project will promote the public convenience and necessity and that all of the following criteria are satisfied:
>
> (1) That the Project is necessary to provide adequate, reliable, and efficient service to the public utility's customers and is the least-cost means of satisfying the service needs of the public utility's customers or that the Project will promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives.
>
> (2) That the public utility is capable of efficiently managing and supervising the construction process and has taken sufficient action to ensure adequate and efficient construction and supervision of the construction.
>
> (3) That the public utility is capable of financing the proposed construction without significant adverse financial consequences for the utility or its customers.

As referenced above, Section 8-406.1(g) states:

> (g) The Commission shall issue its decision with findings of fact and conclusions of law granting or denying the application no later than 150 days after the application is filed. The Commission may extend

> the 150-day deadline upon notice by an additional 75 days if, on or before the 30th day after the filing of the application, the Commission finds that good cause exists to extend the 150-day period.

In addition, the statute requires that a decision granting a certificate under Section 8-406.1 shall include an order pursuant to Section 8-503 of the Act:

> (i) Notwithstanding any other provisions of this Act, a decision granting a certificate under this Section shall include an order pursuant to Section 8-503 of this Act authorizing or directing the construction of the high voltage electric service line and related facilities as approved by the Commission, in the manner and within the time specified in said order.

Section 8-503 of the Act concerns, among other things, additions to or extensions of public utility facilities. This section provides, in part, as follows:

> Whenever the Commission, after a hearing, shall find that additions, extensions, repairs or improvements to, or changes in, the existing plant, equipment, apparatus, facilities or other physical property of any public utility . . . are necessary and ought reasonably to be made or that a new structure or structures is or are necessary and should be erected, to promote the security or convenience of its employees or the public, or in any other way to secure adequate service or facilities, the Commission shall make and serve an order authorizing or directing that such additions, extensions, repairs, improvements or changes be made, or such structure or structures be erected at the location, in the manner and within the time specified in said order; . . .

IV. ISSUES ON REHEARING

Section 8-406.1(f) of the Act requires any project proposed thereunder to be the least-cost means of satisfying the identified objectives and that the petitioner possesses the requisite managerial and financial resources to complete the project. The issues on rehearing do not include the reevaluation of whether ATXI possesses the requisite managerial and financial resources. Nor do they include reconsideration of the overall need for the project. Rather, rehearing has been granted to revisit the selected routes for the Meredosia-Pawnee and Mt. Zion-Kansas segments. Rehearing has also been granted to determine whether the record now contains sufficient evidence to identify the most appropriate connection between Pawnee and Mt. Zion. If it is decided that sufficient evidence exists, the Commission is tasked with determining whether the Illinois Rivers Project should include a Pawnee-Pana segment and a Pana-Mt. Zion segment or whether such segments should be replaced with a segment more or less directly between Pawnee and Mt. Zion (via Kincaid). Finally, the Commission will also

consider on rehearing the necessity for new or expanded substations at Ipava, Pana, Mt. Zion, Kansas, Sidney, and Rising.

The propriety of the various routing proposals must be considered in the context of which route is least-cost. Resolving the question of least-cost involves a comprehensive evaluation and balancing of the overall costs and externalities of each proposed route against the benefits of any other proposed route. The costs and externalities include not only the financial tally for manpower and equipment, but also the impact on local residents and resources and present and future land uses. In past Section 8-406 proceedings and in the earlier phase of this proceeding, the Commission has utilized 12 criteria for purposes of evaluating proposed routes. (See Docket No. 06-0706 Order on Reopening at 6-7) The 12 criteria are as follows:

1. Length of the line
2. Difficulty and cost of construction
3. Difficulty and cost of operation and maintenance
4. Environmental impacts
5. Impacts on historical resources
6. Social and land use impacts
7. Number of affected landowners and other stakeholders
8. Proximity to homes and other structures
9. Proximity to existing and planned development
10. Community acceptance
11. Visual impact
12. Presence of existing corridors

As was noted in Docket No. 06-0706 and the August 20, 2013 Order in this matter, the Commission's decision will result from a balancing of these 12 criteria to the extent that they are relevant to the proposed facilities and any other relevant criteria presented by the parties. None of the criteria is inherently more important than another. (Id.)

The need for new or expanded substations at Ipava, Pana, Mt. Zion, Kansas, Sidney, and Rising in large part boils down to whether sufficient space exists at existing AIC substations to accommodate interconnection with new 345 kV transmission lines. ATXI has provided additional evidence on rehearing regarding the existing substations. Staff's response to that evidence indicates that there is no longer any dispute concerning some of the proposed new or expanded substations.

The Commission also notes that although MISO's application for rehearing was granted, MISO did not offer any testimony in the rehearing phase of this docket. Soon after the Commission ruled upon the applications for rehearing, MISO indicated that it would be limiting its participation. MISO explained that because its interests are aligned with those of ATXI, it would not be expending as many resources to litigate this matter on rehearing.

V. CONNECTION THROUGH KINCAID VERSUS PANA

In the August 20, 2013 Order in this matter, the Commission declined to adopt a route for the Pawnee-Pana and Pana-Mt. Zion segments because it was not convinced that a connection at Pana was appropriate. Rather than divert the transmission line south from Pawnee to Pana and then north to Mt. Zion, Staff suggested that a more direct link between Pawnee and Mt. Zion via Kincaid be considered. Staff pointed out that such an alternative is significantly shorter than what ATXI had proposed and argued that there was little evidence that ATXI and MISO even considered such an option. In granting rehearing, the Commission directed Staff to provide a route between Pawnee and Mt. Zion via Kincaid and asked all interested parties to provide more evidence on this issue. While the record now contains additional evidence on a "Kincaid connection," at least one party suggests that the record is still deficient and that the Commission consider determining an exact route for this area in a subsequent docket.

A. ATXI Position

In developing the Illinois Rivers Project, ATXI states that it and Ameren Services worked with MISO to determine which specific pathways were consistent with regional needs and also presented opportunities to address local reliability concerns. ATXI relates that the Pawnee to Pana to Mt. Zion routes were chosen as a solution to address Decatur-area reliability concerns and also to mitigate instability at the Coffeen Energy Center. Although the Commission had expressed interest in a possible connection through Kincaid rather than Pana, ATXI believes that the record now shows that a Kincaid connection will not address the same service needs as the "Pana connection." ATXI points out that even Staff recognizes that there are potentially valid concerns regarding use of a Kincaid connection.

1. Overall Service Needs

ATXI argues that Section 8-406.1(f)(1) expressly requires the Commission to determine what “service needs” are being addressed by a project. Once the service need is identified, alternatives to meeting that need may be identified, and the cost associated with each alternative quantified. If a project alternative does not meet the service need, it can not be acceptable, no matter what the cost. ATXI contends that the decision whether to approve a route through Kincaid versus Pana is a matter of deciding which “service needs” the Commission is willing to address in this proceeding, and which service needs are best addressed by a particular route. If all the Commission is concerned about is finding the route that completes a connection between Pawnee and Mt. Zion at the lowest baseline dollar cost, and ignores all other material and relevant considerations, ATXI states that the Kincaid connection wins. If, however, the Commission believes that the route should not only connect to previously-approved portions of the transmission line, but also be routed in such a way to address local service and reliability issues at the least cost to AIC area customers, then ATXI believes that the Pana connection wins. ATXI asserts that these local issues can be

addressed at a much lower cost to customers if the work is done as part of the Illinois Rivers Project, instead of separate projects in addition to building the Kincaid route.

ATXI does not understand how the public interest is served by viewing the "service needs" of the Illinois Rivers Project narrowly, as it believes Staff would have the Commission do. ATXI relates that the very concept of MVPs is to identify projects that serve local and regional needs. Route selection, ATXI asserts, was not an exercise of identifying the shortest distance between substations; it took into consideration local operational and reliability issues that could be addressed by new or additional 345 kV connections. Through this process, ATXI states that it identified the need to address Decatur-area voltage issues, and the need to improve generator stability at the Coffeen Energy Center. After it developed routes through Pana, ATXI reports that the need to relocate the Pana substation came to light. ATXI denies that its concerns are fabricated and states that no party has articulated any reason not to address these concerns as part of the service needs of the Illinois Rivers Project.

That it and Staff have differing views on the scope of service needs the Illinois Rivers Project should address is in ATXI's opinion key to understanding why the routing decision is not really a matter of comparing dollars and cents. ATXI insists that its Pana connection addresses local reliability concerns that Staff's Kincaid connection does not. Because the Kincaid connection does not address the service needs identified by ATXI, ATXI maintains that the Kincaid connection should be excluded, regardless of cost. ATXI relies on the January 15, 2002 Order in Docket No. 01-0516 (Order at 12-13) and Ameropan Oil Corp. v. Illinois Commerce Commission, 298 Ill. App. 3d 341 (1st Dist. 1998), to support its position.

2. Benefits of the Pana Connection over the Kincaid Connection

a. Timing

The Commission's August 20, 2013 Order in this matter recognized that reliability concerns exist in the Decatur area. According to ATXI, ATXI Ex. 1.9(RH) confirms that the Decatur area is prone to low voltage and possible voltage collapse by 2016. ATXI witness Kramer explained why the existing electrical configuration in the Decatur area poses this risk. (See ATXI Exs. 2.0 at 28-29; 2.11; 2.13; 2.14; 11.0 at 12-23; and 11.1)

ATXI states that the timeframe for building the new Mt. Zion substation will not depend on which route the Commission approves. ATXI can build the Mt. Zion substation just as quickly for a Kincaid connection as it can for a Pana connection. But, ATXI continues, the new Mt. Zion substation will not solve any reliability issues until it is electrically connected and the timing in which these connections can be made makes Pana the better option. ATXI asserts that it can do everything that needs to be done to connect Pana and Mt. Zion, including another certificate proceeding for 138 kV connections, by the end of 2016. In contrast, ATXI states that studies for a Kincaid to Mt. Zion connection might be completed by the end of 2015 at the earliest. ATXI indicates that actual construction will then take until 2018—assuming the detailed

planning studies reveal no surprises. According to ATXI, this will be too little, too late to address the voltage issues in Decatur.

ATXI states further that there are several reasons why it would take longer to execute the Kincaid connection than Pana, but two stand out. First, because the substation is owned by Commonwealth Edison Company ("ComEd") and located in the PJM Interconnection, L.L.C. ("PJM") footprint, planning and coordination are much more involved than connections solely within MISO. The level of review and coordination needed to study and engineer a connection between two RTOs is of a different character than developing and connecting the project within a single RTO. Mr. Kramer testifies that ATXI, AIC, ComEd, MISO, and PJM would need to share information and perform system impact studies for each entity's respective electrical system. To the extent these studies identify reliability issues caused by a Kincaid connection, those issues would also need to be resolved before a Kincaid connection could be placed in service. ATXI contends that this study and review process would take 12 to 15 months, or possibly longer. By contrast, all of the system impact studies for the Pana connection have already been completed.

Second, ATXI asserts that the Kincaid substation site is essentially landlocked, and this physical constraint makes new connections difficult and costly. There is a factory to the south and ash or waste disposal ponds to the north, east, and west. A new transmission line would have to cross one of these ponds, which would require taller towers with deeper foundations. Transmission lines and terminal structures already in place are located in such a manner that there is no room for a new, additional 150 feet wide right-of-way. Bringing in a new line would likely require ComEd to move equipment around, further increasing costs. ATXI states that none of this is refuted, or even addressed, by Staff.

b. Coffeen Energy Center Stability

ATXI relates that part of MISO's work in developing the Illinois Rivers Project was to analyze areas where generator instability could be mitigated by adding transmission capacity. Improving generation stability allows power plants to withstand major disturbances (such as short circuits, de-energization of transmission lines, and similar system events) and remain connected to the electric grid. ATXI asserts that increasing generation stability is a desirable outcome of any transmission system improvement.

ATXI relies on MISO witness Webb to support its position, pointing to Mr. Webb's testimony that adding a 345 kV connection in Pana "provides a new outlet from Pana to Sugar Creek, forming a path parallel to the heavily loaded existing Coffeen outlet to Ramsey 345 kV. This additional capability mitigates the instability condition [at Coffeen]." (MISO Ex. 1.0 (Rev.) at 21) ATXI states that its own analysis confirms that a connection at Pana improved the stability of the Coffeen plant by approximately 10%, as compared to the Kincaid connection, which did not improve Coffeen plant stability at all.

c. Cost Allocation

ATXI believes that AIC's Pana substation needs to be relocated due to mine subsidence. ATXI witness Hackman testifies that subsidence has occurred 1,000 feet northwest of the Pana substation and at another location 2,000 feet east of the substation. (See generally ATXI Ex. 9.0(RH) at 3-5) If the substation is relocated as part of the Illinois Rivers Project, the costs will be borne in the same proportion as the project costs generally, which is approximately 9% for AIC customers. If the substation is relocated as a stand-alone activity separate from the Illinois Rivers Project, AIC customers will bear 100% of the cost. The reason for this disparity, ATXI explains, is that if a Kincaid connection is approved, the transmission line will not connect to the Pana substation. Costs associated with the Pana substation can not then, by definition, be considered part of the Illinois Rivers Project.

ATXI contends that the reduced cost to AIC customers from sharing the cost of the Pana relocation, resulting in a lower overall cost of the Illinois Rivers Project for these customers, would be sufficient on a stand-alone basis to justify the Pana connection relative to a Kincaid connection. ATXI asserts that the evidence shows that the Pana connection completes the Illinois Rivers Project in a way that also addresses the service needs discussed above. The fact that the Pana connection will allow necessary work to be done at a reduced cost to customers while addressing all service needs demonstrates that the Pana connection is, in ATXI opinion, the superior option to a Kincaid connection.

3. Costs of the Kincaid Connection

If the Commission concludes that it is appropriate to consider service needs beyond just connecting the transmission line, ATXI offers that the next logical step is to consider what it would cost to address these service needs with the Kincaid connection versus the Pana connection. According to ATXI, the “all in” cost of the Pana connection to Illinois customers is approximately $18 million. (ATXI Ex. 1.0(RH) at 5 and Ex. 1.6(RH)) This includes the transmission lines from Pawnee to Pana to Mt. Zion and relocation of the Pana substation. The Kincaid connection, ATXI continues, would cost at least $44 million. (ATXI Ex. 1.0(RH) at 5 and Ex. 1.6(RH)) ATXI would underscore “at least” because the $44 million figure does not include any upgrades, repairs, or enhancements that could be identified in the study process Mr. Kramer described for coordination among MISO, PJM, ATXI, AIC and ComEd. A significant factor in the cost disparity is, again, a function of how MVP cost sharing works. ATXI explains that nearly $33 million of the $44 million cost to connect at Kincaid is attributable to the relocation of the Pana substation as a separate project. Thus, ATXI reasons, any “savings” from the shorter Kincaid route are more than offset by other costs that would be incurred if that route is built.

Furthermore, ATXI continues, selecting the Kincaid connection over the Pana connection would not eliminate the need to address Decatur reliability concerns by 2016. ATXI contends that additional system reinforcements would be needed to

address the Decatur area reliability issues between 2016 and 2018, due to the inability of the Kincaid connection to address them on time. ATXI's studies show that its proposed Pana to Mt. Zion connection is the best means of addressing these reliability issues. Consequently, ATXI indicates that it may need to build this route regardless of the outcome of this proceeding, as a stand-alone reliability project for which MISO cost sharing is not available.

4. Uncertainty Surrounding the Kincaid Connection

ATXI claims that the Pana routes have been vetted and hold no surprises and contends that the same can not be said for the Kincaid route. ATXI points out that Staff acknowledges it did not have much time to develop the Kincaid route, and did not solicit nor receive feedback from stakeholders in developing the route. Additional questions were raised about the viability of the Kincaid route after it came to light that the MCCD owns land that the route might need to cross, but apparently can not legally do so. ATXI is not in a position to say that the Kincaid route can not be built. But ATXI also can not say, and does not believe Staff can say either, that all potential factors impacting the feasibility and cost of the route have been identified.

B. Staff Position

Staff witness Rockrohr observes that using a Pawnee to Kincaid to Mt. Zion route, instead of the Pawnee to Pana to Mt. Zion route that ATXI proposes, would result in the lowest overall costs. Mr. Rockrohr acknowledges the five potential problems/costs that ATXI believes could occur if the Kincaid connection is implemented and responds accordingly. First, ATXI is concerned that existing substation facilities at Kincaid might need to be modified. Mr. Rockrohr recognizes that substation facilities at Kincaid may need to be modified, but contends that modifications at Kincaid could lead to the elimination of existing operating concerns at Kincaid while simultaneously achieving the benefits associated with MISO's MVP Portfolio at lower cost.

Second, ATXI expresses concern that AIC's customers will have to bear the entire cost of a relocation of AIC's transmission equipment at Pana due to mine subsidence. Mr. Rockrohr points out that according to ATXI witness Hackman mine subsidence at the existing AIC Pana substation has not occurred. (See ATXI Ex. 9.0(RH) at 4) The AIC Pana substation was constructed in 1972. (See Staff Cross Ex. 1 (ATXI response to Staff DR ENG 2.14R(b)) Moreover, earlier in this proceeding, Staff relates that ATXI claimed it had no knowledge of the AIC equipment or of AIC's needs or plans at the existing Pana substation. Staff argues further that AIC should not claim that it needs to relocate its transmission facilities at this time simply because costs for doing so at this time would be shared throughout MISO. Staff states that while it would not be prudent to place additional transmission facilities at Pana, there is no evidence that the relocation work at Pana is necessary. Another consideration that Staff offers is that MISO MVPs exist in North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Missouri, Indiana, and Michigan. Costs of MISO MVPs in these other states will be allocated to Illinois ratepayers, just as costs for the four MISO MVPs that comprise

ATXI's Illinois Rivers Project will be allocated to ratepayers in other states. Staff maintains that it is appropriate to consider whether it would be fair for utilities in other states to perform unnecessary work simply because ratepayers in Illinois will help pay the cost.

Third, ATXI expresses concern that, because it had not fully considered a Kincaid connection prior to filing its petition, such a connection would require additional time to study and coordinate with ComEd and PJM, and likely not address Decatur area reliability until 2018. While the record does not reflect whether a Kincaid connection could be completed more quickly if necessary studies were given priority, to alleviate this concern Staff suggests that ATXI could construct the approved Mt. Zion to Kansas segment sooner than 2018, as is presently indicated on ATXI Ex. 2.4. In addition, Staff proposes a substation site near Moweaqua that would support voltage in the Decatur area by providing a connection to an existing AIC 138 kV line that already supplies the Decatur area. Staff states that using only one 345 kV connection to Kansas to the substation site near Moweaqua that Staff identified and AIC's existing 138 kV transmission line north to the Decatur area, post contingency voltages, assuming 2021 peak summer loading, would remain above 90%: above the voltage level for which there is a significant risk of voltage collapse and loss of load. (See ATXI Ex. 4.0(RH) at 7; Staff Cross Ex. 2 (Attachment 7 to ATXI's response to Staff DR 13.08))

Fourth, ATXI expresses concern that, due to the existing bus configuration at the existing Kincaid substation, the Kincaid connection might result in an overload of the 345/138 kV transformer planned for the Decatur area if an unplanned opening of two breakers at the Kincaid ring bus occurs. Staff believes that previously contemplated modifications to the existing 345 kV configuration at the Kincaid substation could alleviate this concern.

Fifth, ATXI expresses concern that the Kincaid connection would not improve stability of the Coffeen Energy Center to the same extent as ATXI's proposed connection through Pana. If, however, ATXI uses the substation site near Moweaqua that Staff identifies, Mr. Rockrohr asserts that AIC's existing 138 kV transmission line would connect the existing Pana substation to ATXI's proposed 345 kV transmission line, which could improve stability at the Coffeen Energy Center.

Having addressed ATXI's concerns, Mr. Rockrohr recommends that ATXI fully study the costs associated with a Kincaid connection, and compare costs and benefits associated with that option to the costs and benefits of using the Pana connection it proposes. On its face, ATXI Ex. 1.6(RH) indicates that the overall cost of the Kincaid connection would be approximately $45.4 million lower than a Pana connection ($202.9 million - $157.5 million), and would result in a transmission line that is approximately 25 miles shorter. This $45.4 million, Mr. Rockrohr points out, assumes that a $32.9 million relocation of AIC's existing Pana substation occurs, which Staff disputes is necessary. Therefore, Staff observes that ATXI's own projection indicates that using the Kincaid connection could result in a savings of $88.3 million. Staff considers this a significant savings that could be used to offset costs for addressing the existing operational issues

at the Kincaid substation for which ATXI expresses concern. Since Kincaid modifications/upgrades would improve transmission system operations for two regional transmission organizations ("RTO"), Staff does not know how costs for those modifications would be allocated.

C. MISO Position

As the RTO, MISO is responsible for ensuring that the regional transmission system is reliably planned to provide for existing and expected use of that system. MISO is concerned that any gap in the Illinois Rivers Project may cause negative “ripple effects” to occur. According to MISO witness Webb, a missing segment would result in new powerflows from the 345 kV path to the lower voltage system at the point of the missing segment. Furthermore, given the complexity and time sequencing of the studies necessary for a Kincaid connection, MISO is also worried about the uncertainties regarding the eventual completion date of a Kincaid connection. The lack of consultation with landowners and government agencies regarding the Kincaid connection compounds this concern for MISO. Of particular concern for MISO is the time necessary for ATXI to make a filing under Section 8-406 or Section 8-406.1 of the Act for a certificate. Acquiring rights-of-way and the possible need to seek eminent domain authority may further delay the completion date. In the meantime, MISO states that the benefits from the Illinois Rivers Project that the Commission has already identified would not be realized until a later date, and local reliability concerns would require additional, more immediate attention. Specifically, MISO notes that owing to the urgent local reliability needs, completion of the transmission line segments in the Decatur area was scheduled by ATXI to be completed in 2016. Delay in this schedule, MISO continues, would leave Decatur exposed to the risk of low voltage and potential loss of load from 2016 until 2018 unless other methods are implemented to address the two-year window of exposure. MISO adds that MVP cost sharing for improvements at the Pana substation would be lost under the Kincaid connection to the extent that the local area reliability solutions are not associated with development of a segment of a MVP.

D. Moultrie PO Position

Moultrie PO is concerned that Staff has for the second time in this proceeding recommended that the Commission delay the approval of the Pawnee to Mt. Zion segments of the line in favor of further consideration of the appropriate routing using the Kincaid connection versus the Pana connection. While Moultrie PO appreciates the need for the Commission to carefully consider viable routing alternatives, it respectfully requests that the Commission seriously consider the real need for any further delay in approval of the Pawnee to Mt. Zion line segments. Moultrie PO fears that this decision could impact the Commission’s decision on the Mt. Zion-Kansas segment of the route because the exact location of the Mt. Zion substation might remain undetermined in this proceeding. This would mean that landowners and interested parties, no matter their routing preference, could for a third time be required to undergo the time and substantial expense associated with relitigating, or opposing various routing proposals, including,

but not limited to, the Mt. Zion to Kansas proposal. Moultrie PO respectfully suggests to the Commission that there is sufficient evidence in the record to resolve these issues.

E. MCCD Position

MCCD opposes the Kincaid connection to the extent that the route identified by Staff passes through land owned by MCCD. MCCD does not wish to release any interest in the land and argues that as a conservation district its land is not subject to eminent domain or condemnation proceedings. MCCD cites Section 12b of the Conservation District Act in support of its position, 70 ILCS 410/1 et seq.

F. Ramey and Raynolds Position

Justin Ramey and Ann Raynolds live in Christian County approximately three miles south of Taylorville in a home along ATXI's Alternate Route for the Pawnee-Pana segment. To avoid the burden of a 345 kV transmission line near their home, they fully support Staff's proposed Kincaid connection. They consider the Kincaid connection to be the least cost option and best alternative route for this segment of the Illinois Rivers Project.

G. Sprague Position

Eric and Julie Sprague live in Christian County approximately four miles west of Moweaqua in a home along ATXI's Primary Route for the Pana-Mt. Zion segment. To avoid the burden of a 345 kV transmission line near their home, they fully support Staff's proposed Kincaid connection.

H. Cooley Position

Intervenor Cooley submits that the Commission was correct to deny a portion of the project so that a proper study could be made of a connection through Kincaid versus Pana. While Staff has offered an alternate route through Kinkaid, she contends that the evidence submitted demonstrates that denying this portion of the project for further study is still the better choice. She notes that Staff witness Rockrohr concedes that he lacked time to meet with parties and landowners and may not have had all available information. He also acknowledges that the route he identified is not the only potential route. Ms. Cooley agrees with Mr. Rockrohr that even if his proposed Kincaid route is not ideal, the concept of constructing ATXI's new 345 kV transmission line from Kincaid to supply the Decatur area, instead of from Pana, is still the most rational, cost-effective solution. She also shares the view that by inflexibly focusing on gaining expedited approval in this proceeding for the Pawnee to Pana to Mt. Zion route segments, ATXI and MISO have missed and/or skipped over various opportunities to conduct this project in a deliberate, least cost manner. In fact, Ms. Cooley continues, ATXI's willingness to enter into stipulations which have dramatically changed its originally proposed routes, seven in years in making, and the location of substations, one already bought and paid for, is just further proof that ATXI's vetting process was incomplete and there are better

options than what have to date been proposed. For these reasons, she believes the relief sought by ATXI and MISO in this regard should be denied.

I. Commission Conclusion

The Commission has considered the arguments on this matter and despite some parties' assertions does not consider this an easy question to resolve. Generally, the Commission agrees with ATXI that a broader view of service needs should be taken. Among the service needs identified in this situation are the general transmission needs represented by the Illinois Rivers Project, improved generation stabilization at the Coffeen Energy Center, reliability improvements in the Decatur area in the next few years, and subsidence concerns in the area of the existing Pana substation.

The Commission has already found a general need for the Illinois Rivers Project. Generation stabilization concerns at the Coffeen Energy Center, to the extent that they exist, can be readily addressed through a Pana connection. Reliability needs in the Decatur area can be met in a timely manner through use of a Pana connection. Although mine subsidence at the existing Pana substation has not yet occurred, the record reflects that subsidence has in fact occurred within relatively close proximity thereto (1,000 feet to the northwest and 2,000 feet to the east). While the Commission does not know with certainty the severity of any of these needs individually, combined they present a compelling case for a Pana connection.

Staff makes good arguments in support of a Kincaid connection. The Commission appreciates Staff's particular suggestions for addressing ATXI's concerns. But in light of the overall uncertainty surrounding Staff's proposed Kincaid connection, the Commission is reluctant to set aside ATXI's Pana connection. For example, Staff's proposed route apparently passes through land owned by MCCD, which arguably can not be acquired for a transmission line easement. The Commission recognizes that Staff did the best it could in the limited time available. Had more time existed in this proceeding, a different outcome may have been the result.

The Commission also recognizes that it could adopt Ms. Cooley's position and withhold judgment on this question at this time. But given the reliability concerns for the Decatur area, deferring action in this case will only increase the likelihood that those reliability concerns will not be resolved until well after 2016. Accordingly, the Commission concludes that the evidence available supports a finding that ATXI's original proposal for Pawnee-Pana and Pana-Mt. Zion segments is preferable to Pawnee-Kincaid and Kincaid-Mt. Zion segments.

VI. MEREDOSIA-PAWNEE SEGMENT

A. ATXI Position

ATXI notes that the Commission previously approved a route from Meredosia to Pawnee that was the subject of a stipulation between ATXI, MSCLTF, and FutureGen.

ATXI states that this route was identified as ATXI's Alternate Route at the beginning of this case. While MSSCLPG sought and was granted rehearing to provide evidence supporting its preferred route, ATXI believes that MSSCLPG has not provided new information that warrants reversal of the Commission's decision. ATXI suggests that MSSCLPG raises largely the same concerns on rehearing as in the initial proceeding regarding, for example, potential interference with farming, crop or soil damage, and property values, while ATXI opines that their basic complaint is that the line will run too close to their property.

ATXI acknowledges that the MSCLTF Route[4] supported by MSSCLPG and Staff is superficially appealing because it is shorter and would cost less to build, and Staff also supports this route. ATXI states that weighing against these considerations; however, is the fact that the MSCLTF route parallels an existing 138 kV line for its entire 57-mile length. While ATXI's position may seem inconsistent as ATXI itself proposes to parallel existing transmission lines on the Pawnee to Pana, Pana to Mt Zion and Mt. Zion to Kansas routes; ATXI submits that what makes these other routes different, among other factors, is the distance the new line will parallel existing lines. ATXI notes that the Pawnee to Pana route parallels approximately 11 miles, the Pana to Mt. Zion parallels approximately 14 miles, and the paralleling for the stipulated Mt. Zion to Kansas route is just less than 15 miles. In fact, ATXI opines that the total amount of paralleling throughout the Project is nearly 80 miles; the MSCLTF route increases the amount of paralleling by 70%. ATXI claims that it is because of the extensive length that the MSCLTF route will parallel existing lines, and the factors described below, that ATXI opposes it. ATXI recommends the Commission re-approve the ATXI Alternate Route.

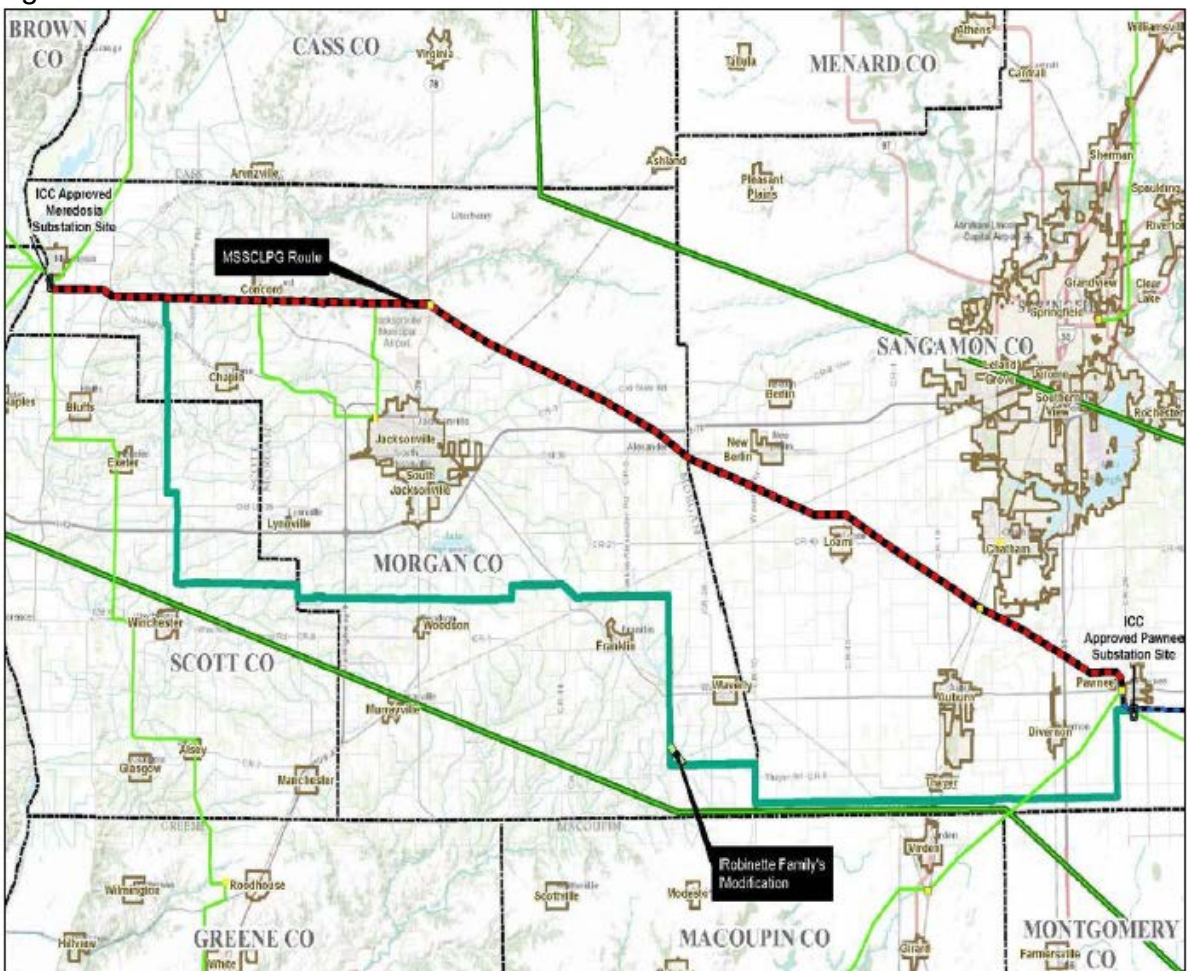
ATXI indicates that it balanced a host of factors to identify the least-cost route for each portion of the Project, considering electrical and engineering factors such as reliability, operations, and maintenance, and also environmental, societal, and land use factors. In some cases, ATXI notes that the environmental, societal, and land use issues related to a portion of the line outweighed the reliability, operations and maintenance concerns that result from constructing parallel lines in close proximity. In those instances, ATXI proposed paralleling the Project's Transmission Line to an existing one. But with the Meredosia to Pawnee segment, given the length of the line, ATXI submits that the operational reliability and maintenance issues outweigh factors supporting the MSCLTF route.

For this segment, ATXI argues the Commission must therefore consider the balance of cost against operational reliability. ATXI notes that the horrific tornados that tore through central Illinois this past November make clear the risk facing AIC customers. A double circuit tower line, with a 138 kV circuit and a 69 kV circuit, was knocked down in the Peoria area, while other 138 kV lines were downed, and in the Kansas area a 345 kV circuit experienced the destruction of five structures and

[4] The route referred to as the MSCLTF route was proposed in the case in chief by MSCLTF, which later agreed to a stipulated route with ATXI. The MSCLTF route is now supported by MSSCLPG and Staff on rehearing.

damaged conductors. ATXI does not consider this type of risk worth the potential cost savings for this segment.

ATXI represents that the following map reflects the routes proposed for this segment of the line:



ATXI Exh. 3.0 RH

1. Length of Line

ATXI represents that the following table reflects the length of each route proposed for this segment of the line:

	Stipulated Route/ATXI Alternate Route	MSCLTF Route
Estimated Length in Miles	75.6	57.3

2. Difficulty and Cost of Construction

ATXI represents that the following table reflects the estimates for the cost of construction for each route proposed for this segment of the line:

	Stipulated Route/ATXI Alternate Route	**MSCLTF Route**
Estimated Baseline Cost	$144.205 million	$107.423 million

3. Difficulty and Cost of Operation and Maintenance

ATXI states that the MSCLTF Route parallels an existing 138 kV line for its entire 57.3-mile length. ATXI has explained that paralleling transmission lines causes operational, maintenance and reliability issues, and therefore should be avoided when possible.

The evidence in the case demonstrates the capability of the existing 138 kV circuits in any given area is quite different. In operation, common mode failures occur, and when they occur in areas where the system is less robust, ATXI witness Mr. Hackman explained more customers suffers outages or are at risk. For this reason, ATXI continues to support a non-parallel route from Meredosia to Pawnee.

ATXI's believes its position is not inconsistent with its position on parallel routes for other portions of the Project, noting that Kansas, for example, has other 345 kV sources and good 138 kV circuits connecting it to other relatively strong sources. Thus, ATXI suggests that the same reliability concern is not present for the portion of the Mt. Zion to Kansas Stipulated Route (15 of 70 miles) that parallels into the Kansas substation as it is for the Meredosia to Pawnee segment.

ATXI witness Hackman testifies that it is important to note that when ATXI constructs parallel transmission lines, it gives up reliability, operations, and maintenance benefits, and it takes on reliability risks. He notes that it is easier for both lines to go out, or to be taken out, when they are close together, and even in the most compelling case, paralleling routes now may result in the need for an additional circuit in the future that would not otherwise be needed. Therefore, ATXI argues that reliability, operations, maintenance, and even security considerations weigh against paralleling transmission lines when possible. Mr. Hackman also testified that parallel lines should only be constructed when the environmental, societal, and land use issues resulting from a particular route outweigh the potential operational, maintenance, and reliability issues that result from constructing parallel routes.

4. Environmental Impacts

ATXI suggests that the Commission made a determination regarding this criterion based on the evidence presented in the underlying case. In its August 2013 Order, the Commission found that, with respect to environmental impacts, there is no material difference between the Stipulated Route and the MSCLTF Route. (Order at 77) ATXI notes that MSSCLPG has provided no evidence on rehearing for this criterion that would warrant reversal of the Commission's original determination in its approval of the Stipulated Route.

5. Impacts on Historical Resources

ATXI suggests that the Commission made a determination regarding this criterion based on the evidence presented in the underlying case. The Commission found that, with respect to impacts on historical resources, there is no material difference between the Stipulated Route and the MSCLTF Route. (Order at 77) ATXI states that the record evidence on rehearing shows there are five archaeological sites along the Stipulated Route, and three along the MSCLTF Route, but that all such sites can be spanned.

6. Social and Land Use Impacts

ATXI notes that the Commission made a determination regarding this criteria based on the evidence presented in the underlying case. The Commission found that, with respect to social and land use impacts, there is no material difference between the Stipulated Route and the MSCLTF Route. (Order at 77) ATXI asserts that MSSCLPG has provided no evidence on rehearing on this criterion that would warrant reversal of the Commission's original determination in its approval of the Stipulated Route.

7. Number of Affected Landowners and other Stakeholders

ATXI represents that the following table reflects the approximate number of landowners affected by each proposed route for this segment of the line:

	Stipulated Route/ATXI Alternate Route	**MSCLTF Route**
Number of affected landowners/stakeholders	273 (approx.) affected landowners	186 (approx.) affected landowners

8. Proximity to Homes and Other Structures

ATXI represents that the following table reflects the number of homes and other structures within the designated proximity to each proposed route for this segment of the line:

	Stipulated Route/ATXI Alternate Route	MSCLTF Route
Residences within 0-75 feet of centerline	0	0
Residences within 75-150 feet of centerline	9	Not specified
Residences within 0-500 feet of centerline	42	Not specified

9. Proximity to Existing and Planned Development

ATXI states that neither the Stipulated Route nor the MSCLTF Route is located in proximity to planned development. ATXI notes that MSSCLPG witness Neimeyer claims the Stipulated Route would impact a 47 acre plot of land he owns and plans to develop into a subdivision; however, ATXI asserts that MSSCLPG never substantiated this claim. ATXI believes there is no record evidence concerning the proximity of either route to existing development that would warrant reversing approval of the Stipulated Route.

10. Community Acceptance

ATXI suggests that the Stipulated Route has garnered the widest community acceptance, as evidenced by the support for the route from FutureGen, the Pearce Family, and MSCLTF.

11. Visual Impact

ATXI states that the Commission made a determination regarding this criteria based on the evidence presented in the underlying case, noting that in its August 2013 Order, the Commission found that, with respect to environmental impacts, there is no material difference between the Stipulated Route and the MSCLTF Route. (Order at 77) ATXI asserts that MSSCLPG has provided no evidence on rehearing on this criterion that would warrant reversal of the Commission's original determination in its approval of the Stipulated Route.

12. Presence of Existing Corridors

ATXI notes that the Stipulated Route follows an existing transmission line for approximately four miles, section, property and field lines, and county roads. ATXI states that the MSCLTF Route parallels an existing 138 kV line for its entire length, which ATXI believes presents reliability, operational and maintenance concerns as compared to the Stipulated Route.

B. Staff Position

Staff suggests that the route originally presented by MSCLTF and now supported by MSSCLPG (the "MSCLTF Route") for the Meredosia-Pawnee segment of the Illinois Rivers Project remains superior to others proposed. Staff opines that the table presented by ATXI witness Donell Murphy on page 7 of ATXI Ex. 3.0(RH) demonstrates that the MSCLTF Route is equal to or superior to the ATXI Alternate Route for nearly all criteria listed, and that even criteria that are identified as equal in the table would actually favor the MSCLTF Route because there would be 21 fewer miles of transmission line causing those impacts.

1. Length of Line

Staff notes that the evidence shows that the MSCLTF Route is 21 miles shorter than the ATXI Recommended Route.

2. Difficulty and Cost of Construction

Staff opines that neither route has unique considerations, however since the MSCLTF Route is 21 miles shorter than the ATXI Recommended Route, Staff notes the construction cost of the MSCLTF Route would be lower.

3. Difficulty and Cost of Operation and Maintenance

Staff notes that ATXI believes there are reliability concerns associated with the MSCLTF Route because it parallels an existing AIC 138 kV transmission line for most of its length. Staff asserts that the Commission should ignore this concern. Staff opines that the MSCLTF Route and ATXI's Alternate Route would equally comply with North American Electric Reliability Corporation Reliability Standards. ATXI's Alternate Route, however, has 21 miles of additional line to operate and maintain, a fact that ATXI appears to ignore.

4. Environmental Impacts

Staff states that the fourth entry in Table 1 on page 7 of ATXI Ex. 3.0(RH) demonstrates that ATXI's Alternate Route would result in incrementally more ground disturbance due to its greater length.

5. Impacts on Historical Resources

Staff believes the evidence also shows that ATXI's Alternate Route would span two more archaeological sites than would the MSSCLPG Route.

6. Social and Land Use Impacts

It appears to Staff that the land use along both routes is generally the same. Staff argues that even criteria that are identified as equal in the table would actually favor the MSCLTF Route because there would be 21 fewer miles of transmission line causing those impacts.

7. Number of Affected Landowners and other Stakeholders

Staff notes that eighty-seven fewer landowners would be affected by the MSCLTF Route.

8. Proximity to Homes and Other Structures

Staff opines that the evidence shows that there are twenty fewer residences within 500 feet along the MSCLTF Route compared to ATXI's alternate route.

9. Proximity to Existing and Planned Development

Staff states that there does not appear to be planned development along either route.

10. Community Acceptance

Staff notes that ATXI entered into stipulations with MSCLTF and FutureGen regarding acceptance of ATXI's Alternate Route. Staff believes that MSCLTF, FutureGen, the Pearce family ("Pearce") and Staff would all accept the MSCLTF Route. Staff suggests that more parties in this proceeding would accept the MSCLTF Route than would accept the longer, more costly ATXI Alternate Route.

11. Visual Impact

Staff states that the land use along both routes is generally the same: agricultural/rural. Staff argues that even criteria that are identified as equal, such as visual impacts, would actually favor the MSCLTF Route because there would be 21 fewer miles of transmission line causing those impacts.

12. Presence of Existing Corridors

Staff notes that as it heads east from Meredosia, the MSCLTF Route and ATXI's Alternate Route parallel the same AIC 138 kV transmission line. As indicated by the

last entry in Table 1 on page 8 of ATXI Ex. 3.0(RH), ATXI's Alternate Route follows this existing corridor for a portion of its length, the MSCLTF Route follows this existing corridor for almost its entire length.

C. MSSCLPG Position

1. Length of Line

MSSCLPG states that on rehearing, two possible routing options are being considered: (1) The option advocated by MSSCLPG and Commission Staff, commonly referred to herein as the MSCLTF Route, and (2) the option advocated by ATXI, commonly referred to herein as the Rebuttal Recommended Route or the Stipulated Route. MSSCLPG notes that the MSCLTF Route (following the route of an existing 138 kV line) runs only 57.3 miles, while the Rebuttal Recommended Route runs 75.6 miles. MSSCLPG notes that ATXI witness reaffirmed the fact that the MSCLTF Route is the shorter option in Table 1 to her Direct Testimony on Rehearing.

2. Difficulty and Cost of Construction

MSSCLPG suggests that cost of construction would seem to provide the most overwhelming evidence that the MSCLTF Route (following the route of an existing 138 kV line and advocated by MSSCLPG and Staff) presents the clear least-cost alternative. MSSCLPG submits that ATXI's own Exhibit 16.3 provides the cost estimates reflect that the Stipulated Route would cost $144,205,000.00, approximately $36.78 million costlier than the MSCLTF Route advocated by MSSCLPG and Staff.

In terms of difficulty of construction, MSSCLPG believes the Commission should consider that the MSCLTF Route is the shorter of the route options, the least cost option, and would follow an existing right-of-way which already has vehicular access for service and maintenance. MSSCLPG also notes that the Stipulated Route would require an estimated twenty-four dead end structures, while the MSCLTF Route would require only fourteen.

3. Difficulty and Cost of Operation and Maintenance

MSSCLPG asserts that since the MSCLTF Route is the shorter of the routing options and would follow the right-of-way provided by an existing line, it appears the MSCLTF Route would present greater ease of access for operation and maintenance. MSSCLPG also notes that Mr. Rockrohr testified that from an engineering standpoint there is nothing unsafe or inherently unreliable about having two transmission lines that do not serve the same function or area routed adjacent to each other. MSSCLPG contends that placing the new line along the existing 138 kV right-of-way provides no increased maintenance issues.

4. Environmental Impacts

MSSCLPG believes the testimony shows that construction of the Stipulated Route would negatively impact the drainage system currently in place for the impacted farms. MSSCLPG also suggests that construction of the Stipulated Route would negatively impact the potential recreational activities in the area.

5. Impacts on Historical Resources

MSSCLPG states that no evidence has been presented as to the impact on historical resources by the MSCLTF Route; however it appears that there are historical areas which could be affected by the Stipulated Route. MSSCLPG notes that ATXI witness Murphy reaffirmed the fact that the MSCLTF Route would affect fewer archaeological sites.

6. Social and Land Use Impacts

MSCLPG opines that since the MSCLTF Route is shorter and has existing right-of-way, it appears to present the least impact in terms of social and land use factors. MSSCLPG argues that the Stipulated Route would necessitate construction through new ground, and would cause the social and land use tumult that comes with the construction of a new right-of-way to affected landowners and residents along its path. Ms. Murphy testified that the impact of the two routing options would be “the same” as they relate to this criterion in Table 1 to her Direct Testimony on Rehearing. [ATXI Ex. 3.0(RH) 7:93]

7. Number of Affected Landowners and other Stakeholders

MSSCLPG submits that the new evidence presented on rehearing suggests that there exist 15 farm sites, some of which consist of multiple buildings, along the MSCLTF Route, while there are 44 farm sites along the Stipulated Route. MSSCLPG argues that the evidence shows that the MSCLTF Route is superior to the Stipulated Route, and it would also impact fewer landowners and residences. MSSCLPG notes that Ms Murphy reaffirmed the fact that the MSCLTF Route would affect fewer landowners in Table 1 to her Direct Testimony on Rehearing. [ATXI Exhibit 3.0(RH) 7:93]

8. Proximity to Homes and Other Structures

MSSCLPG reiterates its arguments in part g in regard to this criteria.

9. Proximity to Existing and Planned Development

MSSCLPG suggests that the Stipulated Route would have an adverse impact on planned development, specifically subdivision and farm operations, while the MSCLTF Route would not.

While ATXI asserts that there exists no evidence in the record concerning the proximity of either routing option to existing development that would warrant reversal of the Commission's original recommendation, MSSCLPG asserts that this is contrary to the record. MSSCLPG notes that Garry Niemeyer testifies that Mr. Niemeyer's 47-acre plot is adjoined to the south by an existing subdivision. A subdivision exists immediately across the road from Mr. Niemeyer's 47-acre plot. Several homes exist along the north and east sides of Mr. Niemeyer's 47-acre plot. A church and day school exist along the south side of the 47-acre plot. MSSCLPG suggests that this supports Mr. Niemeyer's contention that he plans to develop his parcel.

10. Community Acceptance

MSSCLPG asserts that community acceptance for the existing 138 kV right-of-way is already in place, while selection of any routing option other than the MSCLTF Route has been and will be met with outcry from the potentially affected community. MSSCLPG states that the disinterested party in this proceeding, Staff, advocates selection of the MSCLTF Route and in fact refers to the MSCLTF Route as the "superior" option.

11. Visual Impact

MSSCLPG contends that adding the new line to the existing 138 kV line along the same path, the same right-of-way, and in a parallel fashion will have the least impact to the aesthetics of the affected area. Construction of a transmission line along a new route where no existing corridor exists will, by its very nature, change the landscape of the affected area. Ms. Murphy testified that the impact of the two routing options would be "the same" as they relate to this criterion in Table 1 to her Direct Testimony on Rehearing.

12. Presence of Existing Corridors

MSSCLPG argues that the MSCLTF Alternate Route is the only option now before the Commission for the segment from Meredosia to Pawnee which utilizes an existing corridor, that created by the existing 138 kV right-of-way.

D. Commission Conclusion

The Commission notes that the parties agree that the MSCLTF route is shorter, less costly, involves fewer historical resources, and has few landowners involved. The Commission believes that the issues presented for this segment of the transmission line project are fairly straightforward. Should the Commission adopt the MSCLTF route which is shorter, less expensive, and appears to have fewer impacts on homes and farms; or adopt the Stipulated Route which avoids extensive paralleling of an existing transmission line and reduces by un-quantified amount the risk of a major outage?

The Commission believes the preferred route is less clear when considering "Social and Land Use Impacts" and "Proximity to Planned Development." The Commission believes that MSSCLPG's concerns in this area are somewhat exaggerated, and these two issues are most likely a draw between the two proposed routes. Although MSSCLPG contends there is a planned development near the Stipulated Route, it does not appear from the evidence that there has been any action to make this development a reality. Regarding "Difficulty and Cost of Operation and Maintenance," this appears to favor the MSCLTF Route, due to its shorter distance and the potential use of the existing right-of-way for access. The Commission notes that ATXI has raised concerns based on the hazards presented with paralleling an existing right-of-way, however, this will be discussed in more depth later in this conclusion. In regard to "Environmental Impacts," the Commission notes that it previously found that there was no material difference between the two routes. The Commission believes that based on the evidence presented, this is still the case.

The Commission notes it has also indicated that the "Number of Affected Landowners and other Stakeholders," as well as "Proximity to Homes and other Structures" should be considered in arriving at a conclusion. The Commission believes, based on the tables presented by ATXI, that these criteria favor the MSCLTF Route. The Commission notes for residences within 75 to 500 feet of the MSCLTF Route, there appears to be no evidence presented by any party. The Commission finds it troubling that more than one year after this proceeding was initiated, the parties are requesting the Commission approve a route where there appears to be no information provided on an important criterion such as this. The Commission believes that based on the evidence presented, these criteria favor the MSCLTF Route.

Regarding "Community Acceptance," ATXI and MSSCLPG each view this as a mark in favor of their preferred route. ATXI notes the number of parties who signed on to the Stipulated Route, while MSSCLPG believes the existing transmission line shows the MSCLTF Route already has community acceptance. The Commission does not believe either choice shows much in the way of more community acceptance than the other, therefore the Commission finds neither preferable based on this criterion. Likewise, with "Visual Impact," the Commission has previously found that this project will have essentially the same visual impact in either location therefore there is no material difference, and there has been insufficient evidence provided to change this conclusion.

It is the criterion of "Presence of Existing Corridors," and the corollary issues surrounding it, that presents the most difficulty for the Commission. The MSCLTF Route is proposed to parallel, for most of its length, an existing transmission line, resulting in a shorter and less costly segment. ATXI, however, claims that this extensive paralleling will create certain operational problems that would be avoided by less extensive paralleling of the existing line. ATXI points to evidence in this case that demonstrates the capability of the existing 138 kV circuits in any given area is quite different, that common mode failures can occur, and when they occur in areas where the system is less robust, more customers can suffer outages. ATXI claims the area for

this segment is less robust than other areas where some paralleling will occur. ATXI notes that the horrific tornados that tore through central Illinois this past November make clear the risk facing AIC customers. ATXI submits that a double circuit tower line, with a 138 kV circuit and a 69 kV circuit, was knocked down in the Peoria area, while other 138 kV lines were downed, and in the Kansas area a 345 kV circuit experienced the destruction of five structures and damaged conductors. ATXI does not consider this type of risk worth the potential cost savings to adopt the MSCLTF route for this segment.

The Commission also notes that ATXI witness Hackman testified that paralleling does not reduce operation and maintenance expenses. He testified that with paralleling lines, maintenance of either line may require both lines to be taken out of service due to their proximity. Mr. Hackman testified that paralleling is “undesirable from an operations perspective” for this reason, and having two lines down risks the reliability of the system at large. He also noted that adjoining rights of way are susceptible to common-mode failures, such as weather events.

As the criteria are weighed, it is clear to the Commission that the deciding factor for this segment is balancing the cost of each route against potential operational reliability. The Commission is presented with one route which is clearly shorter, cheaper, and involves fewer landowners, but possibly presents operational issues should a massive storm hit the area where the parallel lines would exist. The Commission also has a choice of a longer, more expensive route, which involves more landowners, but avoids the chance of a large storm taking out two nearby transmission lines. In the Commission's view, providing utility service at least cost is important. Even more important is providing safe and reliable service to utility customers. While the Commission does not make this choice lightly, it appears that the more reasonable choice, and the one supported by the law and the evidence, is to approve the Stipulated Route supported by ATXI. The Commission finds the testimony of AXTI witness Hackman to be particularly convincing regarding potential operational difficulties associated with the MSCLTF Route. The Commission finds that avoiding the extensive paralleling associated with the MSCLTF Route is in the best interests of customers and worth the incremental costs associated with the Stipulated Route.

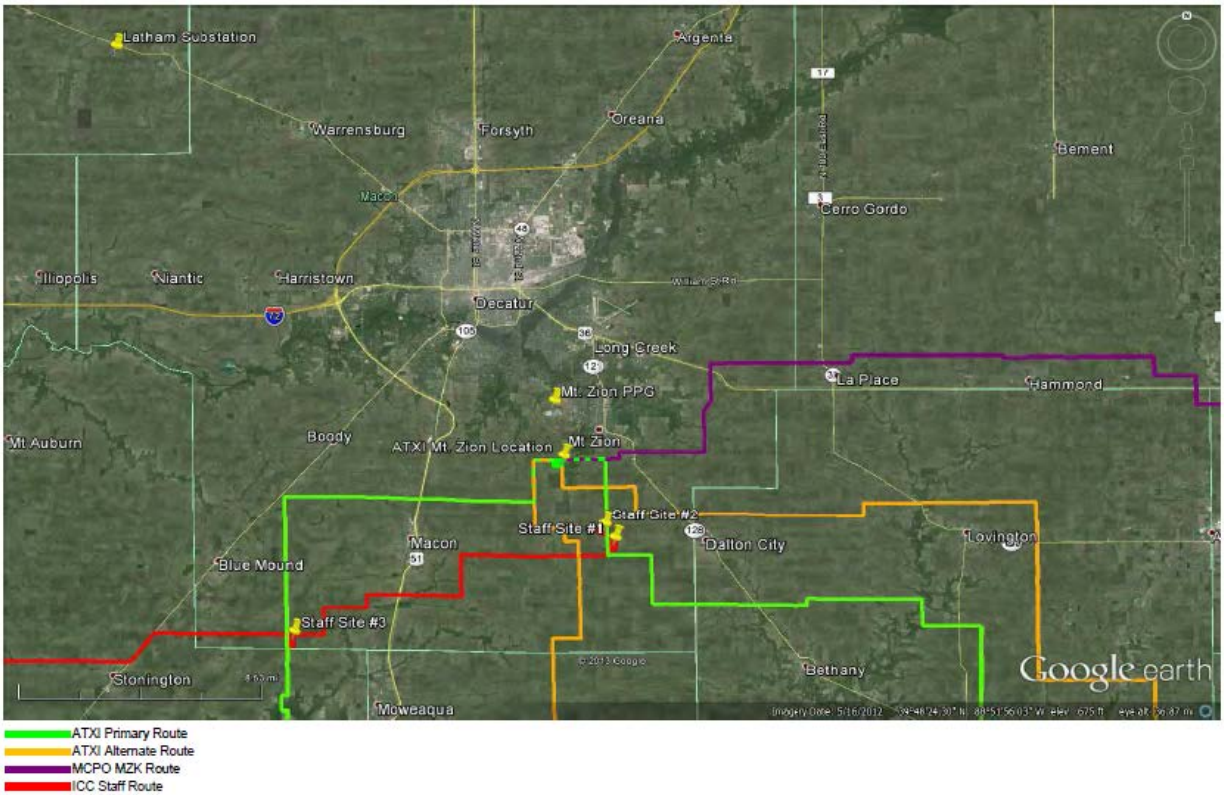
VII. LOCATION OF MT. ZION SUBSTATION

A. ATXI Position

ATXI originally proposed to locate a new substation southwest of the Village of Mt. Zion along Sulphur Springs Road. On rehearing, however, Staff proposes two locations in close proximity to each other a few miles south of Mt. Zion, specifically acknowledging that one site chosen was the same as that proposed by Mt. Zion. Staff also proposes a third location near Moweaqua, approximately 17 miles southwest of Mt. Zion. ATXI agrees that, although not preferred, the two locations south of Mt. Zion are acceptable. ATXI observes that Moultrie PO, one of the two parties contesting the Mt. Zion-Kansas segment, also finds these two Staff substation sites acceptable. ATXI has

entered into a stipulation with Mt. Zion agreeing to recommend approval of one of the two acceptable Staff-proposed sites—Staff substation Option #2. ATXI filed the stipulation on December 16, 2013. Given that Staff, ATXI, Mt. Zion, and Moultrie PO agree that this site would work, ATXI urges the Commission to approve it. ATXI notes that use of Staff substation Option #2 can be accommodated using modifications of existing route proposals shown on the following map:

Overview Map of the Four Mt. Zion Substation Locations



(ATXI Initial Brief at 22)

ATXI understands that the only party expressing concern about the location of Staff's substation Option #2 is Paula Cooley. She alleges that there is a Very High Frequency Omni Directional Radio Range ("VOR") near Staff substation Option #2, which she contends requires ATXI to notify the Federal Aviation Administration ("FAA"). ATXI responds that notice to the FAA is only required if the proposed construction will be more than 200 feet above ground level. (See 14 C.F.R. §77.9(a)) ATXI observes that the transmission line towers will not be more than 200 feet tall. In addition, federal guidelines suggest that structures be placed at least 1,000 feet from VORs. (See FAA JO 7400.2J, 6-3-23) ATXI notes that the VOR is located over 1,200 feet from any portion of Staff substation Option #2 or the lines into that area.

What troubles ATXI is Staff's continued preference for its Option #3 near Moweaqua despite concerns about voltage support from this site to the Decatur area. ATXI understands Staff to prefer the Moweaqua site because there is an existing 138

kV line there that runs north to Decatur and south to Pana. ATXI contends that there are at least three flaws with Staff's argument. First, according to ATXI, Staff admits that the Moweaqua option provides inferior voltage support to Decatur, compared to its substation Option #2 site. In fact, ATXI continues, Staff Option #2 provides higher post-contingency voltage support to the Decatur area than Option #3 regardless of the combination of 345 kV supply line(s) and 138 kV connections to the Decatur area that ATXI evaluated, whether in 2016 – 2018 or after 2018. Given that the Commission has found a substation necessary in Mt. Zion, it is unclear to ATXI why Staff would recommend a location with inferior electrical performance in addressing a reliability issue and physically located many miles away from Mt. Zion.

The second flaw ATXI identifies pertains to Staff's solution to rectify the first shortcoming. In order to rectify the first shortcoming, Staff suggests constructing additional 138 kV transmission lines from Moweaqua to Decatur. ATXI considers this solution counter to Staff's analysis of the Pawnee to Mt. Zion portion of the Illinois Rivers Project, which has focused on reducing the number of miles of new transmission line to be constructed.

Third, ATXI maintains that Staff fails to consider the situation in Decatur in 2016. Staff argues that post-contingency voltages in Decatur are acceptable when supported by a Moweaqua substation with both a Kincaid connection and a Mt. Zion to Kansas 345 kV line in service. But in ATXI's opinion, this is a meaningless argument: the system configuration proposed by Staff will not exist until 2018, given that a Kincaid connection can not be in service until at least then. ATXI argues that Decatur's reliability concerns must be addressed in 2016. Staff's arguments do not address what would happen during a wait between 2016 and 2018 for a Kincaid connection to be built. Even after 2018, ATXI asserts that the Moweaqua site and 345 kV system configuration proposed by Staff will fail to provide post-contingency voltages above 95% (91.4% with one 138 kV line to Decatur and 93.5% with two 138 kV lines to Decatur)—while connections through Staff substation site Option #2 are all above 95%. ATXI considers post-contingency voltages of 95% or higher to be adequate. Between 90% and 95%, the risk of voltage collapse and loss of load increases incrementally as the voltage decreases. Between 89% and 85%, ATXI contends that a significant risk of voltage collapse exists, while voltage collapse is virtually certain below 85%.

ATXI conducted power flow analyses for assumed conditions in 2016 (not including new Archer Daniels Midland Company ("ADM") load). The analysis assumed completion of either a Pana to Mt. Zion 345 kV line, or an accelerated Kansas to Mt. Zion 345 kV line—the two most likely possibilities to address Decatur reliability in 2016. Since the Kincaid connection can not be in service until 2018, ATXI explains that it was not included in the analysis. The following chart summarizes the model results in 2016:

Post-contingency recovery voltages in Decatur

	2016 345 kV connection from:	
	Pana	***Kansas***
Substation configuration		
Staff substation site Option #2	94.30%	93.70%
Moweaqua with one existing 138 kV connection	90.90%	90.33%
Moweaqua with one existing and one new 138 kV connection	92.90%	92.21%

ATXI reports that Staff Option #2 provides better voltage support to Decatur (as does a Pana line as opposed to an accelerated Kansas line). Under all configurations shown, a Moweaqua substation provides inferior voltage support.

Although Staff criticizes ATXI's power flow analyses because they use peak loads in the Decatur area that are expected to exist in 2021, not in 2016 to 2018, ATXI contends that this statement misrepresents the evidence. While it is true that the models reflect system conditions expected in 2021, ATXI explains that these conditions are also representative of summer peak (90/10) conditions during the period between 2013 and 2018, before accounting for new ADM load, due to low load growth in that time period. In order to maintain consistency with previous analyses, ATXI states that the modeled load growth does not include the additional ADM load that is expected to occur in 2016, which would increase the peak load above what is modeled. This expected customer load addition increases the concern that the Moweaqua site is deficient to address the Decatur area reliability issues.

B. Staff Position

Though Staff believes that any of the substation sites that it identifies would serve as good sites, Staff maintains that there are several advantages associated with Option #3 near Moweaqua in Macon County, north of W. Hilvety Road (CR 2100N) and east of Rosedale Road. Among the advantages, Staff identifies the following: (1) AIC has an existing 138 kV line extending north from this location to the Decatur area, so that AIC would not need to quickly petition the Commission for authority to construct 138 kV transmission lines from the Mt. Zion substation site to the Decatur area (as it would under Option #2); (2) AIC could extend a 138 kV line from its existing substation north of Moweaqua, near Highway 51, to provide additional support to the Decatur area, if needed; (3) AIC's existing 138 kV transmission line that runs south from this substation site extends to AIC's existing 345/138 kV substation in Pana, so that the same 345/138 kV substation that provides support for the Decatur area would also provide support for the Pana area; and (4) AIC's 138 kV transmission line that extends south to Pana from the Option #3 site could, at some future date, be converted to a 345 kV line, minimizing impacts to all property owners along ATXI's Primary Route previously submitted for the Pana-Mt. Zion segment. Staff states further that given the unknowns associated with any petition for a certificate of public convenience and

necessity, and though Ameren Services personnel under Mr. Hackman's supervision already have engaged in planning for, and the preliminary design of, connections to the ATXI Mt. Zion substation, it is difficult to share ATXI's confidence that AIC can complete its 138 kV connecting transmission lines from whatever Mt. Zion substation location is ultimately chosen to the Decatur area prior to 2016. For these reasons, Staff considers its Moweaqua site the best option.

Staff understands that ATXI is concerned that the Moweaqua site will not provide adequate voltage support for the Decatur area during the 2016 to 2018 time frame. Per ATXI, a post contingency voltage of 90.9% would exist at the 138 kV bus at Oreana substation following loss of both 345/138 kV Oreana transformers utilizing only the existing 138 kV line to the Decatur area and no additional 138 kV transmission lines immediately installed. Staff observes that this is above the voltage level at which ATXI believes a significant risk of voltage collapse and loss of load would exist. Even so, Staff argues that the conditions represented by the power flow analyses results in ATXI Ex. 4.1(RH) to ATXI Ex. 4.4(RH) are not the conditions that would actually exist were Staff's recommendation implemented. Specifically, Staff notes that the power flow studies associated with ATXI Ex. 4.1(RH) to ATXI Ex. 4.4(RH) assume a single 345 kV connection from Pana, with 345 kV connections from Kincaid to Mt. Zion and from Kansas to Mt. Zion out-of-service. In addition, ATXI's power flow studies use peak loads in the Decatur area that are expected to exist in 2021, not in 2016 to 2018. When ATXI re-ran its power flow analyses to reflect the 345 kV sources from Kincaid and Kansas, as included in Staff's recommendation, Staff relates that the results of ATXI's power flow study show post contingency voltages under the same loading assumptions would be at 91.38% - again assuming 2021 summer peak loading with only the existing 138 kV connection to the Decatur area. According to ATXI, a second 138 kV connection from the substation site near Moweaqua to the Decatur area, as Staff suggests, would result in a post contingency voltage at the Oreana 138 kV bus using 2021 loads of 93.52%. While Staff does not believe a post contingency voltage of 93.52% would pose significant concern for voltage collapse, Staff suggests that ATXI/AIC could use lower impedance 138 kV conductor or install an additional 138 kV transmission line to the Decatur area to provide even greater voltage support. Staff also observes that ATXI's power flow study results show that post contingency voltages in the Decatur area following loss of both 345/138 kV transformers at Oreana during 2021 summer peak loading conditions would be above 95% for the other two substation locations that Staff identifies.

In response to Moultrie PO's concerns about voltage support in Decatur, Staff contends that under the double contingency scenario loss of both 345/138 kV transformers at Oreana, installing additional 138 kV lines to the PPG Industries ("PPG") substation site in Mt. Zion from the Option #3 site would improve voltages in the Decatur area compared to using only the existing AIC 138 kV line, and using lower impedance conductor, as necessary, could improve voltage even more. Assuming only a 345 kV connection from Kansas to the substation site near Moweaqua that Staff identified and AIC's existing 138 kV line to the Decatur area, Staff observes that 138 kV voltages remain above 90% in the Decatur area following the loss of both existing 345/138 kV

transformers at Oreana under 2021 summer peak loading conditions. Staff states further that it has never suggested that AIC should not install additional 138 kV transmission lines to connect the Decatur area to ATXI's 345 kV line. Using the Option #3, Staff argues that the addition by AIC of 138 kV transmission lines to its PPG substation would become less urgent than if any of the other suggested sites were used.

Though post contingency voltages in the Decatur area would be lower than post contingency voltages from the other proposed substation sites, Staff concludes that use of the substation site identified near Moweaqua remains the best course. Staff contends that this is because the lower post contingency voltages still do not cause significant concern for voltage collapse or loss of load, and the site offers several significant advantages that the other substation sites do not offer.

C. Moultrie PO Position

Moultrie PO presented a power flow analysis in its direct case in the original proceeding that confirmed ATXI's proposed Sulphur Spring Road location for the Mt. Zion substation is sufficient to address the low voltage issue that is intended to be addressed by the Mt. Zion substation. On rehearing, Moultrie PO presented evidence that the Staff Option #1 and Option #2 sites for the Mt. Zion substation may be electrically close enough to northeastern Decatur such that these two sites could be sufficient to address the low voltage reliability issue. Moultrie PO considers it unlikely that the Staff's Option #3 site for the Mt. Zion substation would be sufficient to address the low voltage issue in the northeastern portion of Decatur. Moultrie PO witness Dauphinais is a former Senior Transmission Planning Engineer for Northeast Utilities. Based on his experience, and the power flow analysis he performed in his direct testimony, he believes that Staff Option #3 would place the new 345 kV transmission source needed to address the low voltage issue in the Decatur area too far away from the area of greatest reactive power need (northeastern Decatur) for it to be sufficient to address the low voltage issue. Moultrie PO believes that ATXI's power flow analyses confirm Mr. Dauphinais' results.

Moultrie PO recognizes that ATXI has entered into a stipulation with the Village of Mt. Zion agreeing to the use of the Staff Option #2 site. While Moultrie PO agrees that this site may be sufficient to address the reliability issues in Decatur, it notes that the Sulphur Spring Road site is closest to the load center (Decatur) that drives the need for the Mt. Zion substation as an "exit ramp" for the Illinois Rivers Project. Voltage support will not be as good from a substation built further away. Furthermore, should the new facilities reach their capacity because of further development in the Decatur area, Moultrie PO states that there would have to be a greater number of 138 kV circuits of long lengths to get to the load center. The cost of these circuits would have to be recovered from AIC ratepayers and would not be shared throughout the MISO region. Finally, Moultrie PO observes that it is ATXI's position that it is good utility practice to locate all substations, regardless of their voltage, as close to the load center they serve as possible. In the end, however, as long as the Commission adopts a route for the Mt.

Zion-Kansas segment favorable to Moultrie PO, Moultrie PO does not object to the use of Staff's Option #2 site.

D. PDM Coalition and CFT Position

PDM Coalition and CFT prefer Staff's Option #1 site for the Mt. Zion substation. They explain that if the routing that Staff developed to and from the Mt. Zion substation is used, Option #1 will result in three-quarters of a mile less of 345 kV line as compared to Option #2, and will result in about 5 miles less of 345 kV line as compared to ATXI's Sulphur Springs Road site. PDM Coalition and CFT insist that all of the advantages of these two Staff sites are completely lost if the Commission adopts the Moultrie PO route, because that route would defeat the purpose of moving the substation to the south.

E. Cooley Position

Due to the close proximity of a VOR in Section 22 of Macon County, Paula Cooley is concerned about Staff's proposed Option #1 and Option #2 substation sites. She laments that no air case study was performed and fears that ATXI has not included this VOR in its considerations. To remedy this perceived problem, Ms. Cooley recommends that Staff's proposed Option #3, the Moweaqua substation site, be used. She asserts that the advantages of the Moweaqua site are manifest. Specifically, she states that being able to use existing 138 kV lines means less cost and no new landowners affected. She also comments that new 138 kV lines and the location of the Mt. Zion substation would have to be part of a new petition and hearing. As for ATXI's response that the Moweaqua option may not be up to the task because of other issues in the Kincaid area, Ms. Cooley believes that such concerns are succinctly and effectively rebutted by Staff witness Rockrohr.

F. Macon PO Position

Macon PO filed a Brief on Exceptions in which it objects to the use Staff's Option #2. In its place, Macon PO supports the adoption of Staff Option #1 for the Mt. Zion substation site. Macon PO discusses in its Brief on Exceptions why it considers Option #1 preferable under nine of the 12 criteria. As for the three remaining criteria ((a) impacts on historical resources, (b) proximity to existing and planned development, and (c) presence of existing corridors), Macon PO argues that neither option is preferable.

G. Commission Conclusion

The Commission has considered the parties' arguments and finds that the most appropriate location for the Mt. Zion substation is at the site identified as Staff Option #2. While it may be possible to alleviate some of the voltage concerns associated with Staff Option #3, the post-contingency voltages at Option #2 remain more favorable than those at Option #3. Moreover, Option #2 enjoys more support overall among the parties. The Commission has also reviewed the FAA provisions concerning structures

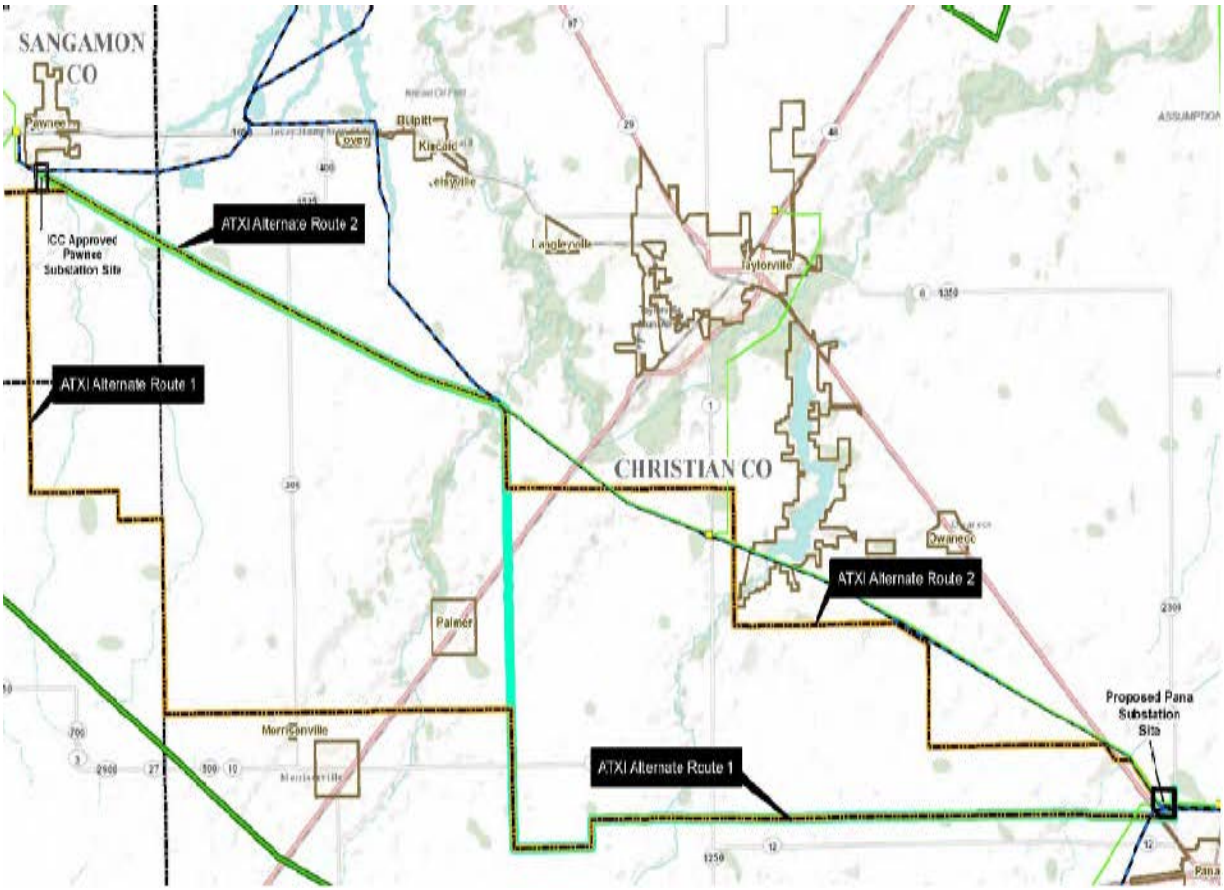
near VORs and concludes that ATXI's assessment is accurate. In the event that applicable FAA provisions are later found to conflict with Staff Option #2, the Commission trusts that this will be brought to the Commission's attention and efforts will be made to remedy the situation. Accordingly, Staff Option #2 is selected as the site for the Mt. Zion substation.

In coming to this conclusion, the Commission is also compelled to comment on an inconsistency in the record. As noted above, ATXI and Mt. Zion entered into a stipulation supporting Staff Option #2 as the location of the Mt. Zion substation. This stipulation was filed on December 16, 2013. Earlier in this proceeding, ATXI and Moultrie PO entered into a stipulation supporting ATXI's original Sulphur Springs Road site as the location of the Mt. Zion substation. This stipulation was filed on May 10, 2013. The Commission recognizes that Staff had not identified Option #2 until after rehearing was granted in this docket, so it would not have been available for Moultrie PO's consideration in May of 2013. Nevertheless, the latter stipulation does not reflect any recantation of the earlier stipulation. Fortunately for the Commission, Moultrie PO has not objected to latter stipulation. The Commission makes these observations simply to acknowledge the stipulations and the parties' apparent changing positions.

VIII. PAWNEE-PANA SEGMENT

A. ATXI Position

When it filed the petition initiating this docket, ATXI included three routes for the Pawnee-Pana segment: a Primary Route, Alternate Route 1, and Alternate Route 2. The three routes are depicted in the map below, with the Primary Route shown in teal.



(ATXI Initial Brief at 26)

The Commission did not previously make a determination regarding a route for the Pawnee-Pana segment because of its concern whether a connection through Pana represented the least cost option in comparison to a connection through Kincaid. To the extent the Commission determines the line should be routed through Pana instead of Kincaid, ATXI understands that Staff supports ATXI's Alternate Route 2.

Only the owners of one parcel, Ann Raynolds and Justin Ramey, appeared during this rehearing to express their concerns. ATXI relates that their concern is not so much the route in its entirety, but the specific impact to their property. ATXI understands that Ms. Raynolds and Mr. Ramey would fully support ATXI Alternate Route 2 if their proposed modification is approved. ATXI does not find the proposed modification problematic per se, but notes some concerns regarding notice to landowners. At the evidentiary hearing, Mr. Ramey acknowledged that he did not submit a landowner list with the proposed modification. He also testified that the proposed modification impacts eight landowners, but that two of the eight landowners may not have received notice of the proposed modification. In their Initial Brief on Rehearing, however, Ms. Raynolds and Mr. Ramey assert that all eight landowners would have been affected by ATXI's Alternate Routes, and therefore, it is believed that all have been contacted as potentially affected landowners. ATXI states that the Commission will need to evaluate this notice issue before making a decision.

Should the Commission decide not to accept the modification, ATXI states that it will work with Ms. Raynolds and Mr. Ramey during the final line design phase to address their concerns as best it can. As already explained in this proceeding, ATXI will coordinate with each landowner on pole placement and will make adjustments where feasible and appropriate to address site-specific concerns. ATXI commits that Ms. Raynolds and Mr. Ramey will not be treated any differently.

With regard to the route selection criteria, ATXI reports that its Alternate Route 2 is the shortest and least expensive to construct. ATXI also asserts that there is no record evidence indicating that Alternate Route 2 would be difficult to construct. ATXI witness Murphy testifies that the land crossed by Alternate Route 2 is mostly flat and agricultural with dispersed residential use. With regard to the difficulty and cost of operation and maintenance, ATXI relates that there is no record evidence indicating that the Alternate Route 2 would be more difficult to operate and maintain or that said route would be more costly to operate and maintain relative to the other routes proposed by ATXI along the Pawnee-Pana segment.

The impacts on the environment, historical resources, and social and land use are all similar among the three proposed routes in ATXI's opinion. ATXI is unaware of any historical resources that would prevent construction of Alternate Route 2, but indicates that it will work with the Illinois Historic Preservation Agency ("IHPA") to address issues that may arise during the construction process, and will obtain required permits or approvals, if any, before construction. According to ATXI, Alternate Route 2 reflects an optimum location for the transmission line in that it would limit societal and land use impacts. ATXI believes that such is true of all of ATXI’s proposed routes, as each such route resulted from a comprehensive siting study and review. ATXI contends that Alternate Route 2 would not create social or land use impacts greater than those created by the other routes ATXI proposed along the Pawnee-Pana segment.

In terms of the number of affected landowners and other stakeholders, ATXI states that there are fewer landowners owning property within 250 feet of ATXI’s Alternate Route 2 from Pawnee to Pana than there are landowners owning property within 250 feet of either the Primary or Alternate Route 1 along that same segment. ATXI states further that none of the routes it proposes for this segment would require displacement of any residences. While there are the fewest residences within 500 feet of the Primary Route, ATXI's studies indicate that Alternate Route 2 is only marginally poorer in this regard. ATXI adds that there is no record evidence indicating that Alternate Route 2 from Pawnee to Pana is proximate to any existing or planned development.

With regard to community acceptance, ATXI relates that all three routes resulted from a lengthy public input process. As noted above, only Ms. Raynolds and Mr. Ramey oppose a small part of Alternate Route 2, based on generalized concerns about proximity of the line to their home, which may exist for any potentially affected landowner. ATXI adds that visual impacts, if any, will be substantially the same for any

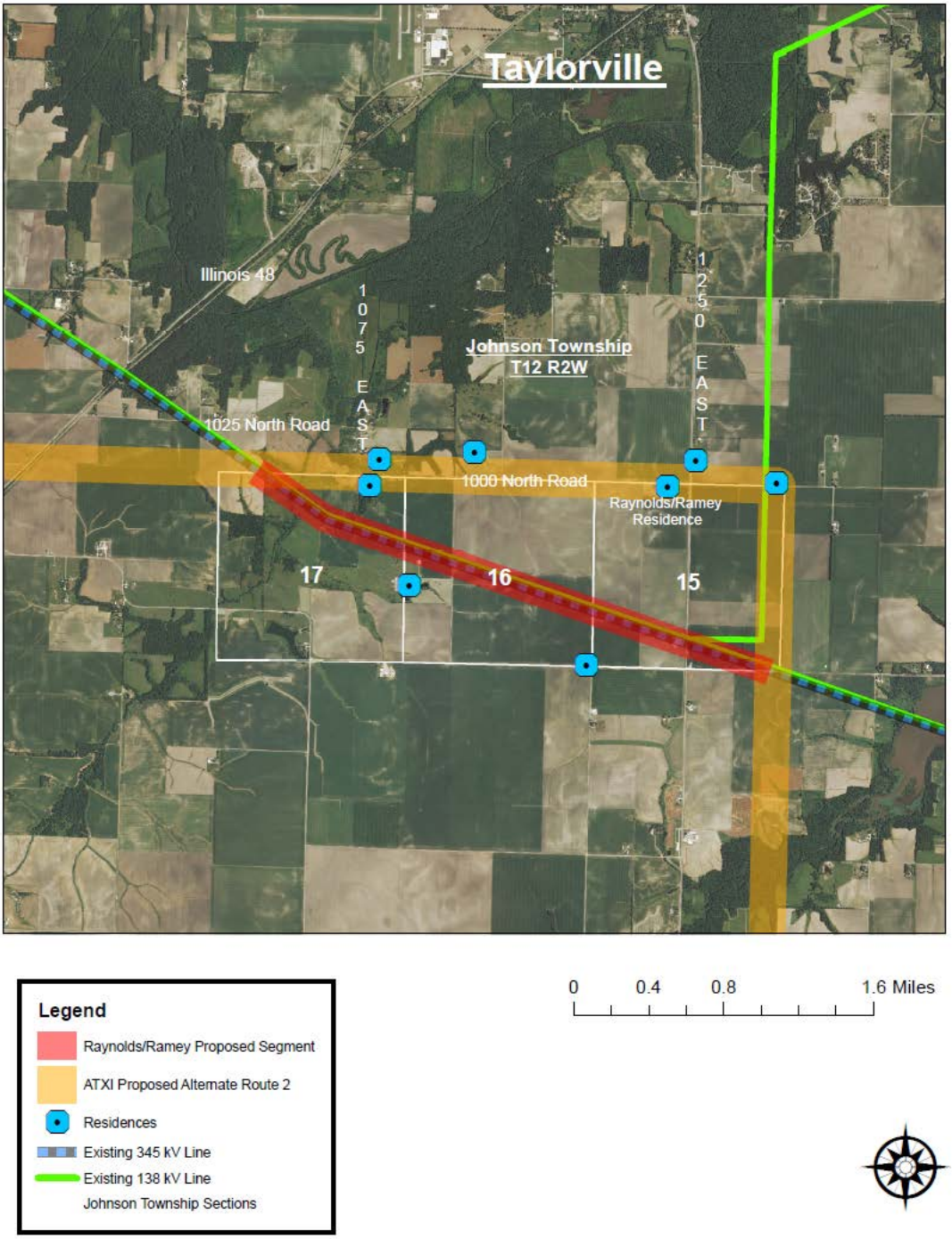
route along the Pawnee-Pana segment. As for existing corridors, ATXI reports that Alternate Route 2 parallels an existing 138 kV transmission line for approximately 11 miles. This route, ATXI continues, also parallels 138 kV lines along two additional stretches before terminating at the Pana substation.

The following table combines data for several of the criteria. ATXI suggests to the Commission that an analysis of all of the criteria supports adoption of Alternate Route 2.

	ATXI Primary	**ATXI Alternate Route 1**	**ATXI Alternate Route 2**
Estimated Length in Miles	34.4	38.5	32.3
Estimated Baseline Cost	$65,868,000	$78,780,000	$65,018,000
Potentially Affected Landowners	142	183	127
Residences within 0-75 feet of centerline	0	0	0
Residences within 75-150 feet of centerline	6	11	7
Residences within 0-500 feet of centerline	14	27	17

B. Ramey and Raynolds Position

In the event that the Commission does not adopt Staff's proposal to link Pawnee and Mt. Zion through Kincaid, Ms. Raynolds and Mr. Ramey propose a modification to ATXI's Alternate Route 2. The couple resides at 1236 E 1000 North Road approximately two miles directly south of Taylorville. The following map, included with their testimony as Raynolds/Ramey Ex. 1.1, depicts their proposal as it relates to ATXI's Alternate Route 2:



Whether or not all landowners affected by the modification proposed by Ms. Raynolds and Mr. Ramey have received notice of this proceeding is not entirely clear. Mr. Ramey acknowledged under cross-examination that he did not provide with the proposed modification a list of landowners affected by the modification.[5] (Tr. at 223) He

[5] He testifies that he provided a list of landowners in response to a discovery request from ATXI. The list was not offered for admission into the record.

stated further under cross-examination that there are eight landowners affected by the modification, and that six of them were previously notified as part of the original ATXI filing. In his Initial Brief on Rehearing, however, Ms. Raynolds and Mr. Ramey assert that all eight landowners would have been affected by ATXI's Alternate Route 2 and, therefore, it is believed that all have been contacted as potentially affected landowners. (Initial Brief on Rehearing at 9) The record is otherwise silent on this matter.

Generally, Ms. Raynolds and Mr. Ramey believe that ATXI's Alternate Route 2 for the Pawnee-Pana segment, as least as initially proposed, fails to fully represent a least cost configuration under the Commission's twelve route selection criteria. Adoption of their modification will in their opinion remedy this shortcoming of the route. If the Commission does not adopt their modification, they request that the centerline of any 345 kV transmission line along ATXI's Alternate Route 2 not pass within 400 feet of their property.

In support of their modification, Ms. Raynolds and Mr. Ramey point out that their proposal shortens ATXI's Alternate Route 2 by 0.84 mile. They also assert that adoption of their proposal would reduce the total cost associated with ATXI's Alternate Route 2. The difficulty and cost of construction, they explain, would be diminished due do: shorter line length, the utilization of an existing transmission line corridor, the necessity of fewer transmission line structures, and ATXI's ability to maximize pole spacing on an undeveloped/nonresidential route. They speculate further that their segment may also be less expensive and easier to construct due to the elimination of one corner structure (located approximately 0.5 miles east of 1250 East Road). They note as well that Ex. 1.1 reflects fewer trees along the proposed modification, which could further reduce project costs while expediting project completion.

Ms. Raynolds and Mr. Ramey are unaware of any appreciable differences between the original route and their modification with regard to the difficulty and cost of operation and maintenance and environmental impacts. With regard to the latter criterion, however, they note that an existing, already disturbed transmission line corridor would be utilized under their proposal. Use of the existing corridor would limit or eliminate the need to impact new and undisturbed habitat. They reiterate as well their comment about fewer trees being impacted under their modification.

In terms of impacts on historical resources, Ms. Raynolds and Mr. Ramey state that their residence and barn along ATXI's Alternate Route 2 were built in 1880. They plan to restore these structures as potential candidates for the National Register of Historic Places in Illinois.

Other than a few residences, Ms. Raynolds and Mr. Ramey note that the land use in this area is primarily agricultural. They relate that 1000 North Road is a narrow, one lane country road that will require ATXI support structures to be located on cultivated acres. Said cultivated acres do not currently have any transmission lines or support structures on them and related farming operations are currently uninhibited by transmission line structures of any kind. They recognize that their proposal would also

require support structures on cultivated acres, but contend that these acres have already been impacted by support structures present as part of existing 138 kV and 345 kV transmission lines. Furthermore, they believe that their proposal should affect fewer cultivated acres than ATXI's Alternate Route 2 due to: shorter line length, the need for fewer structures, and the ability of ATXI to maximize pole spacing due to the reduction or elimination of close proximities to existing overhead lines and residences.

Ms. Raynolds and Mr. Ramey observe that the primary benefit of their proposal is that it would avoid five affected residences by moving the 345 kV transmission line significantly further from five homes located directly on or near 1000 North Road. Specifically, ATXI's Alternate Route 2 is proposed to pass very close (less than 150 feet) to at least two of the five affected residences on 1000 North Road, one being the residence of Ms. Raynolds and Mr. Ramey. They argue that this type of impact to residences should be avoided without question when there are other segment options available on this portion of ATXI's Alternate Route 2 that can provide the same 345 kV service at a lower cost while also more efficiently meeting the Commissions twelve criteria. They maintain that the superiority of their proposal is further strengthened by the fact that there are no affected residences within 1,000 feet of their modified route. They are unaware of any additional existing or planned development along either route.

As for community acceptance, Ms. Raynolds and Mr. Ramey observe that many safety and health concerns are associated with and have been expressed through public comment in regard to transmission structures and lines located within 150 feet of residences. By locating the 345 kV transmission line on their modified route, Ms. Raynolds and Mr. Ramey assert that concerns related to safety and health impacts would be eliminated for residences located in this area of the Illinois Rivers Project. They state further that both the direct and indirect property devaluation of five residences on or near 1000 North Road would be completely avoided if their modification is adopted. Ms. Raynolds and Mr. Ramey add that the visual impact associated with the Illinois Rivers Project would be virtually eliminated for five residences along 1000 North Road with the use of their route modification. In comparison, the addition of another 345 kV line along their proposed route will not, in their opinion, significantly compound the visual impact on this area. With this reasoning in mind, Ms. Raynolds and Mr. Ramey are confident that their proposal yields greater community acceptance than ATXI's original Alternate Route 2.

As previously described, the Raynolds/Ramey segment would utilize an existing transmission line corridor and parallel 2.94 miles of existing transmission line. Although ATXI has expressed reliability concerns associated with paralleling existing transmission lines, Ms. Raynolds and Mr. Ramey note that ATXI's own proposed Alternate Route 2 between Pawnee and Pana parallels more than 17 miles of existing transmission line. Their modification eliminates 0.82 mile of ATXI's Alternate Route 2 where it is proposed to parallel a 138 kV line between 1000 North Road and 900 North Road. Their route, they continue, would parallel 2.94 miles of existing 345 kV line but the segment would only effectively add 2.12 miles of parallel transmission line to ATXI's Alternate Route 2. While they understand ATXI's concerns with paralleling transmission

lines, Ms. Raynolds and Mr. Ramey believe that these concerns are fully negated by the fact that ATXI's Alternate Route 2 also includes more than 17 miles of new line that would parallel existing 138 kV and 345 kV line along an existing corridor. In fact, they state further, the majority of these 17 plus miles of ATXI Alternate Route 2 parallel upstream portions of the same transmission line proposed to be paralleled in the Raynolds/Ramey segment. They believe that this fact further negates ATXI's reliability concerns with paralleling existing transmission lines on the Pawnee-Pana segment.

C. Staff Position

If the Commission determines ATXI should construct the transmission line along Alternate Route 2, Staff recommends that the modification sought by Ms. Raynolds and Mr. Ramey be adopted. Staff observes that the proposed modification shortens the line, and therefore would cost somewhat less to construct than ATXI's proposal. Because it is shorter, Staff notes that the modified route would also cost somewhat less to maintain and operate than ATXI's proposal. With regard to proximity to residences, Staff understands that there are no affected residences within 1,000 feet of the proposed modification. ATXI's Alternate Route 2, on the other hand, is comparatively closer to five residences, including that of Ms. Raynolds and Mr. Ramey. Staff states that the modified route is also favorable because it parallels an existing 138 kV AIC transmission line. While Staff witness Rockrohr supports incorporating the modification into ATXI's Alternate Route 2, he too understands that there are some concerns regarding notice to landowners and questions how this may affect the Commission's ability to adopt this modification.

D. Commission Conclusion

Having reviewed the evidence of record, and upon consideration of all relevant route selection criteria as described by the parties, the Commission finds that the criteria described above favor ATXI's Alternate Route 2 for the Pawnee-Pana portion of the project. Alternate Route 2 is the shortest route and least expensive to construct. This route also has the advantage of affecting the fewest landowners. For several of the other criteria, such as impacts on the environment, historical resources, and social and land use, none of the routes enjoy an advantage over another.

The one area where Alternate Route 2 places a close second to ATXI's Primary Route concerns proximity to residences. Any shortcoming of Alternate Route 2 in this area, however, would likely be mitigated with the adoption of the modification sought by Ms. Raynolds and Mr. Ramey. The advantages of their proposal are set forth above and will not be repeated here. The Commission's only concern relates to whether landowners affected by the Raynolds/Ramey modification received notice of this proceeding. As noted above, the answer to this question is not entirely clear. What is known is that Ms. Raynolds and Mr. Ramey now believe that all affected landowners have received notice of this proceeding and no party disputes this assertion or objects to the proposed modification. While Ms. Raynolds and Mr. Ramey could have provided better information on this issue, the Commission is not inclined to penalize them for this

deficiency and will adopt what by all accounts appears to be a reasonable and appropriate modification to ATXI's Alternate Route 2. With this modification, Alternate Route 2 seems to be preferable with regard to proximity to residences. Therefore, the Commission finds that Alternate Route 2 for the Pawnee-Pana segment of the Illinois Rivers Project is the least-cost route when all costs and benefits are taken into account.

IX. PANA-MT. ZION SEGMENT

A. ATXI Position

When it initiated this docket, ATXI proposed both a Primary Route and an Alternate Route for the Pana-Mt. Zion segment. On May 10, 2013, ATXI filed a stipulation between it and Moultrie PO. In this stipulation, ATXI and Moultrie PO agreed to support (1) ATXI's Primary Route between Pana and Mt. Zion, (2) ATXI's preferred location for the Mt. Zion substation at Sulphur Springs Road, and (3) Moultrie PO's preferred route between Mt. Zion and Kansas.

As noted in Section VII above, during the rehearing phase of this docket, ATXI entered into a related stipulation with the Village of Mt. Zion. This latter stipulation was filed on December 16, 2013. ATXI and the Village of Mt. Zion agreed to support (1) ATXI's Primary Route between Pana and Mt. Zion, (2) Staff's substation Option #2 site for the Mt. Zion substation, and (3) Moultrie PO's preferred route between Mt. Zion and Kansas. To utilize Staff substation Option #2, ATXI explains that its Primary Route from Pana to Mt. Zion can be modified as follows: the transmission line would follow ATXI's Primary Route from the Pana substation until it meets Staff's proposed Kincaid route just north of the Christian/Macon County line; from that point, the transmission line would follow Staff's proposed Kincaid route until it meets Staff's Option #2 site. For purposes of this discussion of the Pana-Mt. Zion segment, this route is referred to as the Blended Route.

ATXI observes that the Blended Route is 33.64 miles long, which compares favorably to the other route options. The Blended Route is also the least expensive to construct, according to ATXI; and has no unique considerations that would make it difficult to construct. From a routing perspective, ATXI reports that there are no impediments to construction along the Blended Route as the land is mostly agricultural and flat. ATXI also states that there are no unique considerations along the Blended Route that would make it more difficult or costly to operate or maintain than any other.

With regard to the environment, ATXI asserts that the Blended Route will have minimal impact and adds that such impacts will occur regardless of the route approved by the Commission. ATXI also recognizes, that concerns were raised regarding the Kincaid route's relationship to certain property owned by MCCD, near where the Kincaid route crosses Highway 51. At the evidentiary hearing, Staff witness Rockrohr testified, "If ATXI can not condemn the property and the property owner is unwilling to grant rights across it, that would render that route not viable." (Tr. at 378) ATXI, however, understands that the identified route passes along the southern edge of MCCD's

property. ATXI suggests that the transmission line could simply be located across a property line to avoid the MCCD property. If the Commission determines that the presence of the MCCD property is a bar to the Kincaid route, however, ATXI contends that Staff substation Option #2 can still be utilized using some combination of existing proposed routes. As an example, ATXI offers that a route using ATXI's Primary Route to where it crosses ATXI's Alternate Route, then the Alternate Route, and then the tail end of the Kincaid route would avoid the MCCD property.

As for impacts on historical resources, ATXI states that the there is no record evidence that the Primary Route or Blended Route would impact any archeological or historical sites. ATXI identifies two archaeological sites along its Alternate Route and 14 archaeological sites along the route endorsed by Mr. Corzine and the Assumption Group earlier in this proceeding. ATXI indicates that all of the archaeological sites can be spanned. Regardless of which route the Commission approves, ATXI states that it will work with the IHPA to address issues that may arise during the construction process, and will obtain required permits or approvals, if any, before construction. Social and land use impacts are similar for all of the routes, according to ATXI, because current area land use is agricultural.

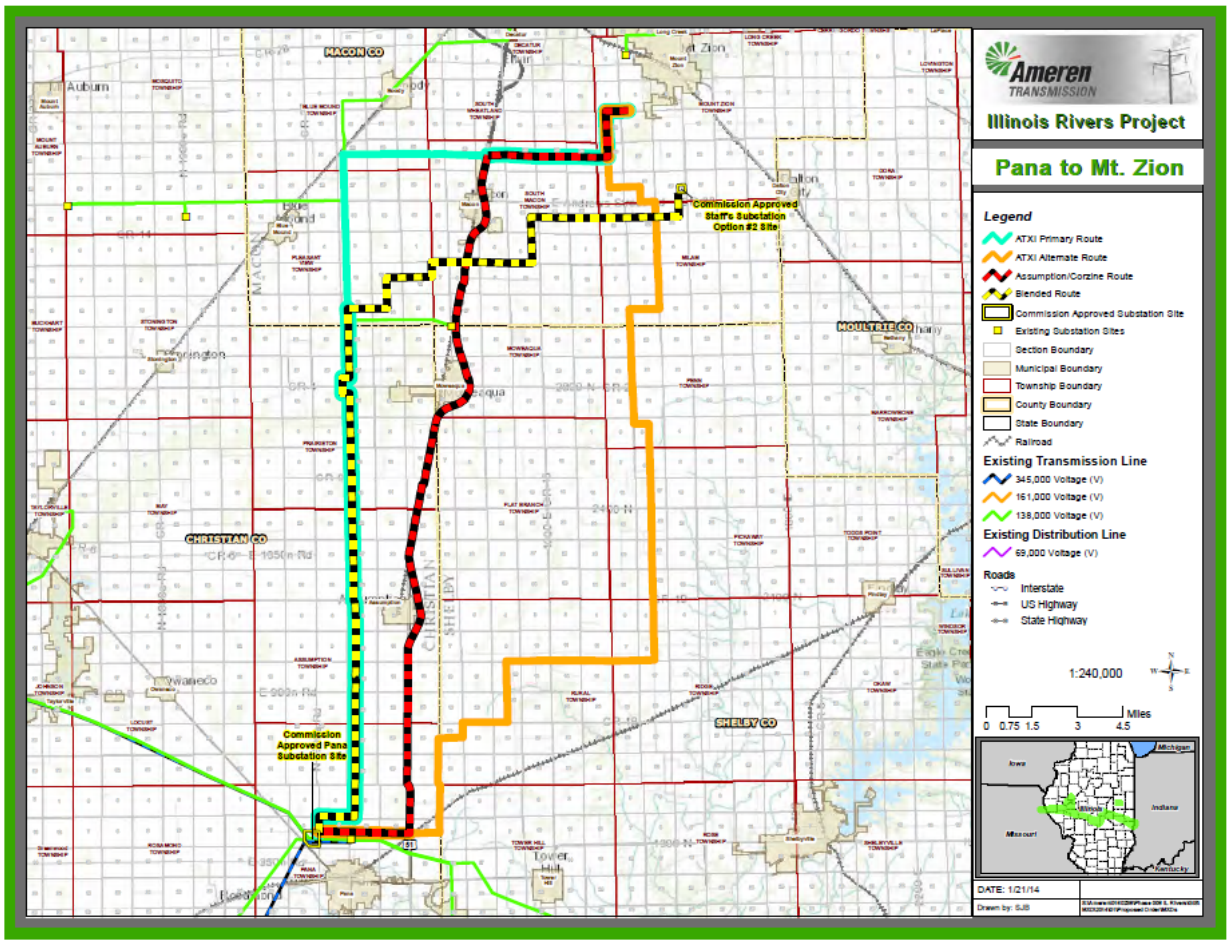
ATXI's Primary Route would impact approximately 118 landowners. ATXI suggests that the number of landowners affected by the Blended Route would not be materially different. Regardless of the number, ATXI asserts that the Blended Route would not require destruction of any residences. In relation to the concern of landowner Eric Sprague, ATXI understands that his concern is not with the route in its entirety, but the specific impact to his property. He wants ATXI to move structures so that the transmission line is on his neighbors' properties, and proposes three alternatives to accomplish this goal. Of the three, ATXI contends that Alternative 1 is not viable because it would continue to parallel an existing transmission line in such a manner as to require the removal of at least one residence. ATXI offers to work with Mr. Sprague during the final line design phase to address his concerns as best it can. ATXI witness Murbarger testifies that only once the easement location is set is the flexibility to adjust pole locations restricted to up to five feet from the centerline or up to fifty feet between the poles. As already explained in this proceeding, ATXI will coordinate with each landowner on pole placement and will make adjustments where feasible and appropriate to address site-specific concerns. ATXI also objects to the route supported by landowner Leon Corzine, which ATXI believes would require the destruction of two homes and is otherwise closer to several residences than the Primary Route. The route preferred by Mr. Corzine appears to be the only route where proximity to planned development is an issue--that being the widening of Highway 51.

On the whole, ATXI suggests that the routes do not vary significantly with regard to community acceptance or visual impacts. As for the presence of existing corridors, ATXI states that the Blended Route follows property lines and county roads and in some places parallels an existing 138 kV transmission line. The route favored by Mr. Corzine runs along Highway 51 for the majority of its length.

The following table combines data for several of the criteria. ATXI suggests to the Commission that an analysis of all of the criteria supports adoption of the Blended Route.

	ATXI Primary Route	ATXI Alternate Route	Blended Route	Assumption/ Corzine Route
Estimated Length in Miles	35.4	38.62	33.64	33
Estimated Baseline Cost	$62,869,000	$72,182,000	$59,853,000	unknown
Potentially Affected Landowners	118	140	unknown	101
Residences within 0-75 feet of centerline	0	unknown	unknown	2
Residences within 0-500 feet of centerline	17	unknown	unknown	26

The four routes included in the table are depicted in the map below:



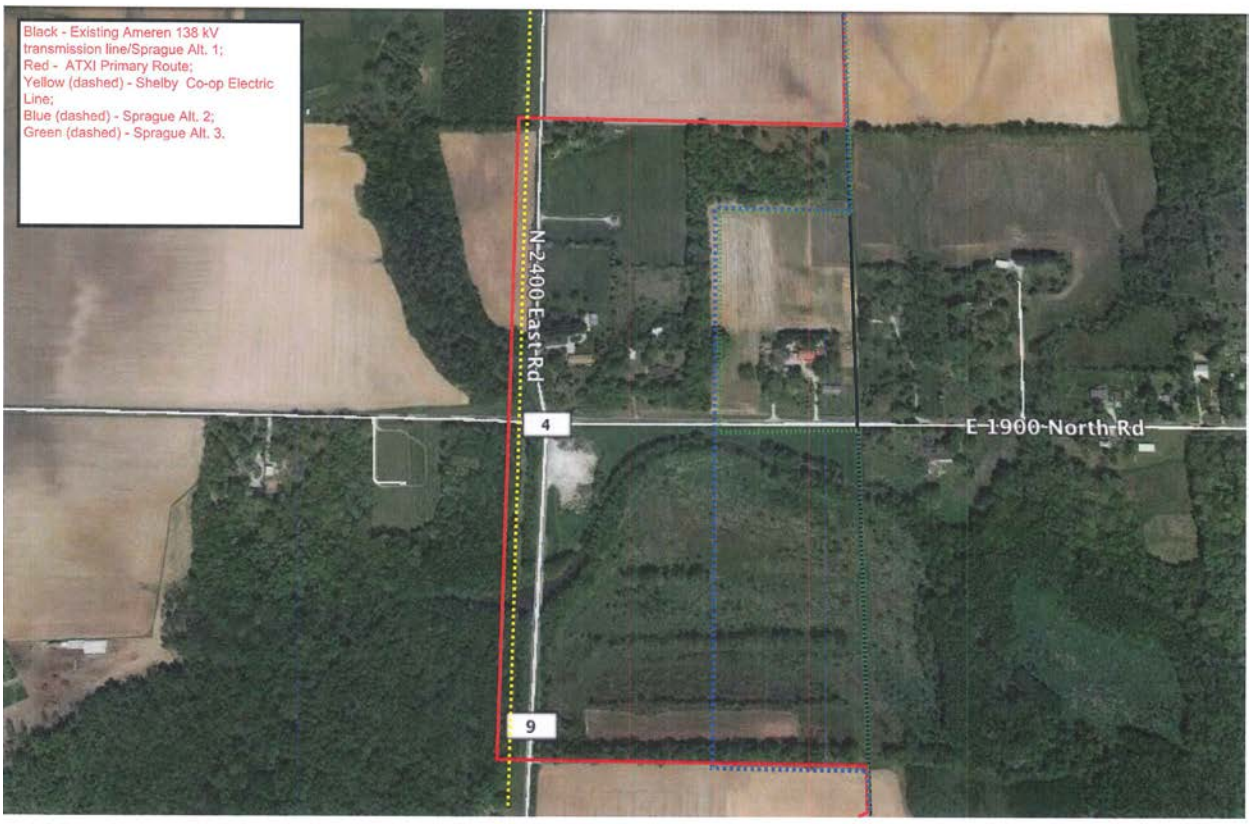
B. Sprague Position

Eric Sprague owns 32.5 acres of timber land along with an adjoining two acres on which he and his wife reside at 2378 E 1900 North Road directly west of Moweaqua. Their property lies along and abuts the west side of a county road, N 2400 East Road. A Shelby Electric Cooperative 13 kV electric line runs along N 2400 East Road. Bilyeu Cemetery sits just over 300 feet from the eastern edge of the Sprague's property. East of their property is ATXI's Primary Route, which parallels an existing 138 kV transmission line running from Pana in a northerly direction. As the Primary Route travels north, approximately one quarter mile from E 1900 North Road, the Primary Route turns west and travels approximately 1,000 feet until it reaches N 2400 East Road. At that point, the Primary Route turns north and runs along N 2400 East Road, passing by the Sprague's property, crossing E 1900 North Road, and continuing over 1,000 feet further north until it turns east and runs until it reaches the path of the existing 138 kV line. Here the Primary Route turns north and resumes its parallel path alongside the 138 kV line.

Despite lacking any detail about the line's actual location within this diversion to the west, Mr. Sprague states that he was able identify several deficiencies with this portion of the Primary Route. First, by veering from the straight line along the existing 138 kV line, the diversion increases the length of the line, thereby increasing its cost. Second, he asserts that the Primary Route in the area of this westerly diversion would pass within 100 feet of one occupied residence (twice – once each on two sides), within 175 feet of a second occupied residence, and within 225 feet of a third. Third, he is concerned that the line (assuming it would be located along the west side of N 2400 East Road), would run 1,765 feet through his timber, requiring clear-cutting of a good portion of the timber. He understands ATXI witness Murphy to consider wooded areas a highly sensitive land use. Mr. Sprague states that he has registered the timber with the Illinois Department of Natural Resources and instituted a Forest Management Plan for the timber (consisting of Bur Oak, Northern Red Oak, Shingle Oak, Pin Oak, Black Walnut, Shagbark Hickory, Wild Black Cheery, American Elm, Osage Orange, and Honey Locust). Fourth, given the presence of the Shelby Electric Cooperative line, the Spragues fear that ATXI would have to locate the new 345 kV line further to the west of N 2400 East Road, and therefore intruding more extensively upon the Sprague's land. Fifth, he notes that the Primary Route passes close to a cemetery, which he understands Ms. Murphy to also consider a highly sensitive land use.

To remedy his concerns, Mr. Sprague offered three routing alternatives. Alternative 1 avoids the diversion to the west altogether and has the Primary Route continue its parallel path along the existing 138 kV line. He identifies one residence impacted by Alternative 1. Alternative 2 (see Sprague Ex. 1.3) and Alternative 3 (see Sprague Ex. 1.4) each involve shrinking the westerly diversion so that it does not come as close to the Spragues' property. He relates that Alternative 2, the larger of the two diversions that he proposes, avoids the three residences impacted by the Primary Route, the Sprague's timber, as well as the Shelby Electric Cooperative electric line and

the cemetery. Mr. Sprague states that Alternative 3 results in a shorter length and avoids the same sensitive areas that Alternative 2 avoids. The map below identifies the Spragues' three alternatives:



The Spragues argue that ATXI diverted the Primary Route west to avoid the possible displacement of two homes without seriously considering other alternatives. Mr. Sprague states that Ms. Murphy's testimony supporting this view assumed a 150 feet right-of-way would be required through this portion of the route, so she did not consider the possibility that ATXI could utilize poles located more closely together, with shorter spans, for the short distance required to pass by the referenced homes and thereby require a narrower right-of-way. While such an approach would increase the cost of the line, Mr. Sprague avers that it would be offset by the significant savings resulting from avoiding the added length of the westerly diversion. He understands the costs to be $2 million per mile on average and approximately $360,000 for dead end structures. Mr. Sprague states further that Ms. Murphy did not consider a dual circuit, or co-locating the new line with the existing 138 kV line.

Mr. Sprague goes on to criticize Ms. Murphy and ATXI witness Hackman for not knowing many of the details necessary for the Primary Route to be fully evaluated. Specifically, he faulted them for not knowing where the new transmission line would be located in relation to the Shelby Electric Cooperative 13 kV line and the existing 138 kV line. He considers it significant that, in contrast to the substantial final routing flexibility the ATXI witnesses on rehearing described, in the initial proceeding ATXI witness

Murbarger described a much more restricted flexibility. Mr. Murbarger testified that once the route is approved, "ATXI has some limited flexibility in determining where the physical structures of the poles are located. Structures can be moved up to five feet from the centerline of the route…." (ATXI Ex. 16.0 at 4) The Spragues wonder how ATXI can have the Commission approve a route with the required specificity when ATXI's witnesses do not themselves propose the route with such specificity.

The Spragues argue that sufficient detail in describing and justifying the westerly diversion are lacking under applicable law. When seeking a certificate of public convenience and necessity under Section 406.1 of the Act, a petitioner is also, necessarily, seeking an order under Section 8-503. Any decision of the Commission, they continue, must be supported by "substantial evidence based on the entire record." (N. Moraine Wastewater Reclamation Dist. v. Ill. Commerce Comm'n & Rockwell Utils., 392 Ill. App. 3d 542, 556 (2d Dist. 2009); Quality Saw & Seal v. Ill. Commerce Comm'n, 374 Ill. App. 3d 776, 780 (2d Dist. 2007), citing 220 ILCS 5/10-201(e)(iv)(A)) Furthermore, they state that the burden of proof is on the petitioner to put evidence in the Commission's record to support its case. The Spragues insist that the Commission may not grant a certificate in this case that incorporates the diversion to the west along the Pana-Mt. Zion segment because ATXI has failed to put forth sufficient evidence to support it.

In their Initial Brief on Rehearing, the Spragues include several tables that essentially reiterate the arguments made above.

C. Corzine Position

Leon Corzine owns 155 acres and rents another 80 acres of farmland along ATXI's Primary Route. He relates that there are already two electric transmission lines on the farmland and he does not want there to be a third. His concern is that the addition of a 345 kV line along the Primary Route will further hamper his farming operations. As an alternative, he recommends the adoption of the route proposed by the Assumption Group. On February 13, 2013, in the initial phase of this proceeding, the Assumption Group proposed that the 345 kV line be constructed along Highway 51 between Pana and Mt. Zion. Mr. Corzine argues that the Highway 51 corridor would be a much better route because it would create substantially less hardship on farmers and landowners. He notes that Highway 51 has been recently upgraded and passes around, rather than through, the towns between Pana and Mt. Zion.

Mr. Corzine understands that Staff witness Rockrohr supported the use of the Highway 51 corridor earlier in this proceeding, but still had reservations in light of ATXI's claim that several homes were nearby. Mr. Corzine counters this perception by pointing out that facts adduced at the hearing proved that there were not as many affected residences as Mr. Rockrohr was led to believe. According to Mr. Corzine, ATXI witness Murphy admitted during cross-examination that ATXI "assumed that any building that appeared to be a residence was, in fact, an occupied residence. [ATXI] felt it more appropriate to err on the side of caution. [ATXI was] not able to access all residences

or what appeared to be residential buildings along any of the routes." (Tr. at 753) Mr. Corzine contends that ATXI's overstatement of the number of affected residences was further demonstrated during his own cross-examination. (See Tr. at 330, lines 1-3 (what ATXI assumed to be residences were shown to be grain bin sites without homes), lines 4-15 (what ATXI assumed to be residences were shown to be grain bins and farm buildings with no occupied residences), lines 19-22 (buildings identified as Grain Systems Incorporated ("GSI"), a commercial facility and not residences), at 331, lines 5-10 (buildings on the other side of the road from GSI are identified as grain facilities, not occupied residences), at 332, lines 2-7 (what actually is a residence is already next to a four lane highway), lines 13-21 (what actually are residences are a quarter mile away), at 333, lines 1-4 (what ATXI assumed to be residences are shown to be businesses), at 334, lines 6-16 (what ATXI assumed to be residences are shown to be a fertilizer plant, grain facility, and trucking company) Even with the overstated data, Mr. Corzine relates that Staff still believed that a route along Highway 51 warranted further consideration.

D. Staff Position

If the Commission does not adopt a direct link between Pawnee and Mt. Zion, Staff recommends that the Commission adopt the Blended Route. Staff states that the Blended Route is shorter, less difficult and expensive to construct, and less difficult and expensive to operate and maintain than the Primary Route. Staff notes that a small diversion to west in the predominantly north-south portion of the Blended Route appears to impact several additional residences. Of the three alternative routes that landowner Sprague proposes, Staff observes that the simplest would continue to parallel AIC's existing 138 kV line, rather than divert to the west. In Staff's opinion, there does not appear to be adequate space for ATXI to parallel AIC's existing 138 kV line north of E 1900 North Road unless ATXI displaces a residence or ATXI and AIC share the easement and two structures. If the Commission approves a Pana connection, Staff recommends that the Blended Route with Mr. Sprague's Alternative 3, shown on Sprague Ex. 1.4, be adopted.

E. Commission Conclusion

Of the four routes for the Pana-Mt. Zion segment, none rises above the others as the clearest choice. In terms of length, all are comparable although the Assumption/ Corzine Route along Highway 51 is the shortest. The Blended Route is the least expensive, totaling nearly $60 million. Exactly how much more the Assumption/Corzine Route would cost is unknown since a total cost estimate for this route does not appear in the record. With regard to the difficulty of construction and maintenance, the Assumption/Corzine Route is arguably the preferred route because Highway 51 facilitates access for the majority of its length.

Environmental impacts to consider include the clear cutting of Mr. Sprague's timber along the Primary/Blended Routes and the proximity of the Blended Route to MCCD's land. Although not discussed much in the context of the Pana-Mt. Zion segment, MCCD has made clear that it is not willing and/or able to provide ATXI an

easement. Other than these considerations, the environmental impacts of the four routes appear to be comparable. The impacts on historical resources and social and land use also appear comparable among the four routes. Although ATXI identified some archaeological sites along the Primary Route and Assumption/Corzine Route, it indicates that the sites can be spanned.

The number of landowners affected and proximity to homes and other development is difficult to ascertain. The Assumption/Corzine Route would appear to affect the fewest number of landowners. ATXI suggests that selection of this route would necessitate the destruction of two homes on the west side of Highway 51 south of Assumption. ATXI also indicates that this route has more homes closer to the center line than does the Primary Route. But as discussed in the August 20, 2013 Order in this matter, the Commission is reluctant to rely on the "residency assumptions" of ATXI, particularly with regard to the Pana-Mt. Zion segment where Mr. Corzine identified shortcomings in ATXI's methods. (See Order at 9) In addition, having reviewed the record, the Commission can see no reason why adoption of the Assumption/Corzine Route would necessitate the demolition of the identified homes. The land to the east of these homes is unoccupied farm ground.

With regard to community acceptance, none of the routes appears to enjoy a clear preference over another. The visual impact is arguably the greatest along the Assumption/Corzine Route since it would run along a public highway. At the same time, the highway provides the Assumption/Corzine Route a favorable status due to the accessibility it provides as an existing corridor.

In addition to these criteria, the Commission is also confronted with the need to choose a route that ends at Staff's substation Option #2 site. Having to do so will result in the end of Staff's Kincaid route being chosen since it is the only route that ends at substation Option #2. This leaves the Commission with three choices for the remainder of the Pana-Mt. Zion segment: (1) the Blended Route (which includes Staff's Kincaid route), (2) the Assumption/Corzine Route south of Staff's Kincaid route, and (3) ATXI's Alternate Route south of Staff's Kincaid route.

Having the considered the advantages and disadvantages of each route, the Commission finds the Assumption/Corzine Route along Highway 51 the most suitable route. This route is the shortest and most easily accessible. Despite ATXI's assertions, the number of impacted landowners and residences appears to be comparable to the other routes. Moreover, as discussed above, the Commission can discern no reason why any homes would need to be demolished if the Assumption/Corzine Route is chosen. Other than ATXI, no party has objected to the adoption of the Assumption/ Corzine Route. In fact, in the earlier phase of this proceeding, Staff supported its adoption. ATXI should therefore utilize the Assumption/Corzine Route from Pana until it reaches Staff's Kincaid route, at which point ATXI should follow the Staff's Kincaid route east to the substation Option #2 site. Admittedly, this route does not avoid the MCCD property, which is just east of Highway 51. But the Commission trusts that ATXI will

work to address this obstacle. If need be, the Commission will entertain requests for a revised route under Section 8-406 to avoid the MCCD land.

X. MT. ZION-KANSAS SEGMENT

A. ATXI Position

In the initial proceeding, ATXI and Moultrie PO stipulated to Moultrie PO's proposed route from Mt. Zion to Kansas (identified by Moultrie PO as Route MZK). (Order at 86.) ATXI notes the Commission approved a portion of this route from the Macon/Piatt County border to the existing Kansas substation, however it did not approve a location for the Mt. Zion substation, or a route from that substation to the Macon County line.

On rehearing, ATXI and Moultrie PO continue to recommend the Stipulated Route, which ATXI states Staff also supports. ATXI proposes a slight adjustment to the west end of the route to accommodate the Staff Mt. Zion substation Site Option #2 that was agreed to by ATXI and the Village of Mt. Zion: from Staff's Option 2 substation site, the modified route uses ATXI's Primary Mt. Zion to Kansas Route north to connect to the Moultrie PO Stipulated route, which continues on to connect to the Mt. Zion to Kansas approved route. Moultrie PO considers this adjustment acceptable. Mt. Zion supports this modified version of the Stipulated Route. Moultrie PO refers to this modified route as "MZK-2." For simplicity, ATXI will continue to refer to the MZK-2 as the "Stipulated Route."

ATXI notes that PDM and CFT (PDM/CFT) oppose the Stipulated Route regardless of which substation location is approved, and recommend the Commission reverse its August 2013 Order and advocate a route that would consist of the western portion of ATXI's Primary Route, until it intersects with ATXI's Alternate Route. From this point of intersection, their route proposal would then follow ATXI's Alternate Route to the Kansas Substation.

ATXI acknowledges that it can construct all of the routes proposed for this portion of the Project if ordered to do so; however ATXI states the approved route from Mt. Zion to Kansas came about as a compromise, by ATXI, Moultrie PO and Shelby County Landowners' Group, and the Stipulated Route incorporates the approved route, and is essentially the same as the route supported by those parties. ATXI notes that the Village of Mt. Zion now supports the Stipulated Route as well. PDM/CFT is the only group to oppose the Stipulated Route; however, ATXI suggests that PDM/CFT has not presented any evidence on rehearing that warrants reversing the Commission's approval of the Stipulated Route.

Ultimately, ATXI notes that the question for the Commission is what weight to give the 12 criteria with respect to these routes. No party disputes that the Stipulated Route is somewhat longer and more expensive to construct than PDM/CFT's hybrid route. ATXI submits that one key factor weighs heavily in favor of selecting the

Stipulated Route, and it is a factor that the Commission considers one of the most important: proximity to residences. ATXI notes the Commission has previously approved transmission routes that are longer and more expensive to avoid being in proximity to residences, noting that the Commission previously found:

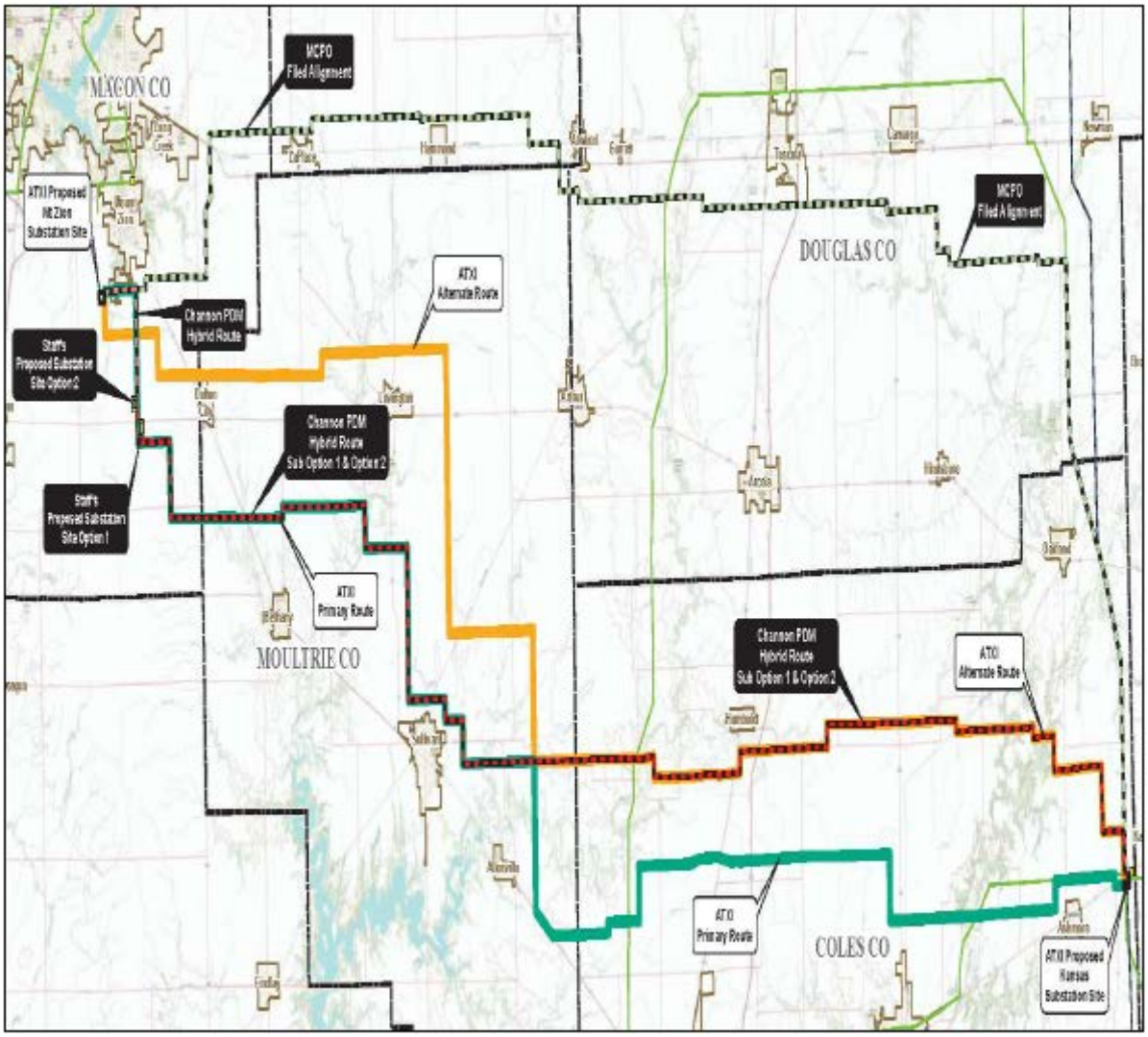
> Although the Staff proposal is longer and thus more costly, it provides, among other things, an important benefit of avoiding the siting of high-voltage transmission lines in close proximity to residential dwellings. Under the Staff proposal, there will be no dwellings within 500 feet of the line; whereas, under the Ameren proposal the line would be within 200 feet of two dwellings – a land use factor of "high sensitivity" according to Ameren's own selection process -- and within 500 feet of another three as described in testimony from Staff and the affected landowners. The Commission believes this consideration is especially important inasmuch as the line in question is not a low or medium voltage line; rather, it is a high-voltage 345 kV line.

Ill. Power Co., Docket 06-0179, Order at 16-17 (May 16, 2007)

In this case, ATXI notes the Stipulated Route impacts substantially fewer residences. Depending on the count methodology, the Stipulated Route impacts from 3 to 12 residences, while the PDM/CFT hybrid impacts 15 to 35. ATXI suggests that this difference is significant and material, and based on past Commission decisions justifies an extra nine miles and additional cost.

ATXI believes the Stipulated Route also resolves the concerns of the clear majority of the parties affected by the various routes proposed for the Mt. Zion to Kansas portion of the Project. Of the 15 parties who own property along any of the routes proposed from Mt. Zion to Kansas, only PDM/CFT opposes the Stipulated Route from Mt. Zion to Kansas. Staff also agrees the Stipulated Route is the best choice of the three route options for this portion of the Project. ATXI recognizes the Commission has said that despite any stipulation it will examine the record, however ATXI believes the record supports the Stipulated Route. Moreover, the Stipulated Route is not simply a matter of stipulation signatories, but represents a compromise among these parties who had a variety of concerns with the routes they and others were proposing. Because of these factors, and more importantly the weight of the record, ATXI recommends the Commission re-approve the Stipulated Route, including the connection into Staff's Option 2 substation location, identified as Route MZK-2.

ATXI represents that the following map shows the potential routes for this segment of the project:



1. Length of Line

ATXI represents that the following table shows the length of the proposed routes for this segment of the transmission line:

	Recommended/ Stipulated Route (MZK-2)	PDM/CFT Hybrid Route
Estimated Length in Miles	70.2	61.9

2. Difficulty and Cost of Construction

ATXI represents that the following table represents the construction estimates for the proposed routes for this segment of the transmission line:

	Recommended/ Stipulated Route (MZK-2)	PDM/CFT Hybrid Route
Estimated Baseline Cost (approx.)	$135M	$120M

3. Difficulty and Cost of Operation and Maintenance

ATXI suggests that there is no record evidence the Stipulated Route would be more difficult or costly to operate and maintain relative to the other routes proposed. ATXI claims that the record on rehearing also contains no meaningful distinction between the proposed routes regarding the difficulty or cost of operating and maintaining each that would warrant reversal of the Commission's approval of the Stipulated Route.

4. Environmental Impacts

ATXI states that the Stipulated Route has 32.6 fewer acres of wooded areas in the 500-foot corridor area than the PDM/CFT Hybrid Route, while there are also 1.2 acres of protected habitat within 500-feet of the PDM/CFT Hybrid route, but none within 500-feet of the Stipulated Route. ATXI asserts that the Stipulated Route parallels more length of existing transmission lines where the elements have already been impacted, and because of this, the Stipulated Route has 40 (11.0%) fewer acres of minimally disturbed areas in the 500-foot study corridor than the PDM/CFT Hybrid Route. ATXI claims that PMD/CFT has not offered any evidence on rehearing that would warrant reversal of the Commission's approval of the Stipulated Route.

5. Impacts on Historical Resources

ATXI states that the Commission found that impacts to historical resources, if any, would not impair the ability to construct the Stipulated Route or either of ATXI's Primary and Alternate Routes in their entirety. (Order at 99) ATXI opines that there is no record evidence on rehearing considering impacts on historical resources that would warrant reversal of the Commission's approval of the Stipulated Route. Regardless of which route is approved, ATXI states that it will work with the IHPA to address issues that may arise during the construction process and will obtain required permits or approvals, if any, before construction.

In its Reply Brief, ATXI notes that PDM/CFT express concerns regarding impacts to an Amish community and a Native American site that was presented in and considered by the Commission in the underlying case. ATXI notes that the only new evidence provided on rehearing is testimony purportedly from a representative of the

"Amish community," regarding alleged "negative impacts on tourism" that the Stipulated Route may pose. ATXI submits there are two issues with this new "evidence." First, ATXI states there is no record evidence that this witness is indeed a representative of the Amish community, and the witness does not identify himself as such. (See PDM Ex. 4.0.) Second, ATXI argues these concerns are purely speculative.

ATXI contends that the record does not support the rest of PDM/CFT's arguments either—as they could be applied equally to the PDM/CFT Hybrid Route. For instance, PDM claims the Stipulated Route is much closer to the Amish area in Arthur than the PDM/CFT Hybrid Route; however, ATXI Exhibit 13.7 shows that Arthur is about 5 miles from the Stipulated Route and is midway between both the competing routes. ATXI indicates that it is not clear how any impacts to Arthur will be any worse along the Stipulated Route than along the PDM/CFT Hybrid Route. PDM also claims the Stipulated Route will be an eyesore to visitors to the Arthur area who arrive from the north via Rt. 36 or from the east via Rt. 133; ATXI suggests that it appears the same effect would occur for tourists arriving from the west or south across the PDM Hybrid Route on I-57, Rt. 133, or Rt. 45.

ATXI argues that in total, the evidence on rehearing does not support reversal of the Commission's approval of the Stipulated Route for this criterion.

6. Social and Land Use Impacts

ATXI notes that the predominant land use along the routes proposed for this segment is agricultural in nature, and the Stipulated Route impacts slightly more acres of prime farmland than the PDM/CFT Hybrid. In its August 2013 Order, ATXI states that the Commission found that "the impact of a transmission line through area farm fields would be comparable regardless of the particular route." (Order at 99) In addition, Moultrie PO witness Reinecke also notes that social and land use impacts of the MZK routes can be mitigated where it follows previously fragmented natural features including existing transmission.

ATXI notes in its Reply Brief that PDM/CFT alleges that Moultrie PO's assertion in the underlying case that its routing affected fewer prime acres than ATXI's routing [ATXI's proposed Primary and Alternate Routes], which the Commission relied on, was false. ATXI believes this claim is misleading. ATXI states that it and Moultrie PO used the same definition to identify prime farmland; however, PDM witness Burns used a different method of calculating prime farmland (productivity indexes), so it is not surprising that the results would differ. As Moultrie PO witness Reinecke explained, ATXI and Moultrie PO used the United States Department of Agriculture ("USDA") and Natural Resources Conservation Service ("NRCS") standards to determine the amount of prime farmland impacted by the various routes. ATXI states that the USDA and NRCS standards are more sensitive with regard to accounting for the differences in the soils than PDM/CFT's method, which concludes that two geographically separate routes of different lengths have exactly the same percentage of prime farmlands.

ATXI asserts that PMD/CFT has not offered any evidence on rehearing on this criterion that would warrant reversal of the Commission's approval of the Stipulated Route.

7. Number of Affected Landowners and Stakeholders

ATXI states that there is no record evidence on rehearing regarding the number of landowners and stakeholders along this segment that indicates one route is superior over the other.

8. Proximity to Homes and Other Structures

ATXI represents that the following table shows the number of residences along each proposed route for this segment of the transmission line:

	Recommended/ Stipulated Route (MZK-2)	PDM/CFT Hybrid Route
Residences within 0-75 feet of centerline	0	0
Residences within 75-150 feet of centerline	0	9
Residences within 0-500 feet of centerline	12	31

ATXI states that the Stipulated Route has 72 fewer non-residential structures within 500 feet, 46 fewer within 300 feet, and 19 (61.3%) fewer within 150 feet of its centerline than the PDM/CFT Hybrid Route. ATXI notes that there are also no non-residential structures within the 150-foot easement of the Stipulated Route. In comparison, ATXI opines that the PDM/CFT Hybrid Route has six non-residential structures within the 150-foot easement that may be displaced.

9. Proximity to Existing and Planned Development

ATXI submits that there is no record evidence the recommended Route MZK-2 is proximate to any existing or planned development, while the PDM/CFT Route passes through a development area along Highway 121, east of the community of Sullivan.

10. Community Acceptance

ATXI notes that it, along with Moultrie PO, the Shelby County Landowners Group, Staff and the Village of Mt. Zion support the Stipulated Route from Mt. Zion to Kansas. Of the 16 parties who own property along any of the routes proposed from Mt. Zion to Kansas, it appears to ATXI that only PDM/CFT Trust opposes the Stipulated Route from Mt. Zion to Kansas. ATXI suggests that the Stipulated Route also resolves the concerns of the clear majority of the parties affected by the various routes proposed for the Mt. Zion to Kansas portion of the Project and remains the optimal route option.

ATXI states in its Reply Brief that PDM/CFT argues the Commission should reverse its decision and approve the PDM/CFT Hybrid Route based on the number of its members. ATXI notes that PDM claims to include over 500 intervenors from every affected community and rural area along the Moultrie PO route, all of whom oppose the Stipulated Route; however ATXI submits that there is no record verification for this claim and the Commission cannot rely on it as an indication of community acceptance. ATXI states there is no record evidence of the interests of those named—whether, for example, they all own property on Stipulated Route or are otherwise actually impacted by the Stipulated Route, and no testimony or other evidence confirms that each of the 500 does, in fact, oppose the Stipulated Route. Simply put, PDM's position asks the Commission to disregard the compromises made by the parties in lieu of a list of names and addresses.

11. Visual Impact

ATXI notes that Moultrie PO witness Dauphinais discussed the use of the existing linear features to avoid introducing new visual impact where none already exists. In this regard, he testified Route MZK-2 parallels 13.7 more miles of existing transmission lines than the PDM/CFT Route. ATXI states that the Commission observed in its August 2013 Order, that running lines in parallel minimizes the 345 kV line's visual impact. (Order at 100)

12. Presence of Existing Corridors

ATXI states that Route MZK-2 parallels US Highway 36, and parallels 14.7 miles of existing 138 kV and 345 kV transmission lines. ATXI notes that Moultrie PO performed an analysis that determined route MZK-2 has relatively superior performance with regard to minimizing the portion of their length that does not parallel existing transmission lines, Major Roads or Railroad. Although the PDM/CFT Hybrid follows roads, property lines, section lines and ½ section lines, ATXI does not believe the record supports reversing the Commission's conclusion on the Mt. Zion to Kansas route for this criterion.

B. Staff Position

Staff notes that there appear to be three alternate routes proposed for this segment, two of which use combinations of ATXI's Primary and Alternate Routes. Staff understands that ATXI and Moultrie PO recommend the Moultrie PO MZK route to which they stipulated, with a potential adjustment on the west end of the route to accommodate Staff's alternate route from Pawnee to Kincaid to Mt. Zion, if required. PDM/CFT jointly recommend a combination of ATXI's Primary and Alternate routes. If Staff's alternative route from Pawnee to Kincaid to Mt. Zion is used, Staff believes the lowest construction cost route for the Mt. Zion to Kansas segment would likely be realized by using a combination of ATXI's Primary and Alternate routes, though Staff does not propose exactly the same combination as PDM/CFT.

Staff notes that ATXI now recommends use of a route connecting Staff's substation site Option #2 to Kansas using a combination of its original Primary Route between Mt. Zion and Kansas, and Moultrie PO's alternative route MZK between Mt. Zion and Kansas. ATXI identifies the route it recommends as Stipulated Route or Route MZK-2. Staff believes the primary reason the Commission should approve ATXI's Stipulated Route over the hybrid routes is that there are fewer residences in close proximity. While individuals might not agree on which residences would be impacted, it appears to Staff that 15 residences have been identified as being affected by the two proposed hybrid routes between Mt. Zion and Kansas that use a combination of ATXI's Primary and Alternate Routes., while only three residences have been identified along ATXI's stipulated route.

1. Length of Line

Staff notes the PDM/CFT Route and Staff Route proposals would be approximately the same length and shorter than the ATXI/Moultrie PO Route. ATXI's proposed substation site and route would result in a distance of 69.2 miles. Adding a distance of about 1.5 miles to adjust for use of Staff Mt. Zion Substation site Option #1 (the Option #1 site is 3 miles south minus 1.5 miles east of ATXI's proposed substation site), the length of the Moultrie PO/ATXI route would be 70.7 miles. Staff notes that ATXI Ex. 5.1(RH) also indicates that the PDM/CFT Hybrid Route from ATXI's proposed Mt. Zion substation site is 66.15 miles. Subtracting about 4.5 miles to adjust for use of Staff Mt. Zion Substation site Option #1 (the Option #1 site is 3 miles south plus 1.5 miles east of ATXI's proposed substation site) would result in a PDM/CFT or Staff route length of about 61.65 miles. Thus, based upon ATXI Ex. 5.1(RH), the ATXI/Moultrie PO route would be approximately 9 miles longer than the PDM/CFT Route if Staff's Mt. Zion Substation site Option #1 is used, and about 3 miles longer if ATXI's proposed Mt. Zion substation site is used. Again, Staff's proposal is roughly the same length as the PDM/CFT Route. Since Staff's alternative route would be the same if Staff substation Option #3 is used, use of Staff substation site Option #3 would result in the same route lengths for the Mt. Zion to Kansas segment as use of Staff substation site Option #1.

2. Difficulty and Cost of Construction

Staff notes that baseline costs for the ATXI/Moultrie PO Route of about $1,915,188 per mile, which equates to $135,403,791 for 70.7 miles, while costs for the PDM/CFT Route of about $1,927,962 per mile, which equates to $118,473,265 for 61.65 miles. Based upon this approximation, the PDM/CFT Route baseline cost would be about $16.9 million less than the ATXI/Moultrie PO Route using Staff's Mt. Zion Substation site Option #1 or Option #3, and about $5 million less using ATXI's proposed substation site. Staff notes the cost of Staff's proposed route would be only slightly lower than the PDM/CFT Route cost because it would require two fewer dead-end structures.

3. Proximity to Homes and Other Structures

Staff states that the hybrid routes that PDM/CFT and Staff propose would cause the transmission line to be closer to more residences and structures. Specifically, the ATXI/Moultrie PO Route are in close proximity to only three residences regardless of whether ATXI's proposed Mt. Zion substation site or Staff's alternative route from Pawnee to Kincaid to Mt. Zion is selected:

- A residence across Sulphur Spring Rd. from ATXI's proposed substation site – if ATXI's proposed Mt. Zion substation site is used.

- A residence on Henry Rd. south of Wheeler Rd. in Moultrie County - if Staff's Mt. Zion Substation site Option #1 is used in combination with the ATXI/Moultrie PO route.

- A residence on the south side of County Hwy 60 east of the Hwy 60 intersection with Hienz Rd, in Moultrie County

- A residence on the west side of CR 2700E north of CR 1720N, in Coles County.

Staff states that the PDM/CFT Hybrid Route and the hybrid alternative that Staff proposed are in close proximity to 15 residences. Residences were common to both routes, except as noted:

- Two residences on CR 1900N between CR 400E and CR 500E, in Moultrie County.

- A residence on CR 800E south of CR 1850N, in Moultrie County.

- Two residences on Cushman Rd., one north and one south of CR 1750N, in Moultrie County - if the PDM/CFT Hybrid Route is used.

- A residence on Murphy Rd. east of Eagle Pond Rd., in Moultrie County - if Staff's proposed hybrid route is used.

- A residence on Cooks Mill Rd west of CR 1625E, in Moultrie County- if Staff's proposed hybrid route is used.

- Two residences along County Hwy 2 east of CR 1625E, in Moultrie County

- Two residences on CR 1500N west of CR 250E, in Coles County.

- A residence on CR 1500N at the Kaskaskia River crossing, in Coles County.

- A residence on CR 700E south of CR 1480N, in Coles County.

- A residence on CR 800E north of CR 1480N, in Coles County.

- Two residences near the intersection of CR1470N and CR 2300E, in Coles County.

- A residence east of CR 2350E and south of CR 1470N, in Coles County.

4. Proximity to Existing and Planned Development

In addition to the residences described above, Staff notes that the PDM/CFT Route, following ATXI's Primary Route, passes through a development area along Hwy 121, east of the community of Sullivan. The existence of this development area is the primary reason to adopt a different route combination proposed by Staff on rehearing that uses ATXI's segment option shown on ATXI Ex. 4.2, Part 69, page 2, to connect ATXI's Primary Route to ATXI's Alternate. Staff states that use of ATXI's proposed substation site would cause the ATXI/Moultrie PO Route to pass through a planned development area identified by the Village of Mt. Zion. Id. This Mt. Zion development area would be avoided if any of Staff's suggested substation sites is used.

5. Presence of Existing Corridors

Staff acknowledges that the ATXI/Moultrie PO Route parallels existing AIC transmission lines for several miles north of Kansas.

C. Moultrie PO Position[6]

On rehearing, Moultrie PO analyzed a number of permutations of line routes for the Mt. Zion to Kansas segment of the IRP, based on the possible line routes that remain relevant at this stage of the proceedings and the viable options for the location of the Mt. Zion substation. It appears to Moultrie PO that the line routes that remain in play on rehearing at this time are the Moultrie PO/ATXI Stipulated Route (MZK, MZK-1 and MZK-2) and the PDM/CFT Routes. Moultrie PO believes that for any of these routes and substation locations, the routes proposed by Moultrie PO significantly outperform all other potential routes, or permutations of them, when all relevant factors are considered. Moultrie PO asserts that the superiority of the MZK Routes is truly demonstrated when a primary consideration is given, as it should be, to the actual impact on human beings, reflected by the proximity of a large high voltage 345 kV lines to residential structures, as opposed to the mainly economic impacts on farmland, prime or otherwise. These impacts on human beings include, among others, health and safety concerns in the event a line goes down as the result of storms or other causes, and aesthetic and quality of life considerations resulting from having to view and live with high tension transmission structures within a few hundred feet of one's home. In this important criterion, Moultrie PO notes that all of the MZK routes impact nine fewer residential structures within 150 feet of the centerline, regardless of substation location, than the routes advocated by PDM/CFT. Within 500 feet of a centerline, Moultrie PO states the MZK routes impact nineteen fewer residential structures than the PDM/CFT routes. There are also no structures that have to be removed on the MZK route, while Moultrie PO contends there are as many as six (6) non-residential structures that will have to be removed on the PDM/CFT routes.

Based on Staff's proposed Option #2 site for the Mt. Zion substation, the parties are currently offering two route alternatives for the Mt. Zion to Kansas portion of the IRP. ATXI, Staff, Mt. Zion and Moultrie PO are supporting Route MZK-2, which consists of the ATXI Primary Route north from the Staff Option #2 site to the intersection with the May 10, 2013, ATXI/Moultrie PO stipulated route from Mt. Zion to Kansas, referred to in the direct testimony of Moultrie PO witness Mr. Dauphinais as "Route Segment Moultrie PO MZK", and then east on route segment Moultrie PO MZK to Kansas. This is the ATXI-Mt. Zion stipulated route from Mt. Zion to Kansas.

Moultrie PO notes that PDM/CFT supports a route which consists of ATXI's Mt. Zion to Kansas Primary Route from Staff's Option #2 substation site to the junction with ATXI's Mt. Zion to Kansas Alternate Route in East Nelson Township and then ATXI's Mt. Zion to Kansas Alternate Route from the junction to Kansas substation, the PDM/CFT Route. Other routes have been proposed in the past in this proceeding by ATXI and Staff from the Staff Option #2 site for the Mt. Zion to Kansas portion of the IRP; however it appears to Moultrie PO that Route MZK-2 and PDM/CFT Route are the

[6] The Commission notes that Moultrie PO included extensive discussion for this segment of the route based on the various Mt. Zion substation locations. As the Commission has opted for Staff Substation Option #2, that portion of Moultrie PO's discussion is all that will be included in the Order.

only routes currently being actively proposed by the parties for use with the Staff Option #2 site.

1. Length of the Line

Moultrie PO states that Route MZK-2 is 8.3 miles (13.4 %) longer in length than Route CHANNON-2. All else being equal, Moultrie PO suggests that the length of a route affects its cost and adverse impact; however, Moultrie PO believes that caution must be used when using length of a route as a factor as often all else is not equal. Moultrie PO submits that this in particular is the case for the segment from Mt. Zion to Kansas.

2. Difficulty and Cost of Construction

To the best of Moultrie PO's knowledge, ATXI's witnesses have not identified any insurmountable difficulties with constructing Route MZK-2 or the PDM/CFT Route. In ATXI's response to data requests, baseline construction cost estimates for Routes MZK-2 and the PDM/CFT Route were provided, and the baseline cost estimate for Route MZK-2 is approximately $15.2 million (12.7%) more than the PDM/CFT Route. Moultrie PO notes that Illinois customers will pay only 9% of the cost of the IRP due to MISO multi-value project cost sharing, therefore, those customers will only pay $1.36 million more in costs for the additional costs for construction of MZK-2 over the PDM/CFT Route.

3. Difficulty and Cost of Operation and Maintenance

To the best of Moultrie PO's knowledge, none of ATXI witness identified any differences between Route MZK-2 and the PDM/CFT Route with regard to the difficulty and cost of maintenance.

4. Environmental Impacts

Moultrie PO witness Reinecke presented routing factors for the Route MZK-2 and the PDM/CFT Route for what he described as minimally disturbed areas in Moultrie PO Ex. 4.2 (RH) at 1 of 1. Moultrie PO notes that minimally disturbed areas were defined as an area within the 500-foot analysis corridor that has the least disturbed land (i.e., deciduous forest, developed open space, emergent herbaceous wetlands, grassland/herbaceous, open water, pasture/hay, and woody wetlands land uses) use that may contain undisturbed natural features. Moultrie PO notes that Route MZK-2 has 40 (11.0%) fewer acres of minimally disturbed areas in the 500-foot study corridor area than the PDM/CFT Route.

5. Impacts on Historical Resources

Moultrie PO has presented routing factors related to historical resources for both Route MZK-2 and the PDM/CFT Route. Moultrie PO states that neither Route MZK-2

nor the PDM/CFT Route impact any National Register Historical Places, Known Historic Structures or Archeological Historic sites. Moultrie PO notes there are three known archeological sites within the 500-foot study corridor for Route MZK-2 and no archeological sites within the 500-foot corridor for the PDM/Channon Route. However, Moultrie PO submits that the Commission previously held that:

> Of [the archeological sites] that may exist, none appear to impair the ability to construct any of the three lines. The MZK route does appear to be marginally preferable in that it is roughly two miles further from the historical Amish areas near the proposed routes.

August 20 Order at 98-99

Mr. Reinecke indicates in his direct testimony that only one of the archeological sites within the 500-foot study corridor of Route MZK is actually crossed by the easement for the Route, and Mr. Reinecke ultimately concluded the presence of this site would not prevent Route MZK from being constructed.

6. Social and Land Use Impacts

Mr. Reinecke also presented routing factors related to social and land use impacts for Route MZK-2 and the PDM/CFT Route in Moultrie PO Ex. 2.2 RH Rev. at 1 and 2. Of the social and land use factors, Moultrie PO notes that ATXI identified the public as favoring the following as some of the high sensitivity factors in Phase I of ATXI's public meetings:

- Cemeteries
- Churches
- Prime Farmland
- Schools

Moultrie PO states that Route MZK-2 and the PDM/CFT Route have no churches or cemeteries within their 500-foot study corridors, and there is one school site along Route MZK-2 versus three school sites along the PDM/CFT Route. Moultrie PO notes that Route MZK-2 has 80.0 (4.7%) more acres of Prime Farmland, within its 500-foot study corridor, than the PDM/CFT Route.

Moultrie PO believes it should also be noted that Route MZK-2 is in proximity to the Tuscola Airport; Moultrie PO notes the Commission has already taken this fact into account. In the August 20, 2013 Order, the commission concluded,

> Other impacts under this criterion concern two airstrips: the Tuscola Airport along the MZK …. With regard to the Tuscola Airport, while the Commission does not take lightly the concerns of the airport owner, Moultrie PO's witness on this issue is persuasive. Construction of the MZK Route does not appear to be an impediment to the Tuscola Airport's

> continuing operation. Overall, the Commission finds that this criterion favors the MZK Route.

August 20 Order at 99

While Route MZK-2 is located 2070 feet south of the Tuscola Airport, Moultrie PO states that the record shows that Route MZK complies with the Illinois Department of Transportation's rules and regulations on airport hazards. (Title 92, Ch. B, Pt. 16, Sec. 16 of the Illinois Administrative Code). Furthermore, Moultrie PO notes that ATXI witnesses have testified that Route MZK is "constructable." Thus, Moultrie PO suggests that the record shows that Route MZK can be constructed and is consistent with Illinois airport hazard requirements, if those requirements are applicable.

7. Number of Affected Landowners/Stakeholders

To the best of Moultrie PO's knowledge, this information has not been quantified for either Route MZK-2 or the PDM/CFT Route.

8. Proximity to Homes and Other Structures

Moultrie PO indicates that the evidence shows that within 75 to 150 feet, the PDM/CFT Route has 9 residences, while Route MZK-2 has none; and in total, within 500 feet, Route MZK-2 has 19 (61.3%) fewer residences than the PDM/CFT Route. Within 75 feet of the centerline, it appears to Moultrie PO that Route CHANNON-2 has 6 non-residential structures while Route MZK-2 has none, and in total, within 500 feet, Route MZK-2 specifically has 72 (55.8%) fewer non-residential structures than Route CHANNON-2 specifically.

9. Proximity to Existing and Planned Development

Moultrie PO notes that Staff witness Rockrohr has testified in his surrebuttal testimony that Route CHANNON-2 passes through an area of planned development; specifically, Route CHANNON-2 passes through a development area along Highway 121, east of Sullivan. To the best of Moultrie PO's knowledge, Route MZK-2 does not pass through any areas of planned development.

10. Community Acceptance

Moultrie PO states that Route MZK-2 was a compromise among many parties, who include ATXI, Moultrie PO, Village of Mt. Zion, STPL, and Shelby County. Of the 15 parties who represent property owners along any of the routes proposed from Mt. Zion to Kansas, Moultrie PO suggests that only PDM opposes the stipulated route from Mt. Zion to Kansas.

11. Visual Impact

Moultrie PO witness Dauphinais discussed the use of the existing linear features to avoid introducing new visual impact where none already exists. Moultrie PO states that Route MZK-2 parallels 13.7 (1,370.0%) more miles of existing transmission lines than the Route CHANNON-2.40. Moultrie PO notes that the Commission, in its Final Order at page 100, concluded that "Running the two lines parallel to one another will minimize the 345 kV line's visual impact.

12. Presence of Existing Corridors

Moultrie PO notes that Mr. Dauphinais discusses the importance of considering the paralleling of existing linear features in terms of the length of the route not paralleling such features. By example, he showed that this is important because the routes being compared can potentially have significantly different lengths causing a significantly longer route to potentially have less impact than a shorter route because the longer route also has more total miles of paralleling. Moultrie PO states that he also discussed at length that when evaluating such linear feature paralleling, it is important to work from the most significant type of existing linear feature to the least significant type of existing linear feature, and he also explained that not all existing linear features are the same with regard to their degree of visual impact, noise impact, environmental fragmentation and/or agricultural fragmentation.

Moultrie PO believes that the MZK Route is superior to the PDM/CFT Route with regard to paralleling opportunities since existing transmission lines, major roads and railroads represent existing linear infrastructure with much more significant visual impact, noise impact, environmental fragmentation than minor roads, other utility right-of-way or section lines.

Mr. Dauphinais summarized his analysis of opportunities for route paralleling by noting that Route MZK-2 has 5.3 (6.3%) fewer miles not parallel to existing transmission lines than the PDM/CFT Route, thereby increasing the opportunities to minimize incremental adverse impacts. Moultrie PO suggests that only when section lines are added into the analysis does the PDM/CFT Route have less distance not paralleling existing linear features; however this better performance of paralleling section lines is only be achieved by placing a significant number of additional residences both within 150 feet and within 500 feet of the proposed transmission line on the PDM/CFT Route.

D. PDM/CFT Position

PDM/CFT notes that three alternative routes have been proposed on rehearing: (1) the PDM/CFT Route, (2) the Staff route, and (3) the Moultrie PO route. PDM/CFT states that Staff witness Rockrohr testified that the CFT and Staff routes are nearly identical. PDM/CFT notes that both of these routes are simply combinations of ATXI's own routing segments, while the Moultrie PO route was proposed by Moultrie PO as an alternate route, to which ATXI later stipulated.

1. Length of Line

PDM/CFT notes that on rehearing, Moultrie PO's route not only remains the longest of the competing routes, with Staff's recommendation of the Option 2 substation sites, the length differential between Moultrie PO's route, as compared to the CFT and Staff routes, becomes even greater. PDM/CFT states this factor unequivocally favors the CFT and Staff routes.

PDM/CFT opines that Staff witness Rockrohr testified that where routes are equal in all other ways and length is the only difference; a longer route will have more negative impacts. PDM/CFT suggests that in order to avoid Moultrie County, the Moultrie PO route travels 13.5 miles off course, heading approximately 6.75 miles north to a point north of US Rt. 36, and then all of that same distance back south, before the Moultrie PO route even begins to transit the distance between Mt. Zion and the Kansas substation. PDM/CFT notes that Mr. Rockrohr testified that adoption of the Moultrie PO route would defeat the purpose in developing the more southern substation locations.

2. Difficulty and Cost of Construction

The Commission found that the Moultrie PO route had the lowest overall construction costs, despite its length (Order at 98), however PDM/CFT argues that this conclusion is no longer supported by the record, as ATXI has estimated the construction of the competing routes and found that the baseline construction cost of the Moultrie PO route is $17,000,000 higher than the baseline construction cost of the PDM/CFT and Staff routes.

PDM/CFT notes that Mr. Rockrohr agreed that the Moultrie PO baseline cost is about $17,000,000 more than the CFT and Staff route. Staff also did not note any unique features of either route that would make one route more difficult to construct than the other, therefore PDM/CFT suggests this factor clearly favors the CFT and Staff routes over the Moultrie PO route. In addition, Mr. Rockrohr agreed with the testimony of ATXI witness Trelz that on a route that is nine miles longer in length, there would be approximately 48 to 50 more structures and spans to construct. PDM/CFT notes that ATXI also agrees that the Moultrie PO route is more costly.

3. Difficulty and Cost of Operation and Maintenance

PDM/CFT notes that the Commission found in the underlying proceeding that the difficulties associated with the operation and maintenance of the competing routes did not appear to vary significantly (Order at 98). PDM/CFT suggests that the evidence on rehearing no longer supports this conclusion. PDM/CFT states that the evidence shows that problems caused by constructing parallel transmission lines can be avoided if sufficient space is provided between the lines; the testimony on rehearing is that the easement for the Moultrie PO route is immediately adjacent to the easements for the existing transmission lines.

PDM/CFT believes that with the Moultrie PO route sufficient space has not been provided to avoid or mitigate the problems caused by parallel transmission lines, as well as needing approximately 50 additional support structures and spans than the PDM/CFT Route. PDM/CFT submits that Staff confirms there is no spacing between the Moultrie PO route and existing lines. PDM/CFT argues that Moultrie PO's design of abutting easements for one-fifth of its route length should give the Commission pause in light of such concerns.

Staff testified that a longer route is more costly to operate and maintain. Mr. Rockrohr stated his opinion that if the following three factors are present – (1) one line is shorter than the other, (2) both transmission lines have the same basic design, and (3) both transmission lines cross land with similar characteristics, he would expect the shorter line to have lower maintenance costs. PDM/CFT argues each of those factors are present here, thereby favoring the PDM/CFT Route. PDM/CFT notes that ATXI has presented during this proceeding concerns about paralleling lines, such that ATXI considers these concerns so significant that it deemed them to be the "determinative factor" in ATXI's recommendation on the Meredosia to Pawnee segment.

PDM/CFT notes that ATXI witness Hackman testified that paralleling does not reduce operation and maintenance expenses. He testified that with paralleling lines, maintenance of either line may require both lines to be taken out of service due to their proximity. Mr. Hackman testified that paralleling is "undesirable from an operations perspective" for this reason, and having two lines down risks the reliability of the system at large. He also noted that adjoining rights of way are susceptible to common-mode failures, such as weather events.

Based on the evidence presented, the PDM/CFT and Staff routes clearly outperform the MPCO route on all components of this factor. Operational concerns over paralleling existing lines and the lack of spacing from those lines, proportionate increase in costs of the longer line, multiple crossing of existing lines, additional structures and spans required to be maintained, less accessibility to the line, and greater exposure on the longer line all favor the PDM/CFT and Staff routes on this factor.

4. Environmental Impacts

The Commission found in the underlying proceeding that the competing routes were comparable in terms of environmental impact (Final Order, p. 98), however on rehearing, PDM/CFT notes the Moultrie PO route is now even longer than it was in the underlying proceeding, and the PDM/CFT and Staff routes are miles shorter than the competing routes in the underlying proceeding, which results in over nine additional miles of adverse environmental impact on the Moultrie PO route.

ATXI and Staff both testified that shorter routes have less environmental impacts. ATXI witness Murphy testified with respect to another segment of the transmission

project that the competing routes had no unique environmental considerations, but that the shorter route "would result in incrementally less ground disturbance". Mr. Rockrohr testified that he agreed that statement would be true for comparing any two routes. Mr. Rockrohr also testified that, aside from length, he was not aware of any unique differences between the routes on the Mt. Zion to Kansas segment regarding environmental impacts.

PDM/CFT suggests there has already been testimony submitted of specific environmental impacts on the Moultrie PO route; while there is no such testimony regarding the CFT/Staff routes. PDM witness Howard Kamm testified that Moultrie PO's route (1) will cut directly through a registered native American archeological site that is on file with the University of Illinois Archeological Survey and has yielded many important artifacts dating back thousands of years, (2) will require a grove of over 100 hybrid black walnut trees he planted 25 years ago to be cut down, and (3) will require the clearing of forest areas in the floodplain of the Lake Fork River.

Based on all of the evidence and testimony submitted during this case, and most notably the fact that the Moultrie PO route is 9 miles longer, PDM/CFT opines that the CFT and Staff routes clearly outperform the Moultrie PO route in regard to avoidance of environmental impacts.

5. Impacts on Historical Resources

The Commission found that because the Moultrie PO route "is roughly two miles further from the historical Amish areas," it was "marginally preferable" (Final Order, p.99). PDM/CFT argues this conclusion is not supported by the evidence on rehearing, and the evidence shows that the Moultrie PO route is much closer to the historic Amish area of Arthur than the PDM/CFT and Staff routes, and it appears that the Moultrie PO Route is about three miles from Arthur, as opposed to the PDM/CFT Route which is about eight miles away. PDM/CFT notes that its witness Bob Doan testified as to the impact the Moultrie PO Route would have on the traditional Amish area of Arthur.

PDM/CFT avers that there is also specific testimony in the record of a Native American site dating back thousands of years on the Moultrie PO route; while no such testimony was presented regarding the PDM/CFT/Staff routes.

Based on the fact that the Moultrie PO route runs through the historic Amish area, and right through a registered Native American archeological site, PDM/CFT believes it is clear that the PDM/CFT and Staff routes outperform the Moultrie PO Route in regard to avoidance of impacts on historical resources.

6. Social and Land Use Impacts

PDM/CFT notes that in the underlying proceeding, the Commission found that this criterion favored the Moultrie PO Route as it affected the least amount of farmland,

and it would not affect the Tuscola Airport. PDM/CFT argues that the evidence on rehearing has shown that this criterion now favors the PDM/CFT Route.

PDM/CFT notes that Dr. Tom Emanuel, Director of the Aviation Institute at the University of Illinois, testified that the Moultrie PO route would have an adverse impact on the use of the Tuscola Airport by the students and staff in the University's aviation training program. PDM/CFT opines that Moultrie PO also admits that its route impacts more prime farmland.

PDM/CFT states that both Staff and ATXI testified to the adverse impact caused by splitting farms, and the evidence shows that the Moultrie PO Route splits a total of 103 farm properties, almost four times as many as the PDM/CFT or Staff routes. PDM/CFT suggests that this is not surprising, as Moultrie PO admits that its route takes less advantage of paralleling opportunities such as roads and section lines. Staff witness Rockrohr testified that placing transmission poles in the middle of a cultivated field has a negative impact on those farms. PDM/CFT submits that the Illinois Supreme Court has recognized the adverse impact of splitting farms, and found the Commission erred in granting a certificate for a route that had 7 miles of line "which does not follow fence lines and splits the affected farms." Ness v. Illinois Commerce Commission, 67 Ill.2d 250, 253 (1977).

PDM/CFT asserts that ATXI's routing respects public input and eliminates as much as possible the splitting of farm properties, while the Moultrie PO Route places multiple dead-end turns in the middle of single farm tracts. PDM/CFT argues that another negative impact unique to the Moultrie PO route is that it places multiple severe turns in the middle of single farm tracts.

Based on all the evidence and testimony in the record, the PDM/CFT and Staff routes clearly outperform the Moultrie PO 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 Moultrie PO route on this factor.

7. Number of Affected Landowners and Other Stakeholders

PDM/CFT notes that Staff testified that longer routes have more negative impacts on landowners, and PDM/CFT notes that even Moultrie PO's data shows its route impacts 40% more farmland than the PDM/CFT or Staff routes. PDM/CFT submits that the Moultrie PO Route is also 9 miles longer than the PDM/CFT and Staff routes, and cuts right through the middle of 103 farms, four times as many as the CFT/Staff routes. Also, the Moultrie PO route travels within a half-mile or quarter-mile of multiple communities, resulting in greater impact on a higher number of citizens.

Based on the additional 9 miles of length in the Moultrie PO Route, the Moultrie PO design which more negatively impacts farm owners whose farms are split, and the

proximity of the Moultrie PO route to multiple communities, PDM/CFT believes it is clear that the PDM/CFT and Staff routes outperform the Moultrie PO route in regard to the number of affected property owners and other stakeholders.

8. Proximity to Homes and Other Structures

PDM/CFT notes that the Commission found that this criterion favored the Moultrie PO Route in the underlying proceeding (Final Order, p.99), and PDM/CFT suggests that this is the only factor on rehearing that may marginally favor the Moultrie PO route, but that is not entirely clear, primarily because Moultrie PO never did the detailed, ground level assessment required to accurately identify homes and other structures.

PDM/CFT alleges that Moultrie PO's analysis, based on data points and aerial maps, provides an insufficient basis for the Commission to accept Moultrie PO's structure counts, noting that 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, 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. PDM/CFT argues that these observations apply with equal force to the Moultrie PO route because neither ATXI, nor Moultrie PO, nor Staff, has performed for the Moultrie PO route the same type of ground-level assessment of structures that ATXI performed for its own routing proposals.

With no on-the-ground visual confirmation of the structures, PDM/CFT suggests that Moultrie PO's assertions about their number, location and type cannot reasonably be relied on, and at a minimum, PDM/CFT suggests this lack of clarity in identifying structures cannot warrant approving the 9-mile longer and $17 million more expensive Moultrie PO route as "least-cost," particularly when none of the homes in question need to be removed or relocated. PDM/CFT contends that Moultrie PO concedes there are errors in its listing of residences, non-residential structures and schools.

PDM/CFT believes that Moultrie PO's analysis of "newly impacted homes" is also faulty, noting that Mr. Reinecke appeared to miss transmission lines in his analysis. PDM/CFT suggests that in any event, none of the routes requires the displacement of any home, nor even any structure, and regardless of the exact number of residences impacted by the routes, Moultrie PO witness Reinecke confirmed that the CFT route would not require the displacement of a single residence. PDM/CFT argues that a slight differential in residences impacted by each route, none of which will be displaced, cannot justify the much greater financial cost to ratepayers of the Moultrie PO route.

This factor also cannot justify the greater adverse economic impacts to farmland that the Moultrie PO route has. Staff witness Rockrohr testified that impacts to farmland, from bisecting farms or placing support structures in the middle of cultivated

fields, have an economic cost, just like there is an economic cost associated with placing a line near a residence. PDM/CFT notes that the Moultrie PO easement cuts right through the middle of 103 farm properties, and opines that this more direct, adverse impact to farms far outweighs the incremental impact on residences.

In regard to proximity to homes and other structures, PDM/CFT believes no clear conclusion can be drawn because the Commission is left to make assumptions on data that is demonstrably inaccurate, but that two points are clear: the Moultrie PO route avoids houses by splitting over 100 farm properties, and the structure counts, whatever they may accurately be, do not warrant the $17 million additional cost of the Moultrie PO route.

9. Proximity to Existing and Planned Development

PDM/CFT notes that the Commission found that this criterion did not appear to favor one route over another in the underlying proceeding (Final Order, p.99). PDM/CFT avers that no route outperforms Staff's route on this criterion. Mr. Rockrohr testified that the only reason his proposed Staff route varies from the CFT route is because he made a modification to avoid an impact to a residential development area on the east side of Sullivan, Illinois.

PDM/CFT contends that the Moultrie PO route is closer to more communities than the PDM/CFT or Staff routes, noting the Moultrie PO route runs within a half mile of two separate residential locations in Mt. Zion, within a half mile of Casner, within a quarter mile of LaPlace, within a half mile of Hammond, within a quarter mile of Pierson Station, within three-quarter mile of Atwood, and within three-quarter mile of Tuscola. PDM/CFT argues that Moultrie PO's desire to avoid routing in Moultrie County cannot justify the adverse impacts to all of these communities.

The PDM/CFT and Staff routes clearly outperform the Moultrie PO route in regard to proximity to existing and planned development. The Moultrie PO route would run unnecessarily close to multiple towns, which not only has a strong negative visual impact on these existing developments, but also limits opportunities for growth in all of these communities in the years to come.

10. Community Acceptance

PDM/CFT notes that the Commission found that "several affected communities and stakeholders have not intervened" and on that basis concluded that "the level of support for/lack of opposition to the MZK route at least marginally favors its adoption over ATXI's routes" (Final Order, p.99). On rehearing, PDM/CFT contends that the record no longer supports this conclusion, stating that the PDM/CFT group now consists of over 500 intervenors from every affected community and rural area along the Moultrie PO route. PDM/CFT suggests that there is no comparable opposition to the PDM/CFT and Staff routes, and it appears that no intervenor other than Moultrie PO has submitted testimony in opposition to the PDM/CFT and Staff routes. PDM/CFT also notes that

ATXI witness Murphy testified that after she reviewed the Moultrie PO route, ATXI's routing was the only viable routing from Mt. Zion to Kansas. She also testified as to several reasons why Moultrie PO's route was not viable, and it appears to PDM/CFT that she has never updated this position.

PDM/CFT notes that the PDM/CFT and Staff routes align with the interests of other intervenors, using the ATXI alternate route for the eastern half of the Mt. Zion to Kansas segment, and therefore aligning with the interests of Intervenors Tarble Limestone Enterprises, Coles County Landowners, Reed Interests, and Coles and Moultrie County Land Interests, all of whom stated support for the ATXI alternate route in the underlying proceeding.

Based on the fact that the PDM/CFT and Staff routes not only align with the interests of every intervenor group in this case (other than Moultrie PO), but also with over 500 individual intervenors from every county and community across the Moultrie PO Route, it is clear that the CFT and Staff routes dramatically outperform the Moultrie PO route in regard to community acceptance.

11. Visual Impact

PDM/CFT states that the Commission found that the visual impact factor favored the Moultrie PO Route, because nearly one-quarter of the route paralleled an existing transmission line. The Commission suggested this would reduce the visual impact that the line would otherwise have in an area previously untouched by transmission lines (Final Order, p.99-100). PDM/CFT argues the evidence no longer supports this conclusion on rehearing, as even if the Commission concluded that the transmission line would have a 50% reduction in visual impact along the fourteen miles of the Moultrie PO Route where it parallels an existing transmission line, the Moultrie PO Route still has a greater visual impact because the Moultrie PO Route is 9 miles longer than the PDM/CFT and Staff routes. Staff also testified that a shorter route has less visual impacts, and Mr. Rockrohr testified that all else being equal on two competing routes, a shorter route will be more favorable than a longer route in terms of visual impacts.

PDM/CFT submits that it's and Staff's routes clearly outperform the Moultrie PO Route in regard to avoidance of visual impacts. The Moultrie PO route is 9 miles longer, would have 50 additional towers and spans, travels in close proximity (one-quarter to one-half mile) of multiple towns, and places six ninety-degree turns right at the northern gateway to the Amish community. PDM/CFT submits that all of these adverse visual impacts can be avoided by adoption of the CFT or Staff routes.

12. Presence of Existing Corridors

PDM/CFT notes that the previously found that this factor favored the Moultrie PO route (Final Order, p.100) because "the MZK route, as noted above, follows an existing 138kV line for nearly one-quarter of its length" and because "ATXI indicates as well that

a 345kV line corridor had been previously acquired elsewhere along the MZK route." The Commission further found that "the record does not reflect whether any of the three routes are immediately adjacent to any other corridors."

PDM/CFT suggests that on rehearing, the evidence does not support these conclusions, noting that Moultrie PO admits that the CFT and Staff routes take more advantage of paralleling opportunities than does the Moultrie PO route. Second, as PDM witness Burns has testified, the Moultrie PO route bisects over 100 farm properties, as compared to the PDM/CFT and Staff routes which bisect only 28 farm properties, a reflection of the fact that the PDM/CFT and Staff routes are superior in taking advantage of paralleling opportunities along roads and section lines. Also, PDM/CFT states that there is no evidence of any 345kV line corridor "elsewhere along the MZK route." Accordingly, the undisputed evidence in the record on rehearing shows that this factor favors the PDM/CFT and Staff routes.

PDM/CFT suggests that the evidence shows that roads and section lines are existing corridors that should be utilized, noting that Mr. Rockrohr testified that the existing corridors could be any number of things, including roads and section lines, as well as transmission lines. Ms. Murphy also testified that the linear features that ATXI focused on as opportunities were property lines, section lines, and roads. Testifying in connection with the Sprague "hitch" on a different segment of the transmission line, PDM/CFT notes that Ms. Murphy testified that the routing design behind the hitch was to "try to run along the cultivated boundaries so as to impact properties the least amount" as opposed to "cutting right through the middle of one of those properties".

PDM/CFT notes that most of its route follows existing corridors, bisecting only 28 farm tracts; while only one-half of the Moultrie PO Route follows existing corridors, and bisects 103 farm tracts. PDM/CFT suggests that Moultrie PO's route design disregards the public's preference for routing along roads, section lines and property lines. PDM/CFT contends that even if the 14 miles of parallel transmission lines on the Moultrie PO Route is considered an advantage that advantage is lost by the 13.5 mile detour to the north that the Moultrie PO route takes. As the Commission, Staff and ATXI have all noted, route design that parallels existing transmission lines has numerous drawbacks. It is one thing to argue, as on the Meredosia to Pawnee segment that the drawbacks of paralleling existing lines are offset by a substantial savings in route length and cost, however in this instance PDM/CFT notes that the drawbacks of paralleling on the Moultrie PO route are in addition to more length and more cost.

PDM/CFT argues that the PDM/CFT and Staff routes clearly outperform the Moultrie PO route in regard to the use of existing corridors, while Moultrie PO's routing does not respect the public's stated preference for routing along roads, section lines and property lines.

E. Corley Position

Edward Corley and the Edward Corley Trust ("Corleys") indicate that they support the ATXI-Moultrie PO proposed route from Mount Zion to Kansas. The Corley's indicate they own properties in Seven Hickory Township, Coles County, Illinois. The first property consists of 80 acres, which ATXI's Primary Route crosses at the north border, while the second property consists of 135.78 acres which ATXI's Alternate Route splits in two. The Corley's suggest there was no evidence submitted by any of the intervenors to change the original decision of the Commission.

The Corley's objects to ATXI's petition because of its intrusion on prime Illinois farmland, claiming that if the Commission grants the Petition, there will be numerous farmers who will be adversely affected by significant obstacles transmission lines present for a farmers farming operations. If the Commission grants the Petition, then the Corley's requests that the Commission utilize the ATXI-Moultrie PO Route because of the negative impact that ATXI's Primary and Alternative Route will have on the Corley's farming operations. The Corley's state that there has been testimony in this docket regarding the negative environmental impact on farming operations, which include:

1. Soil Compaction: The transmission line towers will involve disrupting the soil. When construction equipment is continually operated over farm ground, there is a loss of yield at the location of the construction. When a person operates heavy equipment over farm ground, it impacts the ability of plant roots to penetrate to the soil to reach water and nutrients (e.g., fertilizer), which results in lesser or no yield. There has been testimony that the soil will experience a reduction in yields for up to seven years.

2. Drainage: Corley has drainage tiles in the vicinity of the proposed Primary Route. The construction of the lines will likely disrupt or destroy the drainage tiles.

3. Field Efficiency: The possible placement of transmission line towers on the property will have a negative impact on field efficiency.

4. Weed Control: If the towers are placed on the Property, Corley will have to perform weed control on and around the towers. The presence of weeds reduces yield because the weeds will consume water and nutrients otherwise utilized by the corn or soybeans.

The Corley's assert that ATXI's Proposed Route has the least impact on agriculture, overall. As set forth in the Donnell Murphy's chart, ATXI Ex. 3.1 (RH), the ATXI-Moultrie PO Route impacts the least amount of prime farmland as compared to ATXI's proposed primary or alternative routes.

Finally, the Corley's note that ATXI's alternate route splits their 135 Acre farm in two, and assert that the Commission should take into account the negative impact of farm splitting when considering the route. In this instance, ATXI's proposed Alternative Route literally splits the Corley farm in half, which makes Corley's farming operations inefficient, and will diminish the value of his property.

F. Louis Brock-Jones Limited Partnership Position

The Louise Brock-Jones Limited Partnership (the "LBJ Partnership") supports ATXI's proposed route from Mount Zion to Kansas. The LBJ Partnership owns approximately 240 acres of farmland in Coles County, which is located on ATXI's originally proposed Primary Route. Because the proposed transmission line will have an adverse impact on the Partnership's farming operations, the Partnership respectfully requests the Commission deny ATXI's Petition, but if the Commission grants ATXI's Petition, the Commission should adopt ATXI's proposed route as depicted in Figure 5 of Donnell Murphy's Direct Testimony on Rehearing (ATXI Ex. 3.0 (RH)) (the "ATXI-Moultrie PO Route") for this portion of the project.

The LBJ Partnership objects to ATXI's petition because of its intrusion on prime Illinois farmland. If the Commission grants the Petition, there will be numerous farmers adversely affected by significant obstacles the transmission line presents for a farmers farming operations.

If the Commission grants ATXI's Petition, then the LBJ Partnership requests that the Commission utilize the ATXI-Moultrie PO Route because of the negative impact that ATXI's Primary Route will have on the LBJ Partnership's farming operations. The negative environmental impacts on the LBJ Partnership's farming operations are as follows:

1. Soil Compaction: The transmission line towers will involve disrupting the soil. When construction equipment is continually operated over farm ground, there is a loss of yield at the location of the construction. When a person operates heavy equipment over farm ground, it impacts the ability of plant roots to penetrate to the soil to reach water and nutrients (e.g., fertilizer), which results in lesser or no yield. The Partnership is of the opinion that the soil will experience a reduction in yields for up to seven years.

2. Drainage: The Partnership has drainage tiles in the vicinity of the proposed Primary Route. The construction of the lines will likely disrupt or destroy the drainage tiles.

3. Aerial Spraying: The Partnership uses aerial spraying in its farming operations. The proposed placement for the Primary transmission line route will split the Property identified in Exhibit 1.1 in half. Both sides of the Property are used for agricultural purposes. The transmission line will

make it difficult or impossible to conduct effective aerial spray applications. The Partnership does top air spraying which is 100 feet wide. Certain corn hybrids do need a fungicide application done by airplane at the time of tassel, which is done every year.

4. Field Efficiency: The possible placement of transmission line towers on the property will have a negative impact on field efficiency.

5. Weed Control: If the towers are placed on the Property, the Partnership will have to perform weed control on and around the towers. The presence of weeds reduces yield because the weeds will consume water and nutrients otherwise utilized by the corn or soybeans.

Moreover, the LBJ Partnership believes that the ATXI-Moultrie PO Stipulated Route has the least impact on agriculture, overall. As set forth in the Donnell Murphy's chart, ATXI Ex. 3.1 (RH), the ATXI-Moultrie PO Route impacts the least amount of prime farmland as compared to ATXI's proposed primary or alternative routes.

The LBJ Partnership acknowledges that its concerns are not necessarily unique given the large number of farmers impacted by ATXI's Petition; however the LBJ Partnership believes that ATXI's proposed Primary Route will have a greater negative impact on its property because this route splits the subject farm. By splitting this farm, the LBJ Partnership asserts it will incur long term aggravation and annoyance that other farmers may not experience if the transmission line simply follows the edge of their property. Given the foregoing, the LBJ Partnership believes that the ATXI-Moultrie PO Stipulated Route identified in Figure 5 of Donnell Murphy's Direct Testimony on Rehearing (ATXI Ex. 3.0 (RH)) best balances the concerns raised by the Intervenors in this docket.

G. Commission Conclusion

The Commission has reviewed each party's position for this segment of the project, and believes each has attempted to summarize the evidence as it has been presented. The Commission will again express its dismay regarding the apparent confusion regarding the number of homes and other buildings impacted by each proposed route. The Commission notes that this proceeding has been going on for over a year, and it seems that it is still not settled on where a home is in relation to a proposed route, and whether it will be impacted or not. The apparent reliance on Google Earth™ to determine such issues, while less expensive, seems a questionable practice to the Commission. With that being said, the Commission will attempt to analyze the criteria it has previously considered in determining the most appropriate choice.

As to the "Length of the Line," or the "Difficulty and Cost of Construction," it appears uncontroverted that the PDM/CFT and Staff Routes are preferable to the

Moultrie PO Route. As to the "Difficulty and Cost of Operation and Maintenance," it appears there is no material difference between the routes in question.

In regards to the issue of "Visual Impact," the Commission notes that each route will consist of the same type of construction, across mostly the same type of property. The route supported by Moultrie PO, ATXI, the LBJ Partnership and the Corley's is longer; a portion of that extra length will parallel an existing transmission line, thereby mitigating some of the visual impact from the extra length. The Commission believes there is little difference between the routes in considering this criterion.

When considering the criterion of "Community Acceptance," the Commission accepts that it is unclear exactly what should be considered, and how it should be determined which route has more "Community Acceptance." Moultrie PO and ATXI note that they have come to an agreement on a route, and it is supported by certain other intervenors. PDM/CFT points to the number of landowners that have joined its petition in this proceeding. In considering the evidence presented in this proceeding, the Commission believes there is no clear preference between the routes presented.

The Commission will next turn its attention to "Environment Impacts," one of the more contested areas for this segment of the project. ATXI and Moultrie PO claim that the route they support has fewer wooded acres involved, as well as paralleling in part an existing transmission line. PDM/CFT argues that as the route it supports is shorter, the environmental impact should be lessened, and suggests that the area where the Moultrie PO Route will be located threatens a forested flood plain, as well as a grove of hybrid black walnut trees. The Commission believes based on the evidence presented, that neither route is clearly preferable to the other when considering "Environmental Impacts."

When considering "Impacts on Historical Resources," the Commission notes that it previously found that no impacts would impair the ability to construct the Stipulated Route supported by Moultrie PO and ATXI, or ATXI's Primary or Alternate Routes. PDM/CFT suggests on rehearing that the Moultrie PO Route will come too close to the "Amish community" in Arthur and will impact tourist trips to the area. ATXI believes that both routes are approximately the same distance from Arthur, and the impact will depend on which direction a person takes in traveling to Arthur to determine which route is preferable in regards to Arthur. Although there is a suggestion of historical artifact sites in the Moultrie PO Route path, the Commission accepts ATXI's assertion that it can span any sites and will obtain any required permits or approval before construction. The Commission will again express its frustration that after months of testimony and investigation, there is dispute between the parties as to which route is closer to a town such as Arthur. This seems a basic fact that should not be subject to interpretation. After considering the evidence presented, the Commission is unable to determine any clear preference between the routes based on the criterion of "Impacts on Historical Resources."

In considering the criterion of "Social and Land Use Impact," the Commission notes that it found that this criterion favored the Moultrie PO Route as it affected the least amount of farmland, and it would not affect the Tuscola Airport. PDM/CFT now argues that the evidence on rehearing has shown that this criterion now favors the PDM/CFT Route. Moultrie PO contends, however, that its evidence shows that the Moultrie PO Route will not conflict with the Tuscola Airport, despite the testimony from the PDM/CFT witness. The Commission notes that this witness apparently uses the airport in question, and is not an official associated with the airport. It appears from the evidence that the route with which Moultrie PO has presented the Commission will impact more farmland, being longer, and also appears to split more farms, rather than traveling along roads or section lines. The Commission believes that the evidence presented shows that there is a preference for the PDM/CFT and Staff Routes when considering this issue.

When considering the criteria of "Number of Affected Landowners and Stakeholders," "Proximity to Homes and Other Structures," and "Proximity to Existing and Planned Development," the Commission notes that a great deal of time was spent by the parties at hearing attempting to determine how many houses and where buildings were in relation to the proposed routes. Staff suggests that the PDM/CFT and Staff Routes would be closer to more residences, which is noted in ATXI's table on this issue. The Commission also notes that PDM/CFT believes the evidence presented is questionable, and that various structures were missed along the Moultrie PO Route. PDM/CFT also contends that the greater length of the Moultrie PO Route means it will necessarily affect more landowners. PDM/CFT also lists several apparently small towns to which the Moultrie PO Route comes in proximity. Without evidence of specific developments planned in those various smaller communities, the Commission is hesitant to give that argument much weight. Regardless of which route is approved, the Commission notes that the evidence does not appear to reflect that any residences will need to be removed. The Commission is unable to find, based on the evidence presented, that either route is preferable when considering these criteria.

The last criterion to consider is the "Presence of Existing Corridors." All parties agree that the Moultrie PO Route parallels US Highway 36 and existing transmission lines for a portion of its length. The Commission notes that PDM/CFT argues that this runs counter to ATXI's arguments on the Meredosia-Pawnee segment, where ATXI argued that paralleling raised possible costs of construction, raised the risk of dual outage, and in some cases made maintenance more difficult. In contrast, PDM/CFT suggests that its route follows more natural corridors, such as roads and section lines, while impacting far fewer landowners. The Commission finds that it must agree with PDM/CFT that its route is preferable to the Moultrie PO Route when considering this criterion. The PDM/CFT route follows more corridors such as property lines, section lines, and roads, while avoiding the dangers of parallel lines that ATXI has previously argued is an adverse attribute. The Commission also notes that the PDM/CFT Route apparently affects fewer landowners and is shorter.

Based on the evidence presented to the Commission on this segment of the project, the Commission believes that the preferable route is the PDM/CFT Route with Staff's modification. It is clearly the least-cost option which has been presented to the Commission, it presents no difficulties in construction or maintenance, and affects fewer property owners than the other options presented. It also appears to better utilize existing corridors such as roads, section lines, and property lines.

XI. SUBSTATIONS

A. Resolved

The Commission previously declined to approve new or expanded substations at Kansas, Sidney, and Rising in the August 20, 2013 Order, but noted that it would revisit the issue "should new or additional evidence be presented to the Commission on rehearing . . . demonstrating the necessity of such a substation." Rehearing presented the opportunity for ATXI to further explain the need for new or expanded substations. Staff now agrees that ATXI's proposed substations should be approved at Kansas, Sidney, and Rising.

1. Kansas Substation Site

ATXI contends that AIC's existing substation at Kansas is undersized to meet the needs of the project; therefore, ATXI plans to install a 345 kV breaker-and-a-half bus, a second 345/138 kV transformer, a 138 kV bus, and associated equipment at an expanded Kansas substation. ATXI states that the breaker-and-a-half configuration was specified for the Kansas substation because the substation will initially have six connections, and good engineering practice dictates a breaker-and-a-half configurations in new 345 kV buses that have, or are likely to have, five or more connections, Because space is not available to accommodate this configuration, ATXI has acquired property rights for 30 acres adjacent to the existing Kansas substation. Staff indicates it has no objection to ATXI's plans to expand the Kansas substation to install a six-position 345 kV bus with a breaker-and-a-half configuration.

The Commission finds that the evidence shows that the expansion of the Kansas substation site is required for the project, and that the evidence presented on rehearing is sufficient to approve this substation.

2. Sidney Substation Site

ATXI states that the Sidney substation presents issues similar to the Kansas substation. In Sidney, ATXI must install a 345 kV breaker-and-a-half bus, a second 345/138 kV transformer, a 138 kV bus, and associated equipment. Again, ATXI states that the breaker-and-a-half configuration was specified because the Sidney substation will initially have five connections. As in Kansas, there is not enough land at the Sidney site to accommodate this configuration. ATXI notes it has acquired property rights for

39 acres adjacent to the existing Sidney substation, where the new equipment can be installed. Staff agrees that expansion of the site is necessary.

The Commission finds that the evidence shows that the expansion of the Sidney substation site is required for the project, and that the evidence presented on rehearing is sufficient to approve this substation.

3. Rising Substation Site

ATXI states that the need to expand the Rising substation also arises from a lack of space necessary to accommodate a breaker-and-a-half configuration. ATXI notes that while the Rising substation will have fewer than four connections initially, ATXI anticipates that additional connections will likely be made in the future because of the substation's proximity to new generation resources and the MISO-PJM seam. ATXI asserts that what is different about Rising in comparison to the other two substations is that enough real estate is available at the existing AIC Rising substation to accommodate additional equipment. Staff indicates that it has no objection to ATXI's plans to expand the Rising substation.

The Commission finds that the evidence shows that the expansion of the Rising substation site is required for the project, and that the evidence presented on rehearing is sufficient to approve this substation.

B. Contested

1. Ipava Substation Site

a. ATXI Position

ATXI notes that the Commission previously found that AIC's existing Ipava substation was "sufficiently sized and capable of expansion such that it could handle the additional facilities required" by the project. (Order at 55) ATXI suggests that the evidence presented on rehearing now shows otherwise.

ATXI states that Staff and ATXI agree that the buildable area at the existing AIC Ipava substation is not large enough to accommodate a six-position 345 kV breaker-and-a-half bus. Staff, however, believes that a substation capable of expansion to six positions is "wholly unnecessary," and recommends instead that ATXI terminate the Meredosia to Ipava transmission line at AIC's existing Ipava substation, after expanding that substation to accommodate a four-position ring bus. ATXI notes that AIC's existing Ipava substation currently has two connections, and the Illinois Rivers Project would add a third, leaving only one spare connection.

While Staff's proposal for a scaled-down Ipava substation would meet the immediate needs of the Project, ATXI notes that it would not meet future needs for additional connections that could occur at Ipava. ATXI suggests that due to its location

near the MISO-PJM seam or due to potential system upgrades needed following generation retirements, expansion is likely in the future. ATXI's proposal would meet both immediate and future service needs. Although the new substation property would be configured to be expandable to accept six connections, ATXI states that only the four ring bus connections will be included in the project costs. ATXI contends it is far more economical to plan for six connections now than to build only four connections now, and an entirely new substation when it becomes necessary to have additional connections. ATXI recommends the Commission approve ATXI's planned Ipava substation.

b. Staff Position

Staff believes that ATXI does not need to construct a new substation east of AIC's existing substation just because its costs for doing so would be shared across MISO. Staff notes that ATXI could install a four-position ring bus at AIC's existing substation and still have a spare position for a future 345 kV connection.

Staff notes that ATXI continues to seek approval to construct an entire new substation east of the existing AIC substation and Staff continues to object to ATXI's request. Staff opines that ATXI states it would initially install a four position ring bus at its new substation, however, Staff suggests that a four-position ring bus could instead be installed at AIC's existing substation. Staff's recommendation of terminating ATXI's 345 kV transmission line at AIC's existing substation rather than at a new ATXI substation would provide a spare 345 kV position for some yet undetermined potential future need. ATXI seeks to instead construct an entirely new substation east of AIC's existing Ipava substation that could be expanded to a 6-position breaker-and-a-half configuration and thus provide up to three spare 345 kV positions for yet undetermined potential future needs.

Staff avers that ATXI's only justification for including the unnecessary new substation as part of the Illinois Rivers Project is that, though there presently is no known need, expansion to more than four positions may someday be necessary and it would be more economical to construct a six position bus structure now. Staff recommends that the Commission not approve ATXI's construction of an entirely new substation at Ipava that is unnecessary now and for which there is no known or foreseeable future need.

c. Commission Conclusion

The Commission notes that ATXI is proposing a new substation for the Ipava location of the project based on expected future demand for transmission at this location. Staff believes that this expansion is unnecessary at this time, and the future need is undetermined at this time. ATXI plans to build a new substation at this time and install a four position ring bus. The substation would be sized to accommodate a future six position breaker-and-a-half configuration to allow for up to three spare 345kV positions.

While the Commission appreciates Staff's concern, it seems somewhat short-sighted, and perhaps a false economy to limit the Ipava substation as Staff desires. The Commission believes the better course based on the evidence presented is to approve the ATXI plans for the Ipava substation. It appears to the Commission that in the long-run this will be the least-cost alternative.

2. Pana Substation Site

ATXI believes that the need for a new Pana substation is not contested, once the issue of whether the project should be routed through Pana or Kincaid is resolved. As far as ATXI is aware, no party disputes that if the Commission approves routes in and out of Pana, a new Pana substation is necessary.

As previously discussed, Staff supports a route between Pawnee and Mt. Zion via Kincaid for the project, so that no new substation at Pana would be required as part of this project. Staff notes that ATXI has determined that subsidence is not occurring at AIC's existing Pana substation, and Staff does not understand that relocation is justified at this time. If, however, the Commission determines that ATXI should construct its transmission line from Pawnee to Pana to Mt. Zion, Staff indicates that the substation site or design that ATXI proposes is unobjectionable.

The Commission notes that it has earlier determined on rehearing that the route for the project should go from Pawnee to Pana, as opposed to the route supported by Staff. As such, it appears that there is no dispute between ATXI and Staff regarding the substation at Pana. The Commission therefore finds that the evidence presented supports ATXI's plans for the Pana substation, and they are approved for this proceeding.

XII. FINDINGS AND ORDERING PARAGRAPHS

Having given due consideration to the entire record, the Commission is of the opinion and finds that:

(1) ATXI is a public utility pursuant to the Act;

(2) the Commission has jurisdiction over ATXI and the subject matter of this proceeding;

(3) the facts recited and legal argument identified as the parties' respective positions are supported by the record;

(4) the facts recited and conclusions of law reached in the Commission conclusion are hereby adopted as findings of fact and conclusions of law for purposes of this Second Order on Rehearing;

(5) the route for the transmission line segment between the Meredosia and Pawnee, Pawnee and Pana, Pana and Mt. Zion, and Mt. Zion and Kansas

should be approved along the routes identified in the prefatory portion of this Second Order on Rehearing and shown in the Appendices hereto;

(6) the proposed new or expanded substations at Kansas, Sidney, Rising, Ipava, Pana, and Mt. Zion should be approved at the locations identified in the prefatory portion of this Second Order on Rehearing and shown in the Appendices hereto;

(7) pursuant to Section 8-406.1(f)(1) of the Act, the Commission finds that the portions of the project approved for the first time herein are necessary to provide adequate, reliable, and efficient service to the public utility's customers and is the least cost means of satisfying the service needs of the public utility's customers or that the project will promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives;

(8) pursuant to Section 8-406.1(i) of the Act, ATXI is authorized, pursuant to Section 8-503 of the Act, to construct the high voltage electric service line, the new and expanded substations, and related facilities as approved by the Commission in the prefatory portion of this Second Order on Rehearing;

(9) all other findings and conclusions contained in the August 20, 2013 Order should remain unchanged; and

(10) all motions, petitions, objections, and other matters in this proceeding which remain unresolved should be disposed of consistent with the conclusions herein.

IT IS THEREFORE ORDERED by the Illinois Commerce Commission that the Certificate of Public Convenience and Necessity issued to Ameren Transmission Company of Illinois pursuant to Section 8-406.1 of the Public Utilities Act on August 20, 2013 in this docket is hereby replaced with the following:

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

IT IS HEREBY CERTIFIED that the public convenience and necessity require (1) construction, operation, and maintenance by Ameren Transmission Company of Illinois of segments of a 345 kV electric transmission line over routes found appropriate at locations shown on Appendix B and legally described in Appendix C attached hereto, as well as new substations at locations approved in Docket No. 12-0598, and (2) the transaction of an electric public utility business in connection therewith, all as set forth in the August 20, 2013 Order and February 20, 2014 Second Order on Rehearing in Docket No. 12-0598.

IT IS FURTHER ORDERED that pursuant to Section 8-503 of the Act, Ameren Transmission Company of Illinois is authorized to construct the high voltage electric service line, the new and expanded substations and related facilities as described in the prefatory portion of this Second Order on Rehearing.

IT IS FURTHER ORDERED that all other findings and conclusions contained in the August 20, 2013 Order remain unchanged.

IT IS FURTHER ORDERED that all motions, petitions, objections, and other matters in this proceeding which remain unresolved are disposed of consistent with the conclusions herein.

IT IS FURTHER ORDERED that subject to the provisions of Section 10-113 of the Act and 83 Ill. Adm. Code 200.880, this Second Order on Rehearing is final; it is not subject to the Administrative Review Law.

By order of the Commission this 20th day of February, 2014.

(SIGNED) DOUGLAS P. SCOTT

Chairman