ATXI Exhibit 9.0 (2d Rev.)

ILLINOIS COMMERCE COMMISSION

DOCKET No. 12-0598

SECOND REVISED DIRECT TESTIMONY

OF

RODNEY FRAME
ANALYSIS GROUP, INC.

Submitted On Behalf

Of

AMEREN TRANSMISSION COMPANY OF ILLINOIS

FEBRUARY 11, 2013

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I. INTRODUCTION, PURPOSE AND SUMMARY OF CONCLUSIONS

Q. Please state your name, business address and position.

A. My name is Rodney Frame. I am employed by Analysis Group, Inc. ("Analysis Group"), where I was a Managing Principal until July 1, 2011, at which point I became an Affiliate. Analysis Group is a firm that provides microeconomic, strategy and financial analyses. My business address is 1899 Pennsylvania Avenue, N.W., Suite 200, Washington, D.C. 20006. Analysis Group has approximately 570 employees and offices in Beijing, Boston, Chicago, Dallas, Denver, Los Angeles, Menlo Park, Montreal, New York City, San Francisco and Washington, D.C., where I am located.

Q. Please briefly describe your educational and business background.

A. I received an undergraduate degree from George Washington University in Washington, D.C. Also at George Washington, I completed all requirements for a PhD in Economics with the exception of the dissertation. I have been employed by Analysis Group since January 1998. Prior to being employed by Analysis Group, I was a Vice President at National Economic Research Associates, Inc., where I was employed from 1984 to January 1998. My professional experience and qualifications are summarized in my résumé, which is included as ATXI Exhibit

9.1 to this testimony. Most of my professional work has involved consulting with electric industry clients on a variety of matters including restructuring issues, wholesale bulk power markets and competition, transmission access and pricing, contractual terms for wholesale service, mergers and acquisitions, and contracting for generation supplies from non-utility suppliers. I have testified, on numerous occasions on these and related topics, before the Federal Energy Regulatory Commission ("FERC"), state regulatory commissions, federal and local courts, the Armed Services Board of Contract Appeals and the Commerce Commission of New Zealand.

Q. Have you previously submitted testimony to the Illinois Commerce Commission?

A. Yes. I have previously submitted testimony to the Illinois Commerce Commission ("Commission") in Docket Nos. 95-0551, 02-0428, 04-0294 and 05-0160.

Q. On whose behalf are you testifying in the current proceeding?

A. I am testifying on behalf of Ameren Transmission Company of Illinois ("ATXI"), which is a wholly-owned subsidiary of Ameren Corporation ("Ameren").

Q. Are you familiar with the project proposed in the Petition filed by ATXI in this proceeding?

A. Yes. ATXI is seeking a Certificate of Public Convenience and Necessity ("Certificate") and Section 8-503 Order from the Commission authorizing it to construct, operate and maintain a 345 kilovolt (kV) electric transmission line, approximately 375 miles in length (the "Transmission Line"), and related facilities, including the construction or expansion of nine substations, in an area extending from the Mississippi River near Quincy, Illinois eastwards across the state to the Indiana State line, and including portions connecting the Sidney and Rising Substations and the

Meredosia and Ipava Substations. (Such facilities, including substations, together with the Transmission Line, constitute the Illinois Rivers Project.) The Illinois Rivers Project is referred to as the "Project".

Q. What is the purpose of your direct testimony?

A. Section 8-406.1(f)(1) of the Illinois Public Utilities Act (the "Act") includes a requirement that, for the granting of a Certificate for a new high voltage transmission line, the Commission must find that the project for which the Certificate is sought "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." My testimony provides an analysis of the competition-related portions of this requirement of the Act, *i.e.*, the extent to which the Project will "promote the development of an effectively competitive electricity market that operates efficiently… [and]… is equitable to all customers".

Q. Please summarize your conclusions.

A. My competitive analysis focuses on the portion of Illinois located within the footprint of the Midwest Independent Transmission System Operator, Inc. ("MISO") where the Project is to be constructed and located. I refer to this area as the "MISO Illinois region". The MISO Illinois region principally includes the electric systems of Ameren Illinois Company d/b/a Ameren Illinois ("Ameren Illinois"), Southern Illinois Power Cooperative ("SIPCO") and City Water, Light & Power ("CWLP"), the Springfield, Illinois municipal utility. There are also a number of smaller municipal electric and cooperative systems in the MISO Illinois region.

The Project will allow the construction of more generation capacity within the MISO Illinois region (and elsewhere) and, as well, increase import capability into the MISO Illinois region. As a result, there will be more electricity supply available to serve MISO Illinois region customers than in the absence of the Project, and prices in the competitive wholesale electricity markets operated by MISO, including in the MISO Illinois region specifically, will fall. While the price reductions will occur directly in the wholesale market, inevitably the lower wholesale prices will result in lower retail prices as well—as retail suppliers pass on to their customers the lower wholesale bulk power purchase costs they experience as a result of the Project.

In my testimony, I estimate both the amount of additional supply available to serve the MISO Illinois region from the Project and the concomitant lower wholesale electric energy prices. I also provide a conservative estimate of the net reduction in electricity payments made by MISO Illinois region customers taking into account both the lower wholesale electricity prices as well as those customers' expected share of the increased transmission payments required to fund the Project. Based on this evidence about expanded supply, lower wholesale electricity prices and lower net customer payments, I conclude, consistent with the requirements of Section 8-406.1(f)(1) of the Act, that the Project "will promote the development of an effectively competitive electricity market that operates efficiently… [and] … is equitable to all customers."

Q. How is your testimony organized?

A. Section II below provides a high-level description of the Project while Section III describes the analytical techniques that I employ to address the competition-related requirements of Section 8-406.1(f)(1) of the Act. More detailed discussion of certain of the analytical

techniques is contained in ATXI Exhibit 9.2 attached to this testimony. Section IV, along with ATXI Exhibits 9.3 thru 9.6, provides the results from my analysis.

II. DESCRIPTION OF THE PROJECT

Q. What is your understanding of the general proposed route of the Illinois Rivers Project?

A. The general route of the Project is described more completely in the testimony of ATXI witness, Mr. Dennis D. Kramer. (ATXI Ex. 2.0.) My understanding is the Project will be routed from a new substation near Palmyra, Missouri across the Mississippi River to Quincy, Illinois and will continue east across Illinois to Meredosia, Pawnee, Pana, Mt. Zion and Kansas, and then across the Indiana border to Sugar Creek, Indiana, with portions from Sidney, Illinois to Rising, Illinois and from Meredosia, Illinois to Ipava, Illinois. My further understanding is that, in connection with the Illinois portion of the Project, nine substations will be constructed or expanded and six 345/138 kV transformers will be installed.

Q. What is your understanding of the total cost of the Illinois Rivers Project?

A. As indicated in ATXI witness, Mr. Jeffrey V. Hackman's testimony (ATXI Ex. 3.0), the expected total cost of the Project, for the Primary Route, is approximately $1,091,600,000.

Q. What is your understanding of the principal benefits to the electric system that will be provided by the Illinois Rivers Project?

A. These benefits are described in the testimonies of ATXI witnesses, Ms. Maureen A. Borkowski (ATXI Ex. 1.0) (generally), Mr. Hackman (ATXI Ex. 3.0) (operational benefits) and Mr. Kramer (ATXI Ex. 2.0) (reliability benefits). The Project is an integral part of a portfolio of Multi Value Projects ("MVPs") that was approved by MISO's Board of Directors, and that will

enable the reliable delivery of renewable energy, including wind power, within the MISO footprint. The MVP portfolio allows for a more efficient dispatch of generation resources, opening markets to further competition and spreading the benefits of low-cost generation. FERC approved the MVP methodology because it "is an important step in facilitating investment in new transmission facilities to integrate large amounts of location-constrained resources, including renewable generation resources, to further support documented energy policy mandates or laws, reduce congestion, and accommodate new or growing loads."[1]

Q. What are MVPs?

A. MVPs are transmission projects in the MISO footprint that have been "determined to enable the reliable and economic delivery of energy in support of documented energy policy mandates or laws that address, through the development of a robust transmission system, multiple reliability and/or economic issues affecting multiple transmission zones."[2] The costs of

[1] Midwest Indep. Transmission Sys. Operator, Inc., 133 FERC ¶ 61,221 at Para 3 (Dec. 16, 2010 Order).

[2] December 16, 2010 Order, at Para 1. See also the listing of the three MVP criteria in Section II.C.2 of Attachment FF of the MISO Tariff, as follows:

> Criterion 1. A Multi Value Project must be developed through the transmission expansion planning process for the purpose of enabling the Transmission System to reliably and economically deliver energy in support of documented energy policy mandates or laws that have been enacted or adopted through state or federal legislation or regulatory requirement that directly or indirectly govern the minimum or maximum amount of energy that can be generated by specific types of generation. The MVP must be shown to enable the transmission system to deliver such energy in a manner that is more reliable and/or more economic than it otherwise would be without the transmission upgrade.
>
> Criterion 2. A Multi Value Project must provide multiple types of economic value across multiple pricing zones with a Total MVP Benefit-to-Cost ratio of 1.0 or higher ….
>
> Criterion 3. A Multi Value Project must address at least one Transmission Issue associated with a projected violation of a NERC or Regional Entity standard and at least one economic-based Transmission Issue that provides economic value across multiple pricing zones. The project must generate total financially quantifiable benefits, including quantifiable reliability benefits, in excess of the total project costs ….

MVPs are recovered from all load within and exports from MISO via a per mega-watt hour ("MWh") charge.[3]

Q. Is the Project included in MISO's list of approved MVPs?

A. Yes. MISO's MVP Portfolio, Results and Analysis, January 10, 2012 ("MISO MVP Report") is a recently completed comprehensive assessment of a package of 17 MVPs. Of the 17 projects included in this assessment, four comprise the Illinois Rivers Project.[4] The MISO MVP Report recommends that each of the 17 projects, including the four comprising the Project, be approved by MISO's Board of Directors for inclusion in Appendix A of the MISO Transmission Expansion Plan process and implemented. On December 8, 2011, the MISO Board approved this recommendation.

III. DESCRIPTION OF ANALYTICAL APPROACH

Q. Please describe the analytical techniques you employed to provide the competitive assessment pursuant to Section 8-406.1(f)(1) of the Act.

A. As indicated, Section 8-406.1(f)(1) of the Act includes a requirement that the Commission find a project for which a Certificate is being sought "will promote the development of an effectively competitive electricity market that operates efficiently … [and] … is equitable to all customers." Lower prices are one of the essential features of competition, and an event (such as the construction of a major new transmission line) that results in lower prices necessarily is a pro-competitive event. All other things the same, an increase in supply to a market will lower prices in that market, and therefore represents a pro-competitive event for that

[3] See MISO Tariff, Schedule 26A, Multi-Value Project Usage Rate, and Attachment MM, Multi-Value Project Charge.

[4] These four are identified in the MISO MVP Report as Projects 9 (Palmyra Tap-Quincy-Meredosia-Ipava & Meredosia-Pawnee, 10 (Pawnee-Pana), 11 (Pana-Mt. Zion-Kansas-Sugar Creek) and 17 (Sidney-Rising).

market. Adding new transmission capacity to the existing electric system, as the Project will do, will increase electric energy supply in the MISO Illinois region both by allowing more imports and by facilitating the construction of new wind generation capacity.[5] This additional supply will lower prices and, accordingly, is pro-competitive. Thus, almost by definition, the Project will promote the development of an effectively competitive electricity market. In my view, electricity markets in MISO already are effectively competitive, and the construction of the Project can only make them more so.[6]

The approach that I employ to document these pro-competitive effects from the Project largely mirrors the "Part 1/Part 2" analytical approach utilized by witness Dr. Karl A. McDermott in his October 4, 2011 testimony in Docket No. 11-0661 on behalf of American Transmission Company ("ATC") involving ATC's application for a Certificate for its Pleasant Prairie-to-Zion Energy Center 345-kV transmission line. That analysis was found by the Commission to provide "convincing evidence" that the Pleasant Prairie-to Zion Energy Center

[5] Of course, as noted above, as discussed in the testimonies of ATXI witnesses Ms. Borkowski, Mr. Kramer and Mr. Hackman, the Illinois Rivers Project will result in other benefits as well.

[6] That markets in MISO are effectively competitive is something that has been documented on numerous occasions by MISO's Independent Market Monitor (MISO IMM). See, *e.g.*, the 2011 State of the Market Report for the MISO Electricity Markets, prepared by Potomac Economics, the MISO IMM, June 2012, where at page i it states as follows:

> The MISO energy and ancillary service markets generally performed competitively in 2011. Conduct of suppliers was broadly consistent with expectations for a workably competitive market. Our analysis revealed little evidence of potential attempts to exercise market power or engage in market manipulation. The output gap, a measure of economic withholding, declined over the course of the year and averaged less than 0.1 percent of actual load, which is extremely low. Consequently, market power mitigation measures were applied very infrequently.

Similar statements about the competitiveness of the MISO markets are found in the MISO IMM's state of the market reports for 2009 and 2010. Other evidence supporting the competitiveness of MISO's wholesale electricity markets includes FERC's continuing determinations that individual suppliers in MISO lack market power and therefore qualify for market-based rate authority.

transmission line would "promote the development of an effectively competitive electricity market…"[7]

Q. Please describe generally the Part 1 analysis that you conducted.

A. The Part 1 analysis uses the PROMOD IV (PROMOD) market simulation model to estimate future locational marginal prices (LMPs)[8] in MISO and surrounding geographic areas with and without the Project. PROMOD, which is marketed by Ventyx, simulates the operation of the regional generation and transmission system, in so doing reflecting a variety of generator operating characteristics and constraints and transmission system topology and limits. The PROMOD analysis for the Project was conducted by colleagues of mine working under my supervision. Along with the data set that was employed, the PROMOD analysis is described more fully in ATXI Exhibit 9.2 attached to this testimony. The PROMOD market simulation model and the data set employed are identical to those used by MISO in the above-noted MISO MVP Report assessing the 17 projects in the MVP portfolio package.[9]

The hour-by-hour LMP values produced by the PROMOD analysis were used, along with the amount of load served from each of the pricing nodes, to develop load-weighted average wholesale energy prices. The difference between the load-weighted average electric energy prices without the Project and the load-weighted average electric energy prices with the Project represents the wholesale energy price effect from implementing the Project. If this difference is

[7] American Transmission Company LLC, April 10, 2012 Order in Docket No. 11-0661, at page 8.

[8] In MISO, electricity prices are developed for individual "nodes" on the system. These location-specific "nodal" prices commonly are referred to as locational marginal prices or LMPs. Differences in LMPs from location to location occur because of differences in marginal losses as well as the presence of congestion. When congestion is present, it is not possible fully to exploit differences in marginal generating costs at different locations and LMPs in transmission-constrained areas will rise above LMPs outside those transmission-constrained areas.

[9] In this regard, MISO's MVP Report analysis compares the results between the "with 17 MVP" case and a "but for" case that does not include any of the 17 MVPs, whereas the analyses reported on herein compare the results between the "with the Illinois Rivers Project" case and a "without the Illinois Rivers Project" that includes the other 13 MVPs, but not the Illinois Rivers Project (which encompasses four of the 17 MVPs analyzed by MISO).

positive, as turns out to be the case, then this is an indication that the Project will lower average wholesale electric energy prices. As discussed, such a lowering of wholesale electricity prices (which can be expected to flow through to retail customers) is consistent with the requirement of Section 8-406.1(f)(1) of the Act that the Project "promote the development of an effectively competitive electricity market that operates efficiently…" Indeed, as noted, lower prices are the essence of competition and competitive markets.

The PROMOD analyses were run for two future study years, 2021 and 2026, using six different scenarios for each year. These scenarios, which are described further below and which are also used in the MISO MVP Report, contain different assumptions about load growth, natural gas prices, carbon constraints and other policy matters, and therefore allow an assessment of the relative robustness of the study results across a range of possible futures.

Q. Does the PROMOD analysis reflect the complete set of wholesale electricity price benefits from the Illinois Rivers Project?

A. No. The PROMOD analysis quantifies the lower wholesale electric *energy* prices that will result from the Project, but it does not quantify other potential wholesale electricity price benefits such as lower operating reserve costs and lower capacity requirements and prices. Focusing just on wholesale electric energy price comparison results of the PROMOD analysis therefore will understate the full range of price benefits that can be expected from the Project.

Q. What geographic region is covered by the PROMOD analysis?

A. The geographic region covered by the PROMOD analysis includes a large portion of the Eastern Interconnection,[10] including all of MISO and the footprint of the adjacent PJM Interconnection ("PJM") and other directly and indirectly interconnected systems.

Q. In the Part 1 analysis, did you treat LMP changes on the CWLP and SIPCO systems differently than LMP changes on the Ameren Illinois system?

A. Yes. It is appropriate to do so. Customers on the CWLP and SIPCO systems are to some extent hedged by the generation capacity owned by their suppliers and, as such, are not exposed in the same fashion to wholesale price changes as are customers in restructured areas, such as the Ameren Illinois territory. Accordingly, focusing just on LMP changes would not accurately assess the effects of the Projects on customers on the CWLP and SIPCO systems since it would ignore potentially offsetting effects on generating profits which ultimately would get flowed through to those customers. Accordingly, instead of examining just LMP changes for these two systems, I examined the net effect of LMP changes and changes in generating operating margins.

Q. Please describe generally the Part 2 analysis that you have undertaken.

A. The goal of the Part 2 analysis is to quantify the extra wholesale electric energy supply made available to the market area as a result of construction of the Project. Making more supply available to a market area is consistent with promoting the development of an effectively competitive electricity market as contemplated by Section 8-406-1.1(f)(1) of the Act and, all other things the same, will result in lower prices in that market. I used Economic Capacity to measure the increase in supply attributable to the Project. Economic Capacity is one of two

[10] The Eastern Interconnection includes roughly the eastern two-thirds of the "lower 48" (with the exception of portions of Texas) plus Canadian provinces to the east of Alberta.

capacity measures used by FERC when it conducts competitive analyses using the Delivered Price Test ("DPT") analytical technique.[11] Under FERC's procedures, Economic Capacity is all generation capacity located within or deliverable to a "destination market" with variable costs (including fuel, emissions and transmission) less than or equal to 1.05 times the competitive market price. My Part 2 analysis develops estimates of changes in Economic Capacity available to serve the MISO Illinois region as a result of the Project.[12]

There are two portions to this Part 2 Economic Capacity analysis. The first portion involves developing an estimate of *additional in-region supply* as a result of the Project. In this context, in-region supply refers to electric generating capacity located within the MISO Illinois region. The second portion of the Part 2 Economic Capacity analysis involves developing an estimate of *additional import capability* into the MISO Illinois region as a result of the Project.

[11] FERC uses DPT analyses for two principal purposes: (i) to assess the competitive implications of mergers and acquisitions under Section 203 of the Federal Power Act; and (ii) as part of its assessment of the appropriateness of market-based pricing by jurisdictional suppliers under Section 205 of the Federal Power Act. In this latter context, the DPT analytical technique is used only in instances where the supplier has failed one of two "indicative" market power screens that FERC also employs. In the Section 203 context, the DPT is used by FERC as a technique to measure market share and market concentration and transaction-induced changes in market concentration. In the Section 205 context, the DPT is used by FERC to measure market share and market concentration and to make a determination as to whether or not the market-based rate applicant is "pivotal".

[12] In its DPT analyses, FERC also uses a second capacity measure, referred to as Available Economic Capacity. The Available Economic Capacity of a particular supplier is equal to its Economic Capacity less its native load (and certain wholesale contract) obligations. The Economic Capacity measure is generally considered to be the more relevant of the two in situations, such as Illinois, where industry restructuring has occurred and the link between traditional suppliers and their native load customers has been altered. Accordingly, my analysis herein utilizes only the Economic Capacity measure. In any case, while the absolute levels will differ, the MW change in Economic Capacity from the "without the Illinois Rivers Project" case to the "with the Illinois Rivers Project" case will be the same as the MW change in Available Economic Capacity. That is, the difference between Economic Capacity and Available Economic Capacity involves the subtraction in the case of the latter of native load and certain wholesale contract obligations. However, these subtractions do not change between the "without the Illinois Rivers Project" and "with the Illinois Rivers Project" cases thus making the MW differences between the two cases the same for both Economic Capacity and Available Economic Capacity.

Q. Please describe further the first portion of the Part 2 Economic Capacity analysis, the development of the additional in-region supply as a result of the Illinois Rivers Project.

A. DPT analyses at FERC typically examine a number different season and load level periods and provide separate computations for each such period. For my analysis, I used three different periods, defined as Summer Extreme Peak, Summer Peak and Off-Peak.[13] I first determined the competitive market price for each of these periods. For this purpose, I used the weighted average of the LMPs in the MISO Illinois region produced by the PROMOD analyses during the hours comprising each period. From the PROMOD generator data, I then developed a "supply stack" for each period, and quantified the amount of in-region capacity with variable costs less than or equal to 1.05 times the competitive clearing price. As part of this process, consistent with DPT analyses conducted for FERC, I derated wind generation capacity to account for expected utilization levels and derated other generation capacity to account for planned and forced outages. I went through this process for each scenario in each study year for both the "with Project" and "without Project" cases. The difference represents the additional in-region Economic Capacity resulting from the Project. As it turns out, the mega-watt amount of additional Economic Capacity is the same across all scenarios and study years, representing as it does the portion of the MISO Illinois region new wind generation capacity that was modeled by MISO in its MVP Report but determined by MISO to be "curtailed" if the Project were not constructed.

[13] In this regard, the Summer Extreme Peak consists of the 1 percent of Summer Peak hours with the greatest loads in the MISO Illinois region. The summer peak consists of all other summer peak hours. The Off-Peak consists of 24 hours per day on Saturday, Sunday and NERC holidays and 8 hours on other days, on a year-round basis.

Q. Please describe further the second portion of your Part 2 analysis, the development of the additional import capability into the MISO Illinois region as a result of the Project.

A. For this step, the PROMOD analysis was used to determine hourly flows into the MISO Illinois region with and without the Project. I made this determination for each scenario and study year. I used the average flows during the 10 percent of hours with the greatest inflows as a proxy for the amount of Economic Capacity available to the MISO Illinois region from the outside.[14] Accordingly, the changes in flows during these 10 percent of the hours between the "without Project" and "with Project" cases provide estimates of the additional amount of Economic Capacity available to the MISO Illinois region from the outside as a result of the Project.

Q. What specific scenarios are included in your analysis?

A. The following six scenarios were included:

i) Business as Usual, Low Demand - assumes the continuation of current energy policies and continuing "recession-level" demand and energy growth;

ii) Business as Usual, High Demand - assumes the continuation of current energy policies and a return to pre-recession demand and energy growth levels;

iii) Carbon Constrained - assumes the continuation of current energy policies plus a carbon cap modeled on the Waxman-Markey bill;

iv) Combined Energy Policy - includes the enactment of multiple new energy policies including a carbon cap modeled on the Waxman-Markey bill, a 20 percent Federal RPS requirement, smart grid implementation and the widespread adoption of electric vehicles;

v) Business as Usual, Low Demand, High Natural Gas Prices - same as the Business as Usual, Low Demand case listed above but with higher natural gas prices; and

vi) Business as Usual, High Demand, High Natural Gas Prices - same as the Business as Usual, High Demand case listed above but with higher natural gas prices.

These six scenarios are described more completely in ATXI Exhibit 9.2 attached.

[14] Placing the IRP in service results in increased imports into the MISO Illinois region across virtually all hours of the year across all scenarios as determined in the PROMOD analysis. The use of average inflows measured over the 10 percent of hours with the highest inflows provides a proxy for the increase in additional import capability attributable to the Illinois Rivers Project.

Q. Please describe the data sets used for your analysis.

A. The PROMOD analysis relies on the same data used by MISO in its economic analysis of the MVP portfolio. These data include information on customer loads, transmission infrastructure, forecasted fuel prices, and existing and new generation resources. Similarly, the scenarios I analyzed were also analyzed by MISO in the MISO MVP Report, and I relied on the same assumptions regarding customer demand and energy growth, fuel prices, wind penetration and carbon prices. New renewable resources are added so that each state in the MISO region can comply with its state Renewable Portfolio Standards. Aside from the Project transmission, the only difference between the "with Project" case and "without Project" case is the quantity of wind power assumed in each case. As described earlier, the quantity of new wind power resources is reduced in the "without Project" case based on MISO's determination that fewer wind resources can be reliably supported. These data assumptions are described in further detail in ATXI Exhibit 9.2.

IV. PRESENTATION OF RESULTS

Q. Have you prepared exhibits summarizing your results?

A. Yes. The results of the analysis are described in ATXI Exhibits 9.3 thru 9.6.

Q. Please describe ATXI Exhibit 9.3.

A. As indicated, the PROMOD analyses involve a comparison of the "without Project" and "with Project" cases for two different study years (2021 and 2026) and six (6) different scenarios within each study year. ATXI Exhibit 9.3 provides the weighted average LMP values for the MISO Illinois region from these analyses.

Q. What does ATXI Exhibit 9.3 indicate?

A. Wholesale electric energy prices, as measured by the average LMPs reported in ATXI Exhibit 9.3, are lower with the Illinois Rivers Project in the MISO Illinois region. As discussed, it is a pro-competitive outcome when prices are reduced in this fashion; as such, constructing and energizing the Project will be pro-competitive. The conclusion about lower prices exists for all of the scenarios that I evaluate. Across these scenarios, the reduction in prices in the MISO Illinois region from the Project range from $0.87 to $2.31 per MWh in 2021, and $0.98 to $5.06 per MWh in 2026. The percent reduction in prices ranges from 1.2 to 4.3 percent in 2021, and 1.6 to 4.5 percent in 2026.

Q. Please describe ATXI Exhibits 9.4 and 9.5.

A. ATXI Exhibits 9.4 and 9.5 present a conservative depiction of the estimated payment reductions for MISO Illinois customers as a result of the Illinois Rivers Project. ATXI Exhibit 9.4 is a one page summary containing estimates of the payments for wholesale electric energy for each of the six scenarios, with and without the Project, and includes a subtraction for MISO Illinois customers' estimated share of the transmission expenses to support the Project. ATXI Exhibit 9.5, which consists of six (6) pages, provides year-by-year detail of the wholesale electric energy payment reductions for each of the scenarios.

To prepare these exhibits, I began with the MISO Illinois region LMP comparisons from the PROMOD analysis from 2021 and 2026. These were multiplied by MISO Illinois region load to provide estimates of total payments for wholesale electric energy. The computations were made for a 20-year period (2020-2039). I selected 2020 as the beginning year for this evaluation since that represents the first full year when the entire Project is expected to be fully energized. I used the 2021 and 2026 PROMOD-produced electric energy payment amounts to

determine a growth rate between these two years, and used this growth rate to interpolate or extrapolate the values for the other years in the 20-year comparison period. As indicated, in ATXI Exhibit 9.4, from the estimated total payments for electric energy I subtracted an estimate of the amount of investment costs for the Project that will be borne by MISO Illinois customers as well as an estimated variable expense component. The remainder provides a conservative estimate of the payment reduction that can be expected for MISO Illinois customers as a result of the Project. The figures in ATXI Exhibit 9.4 and ATXI Exhibit 9.5 are present values as of mid-year 2013 computed using alternative discount rates of 3 percent and 8.2 percent, which are the same discount rates used in MISO's MVP Report. ATXI Exhibit 9.2 provides a more detailed explanation of the computational procedures employed in developing ATXI Exhibits 9.4 and 9.5. I characterize the ATXI Exhibits 9.4 and 9.5 payment reduction estimates as conservative because they reflect expected reductions in wholesale electric energy payments (net of increased transmission payments) but not reductions in payments for other unbundled components of full-requirements electricity supply such as capacity and operating reserves. The estimate also does not account for reduced electric energy payments prior to 2020, or for improvements in reliability and other benefits.

Q. What does ATXI Exhibits 9.4 indicate?

A. The results of my analysis reported in ATXI Exhibit 9.4 show that the Project will lead to substantial reductions in payments by customers in the MISO Illinois region. Under the Business as Usual, Low Demand case, the present value of reductions in wholesale electric energy payments from the Project is $324.7 million (at a discount rate of 8.2 percent.) The present value of transmission payments for the Project is $119.6 million, resulting in a net reduction in energy payments by MISO Illinois region customers of $205.1 million (*i.e.*, $324.7

million minus $119.6 million). Thus, there is roughly a three to one ratio of reduction in wholesale energy payments to Project payments. The exhibit also shows that the reduction in payments would be even greater under the other scenarios I evaluated, with reductions in net payments for these other five scenarios ranging between $311.0 million and $1,624.3 million. When the analysis is performed using a lower 3 percent discount rate the reduction in net payments increases in each scenario and ranges from $539.9 million in the Business-as-Usual Low Demand case to $4,073.9 in the Combined Energy Policy case.

Q. Do you have any additional comments relating to ATXI Exhibit 9.4?

A. The MISO MVP Report provides an overall assessment of the benefits of the 17 MVPs (see., *e.g.*, page 50 of the MVP Report) as well as an assessment of the benefit/cost ratio of the 17 MVP package for each individual "zone" examined by MISO, one of which zones is the MISO Illinois region as defined herein (see, *e.g.*, page 7 of the MISO MVP Report). The results in the MISO MVP Report have been developed using the same PROMOD simulation, data set and scenarios employed herein. The MISO report concludes that there are substantial benefits from the 17 MVP package in *each* zone. On this basis, one might conclude that the implementation of the 17 MVP package was equitable to all customers. However, the MVP Report does not contain a benefit/cost assessment for individual MVPs in individual zones. With respect to the Project, the information in ATXI Exhibits 9.4 and 9.5 helps to bridge this gap by demonstrating that MISO Illinois customers will receive greater benefits than costs. This is consistent with a conclusion that the Project is equitable to customers in the MISO Illinois region. Moreover, it is efficient to implement projects such as the Project where the benefits clearly exceed the costs by a substantial margin.

Q. Please describe ATXI Exhibit 9.6.

A. ATXI Exhibit 9.6 depicts the increase in supply to the MISO Illinois region as a result of the Project using the Economic Capacity measure, as discussed above, and disaggregated into "within MISO Illinois" and import components. There are six pages to this exhibit, one for each of the six scenarios analyzed.

Q. What does ATXI Exhibit 9.6 indicate?

A. ATXI Exhibit 9.6 shows that the Project would increase electricity supply into the MISO Illinois region, which is a pro-competitive outcome and thus consistent with the requirements of Section 8-406.1(f)(1) of the Act. Under the Business-as-Usual Low Demand case in 2021, shown on page 1 of ATXI Exhibit 9.6, supply from within the MISO Illinois region increases by the 154 MW of additional wind power supported by the Project. The Project will also allow an additional 450 mega-watts of supply from outside the MISO Illinois region to enter the MISO Illinois region. The combined increase of 603 MW of supply from internal and external sources represents an increase of 3.7, 4.0 and 5.3 percent respectively in the Summer Extreme Peak, Summer Peak periods and Off-Peak periods. The total increased supply in 2026 is 544 MW. Results in other scenarios are similar, with increased supply ranging from 371 MW (Business-as-Usual High Demand – High Gas) to 626 MW (Carbon Constrained) in 2021 and from 320 MW (Combined Energy Policy) to 599 MW (Carbon Constrained) in 2026.

V. CONCLUSIONS

Q. Does this conclude your second revised direct testimony?

A. Yes, it does.