

Exhibit No.:  
Issues: History of Transmission  
Projects  
Certificate of Convenience  
and Necessity  
Witness: Alan J. Bax  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Rebuttal Testimony  
File No.: EA-2013-0098  
EO-2012-0367  
Date Testimony Prepared: January 30, 2013

**MISSOURI PUBLIC SERVICE COMMISSION**

**REGULATORY REVIEW DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**ALAN J. BAX**

**TRANSOURCE MISSOURI, LLC**

**KANSAS CITY POWER & LIGHT COMPANY**

**KCP&L GREATER MISSOURI OPERATIONS COMPANY**

**FILE NOS. EA-2013-0098 and EO-2012-0367**

*Jefferson City, Missouri  
January 2013*





Rebuttal Testimony of  
Alan J. Bax

1 as a Staff Engineer until August, 1999, at which time I began my employment with the  
2 Commission.

3 Q. Are you a member of any professional organization?

4 A. Yes, I am a member of the Institute of Electrical and Electronic Engineers.

5 Q. Have you previously filed testimony before the Commission?

6 A. Yes. A list of cases is attached as Schedule AJB-1 to this Rebuttal Testimony.

7 Q. What is the purpose of your Rebuttal Testimony in File Nos. EO-2012-0367  
8 and EA-2013-0098?

9 A. The purpose of my testimony is to respond to Kansas City Power and Light  
10 Company ("KCPL") and KCP&L Greater Missouri Operations Company's ("GMO") request  
11 for a transfer of certain assets in File No. EO-2012-0367 and a related request by Transource  
12 Missouri, LLC ("Transource Missouri") for a Certificate of Convenience and Necessity  
13 ("CCN") in File No. EA-2013-0098 ("Applications"). These requests involve two electric  
14 transmission lines: the Iatan-to-Nashua and the Sibley-to-Nebraska City transmission lines  
15 (referenced together as the "transmission projects"). The Iatan-to-Nashua line is currently  
16 scheduled to be operational in June 2015, and the Sibley-to-Nebraska City line has an  
17 anticipated operation date of June 2017. I discuss the history and current status of each  
18 transmission line project. I also address certain portions of the Direct Testimonies filed by  
19 KCPL, GMO, and/or Transource Missouri witnesses (referenced together as the  
20 "Applicants").

21 Q. What is your recommendation in this Rebuttal Testimony?

22 A. I recommend that the requests for a transfer of assets and a line CCN be  
23 denied. It is Staff's opinion that these requests are not in the public interest.

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1 Q. Please describe the history surrounding the Iatan-to-Nashua transmission line  
2 project.

3 A. The Iatan-to-Nashua transmission line was included in a list of projects,  
4 referred to as the “Balanced Portfolio”, which the Southwest Power Pool’s (“SPP”) Board of  
5 Directors (“BOD”) approved in April, 2009. SPP describes the Balanced Portfolio as a group  
6 of economic transmission system upgrades, (illustrated in the attached Schedule AJB-2)  
7 intended primarily to reduce congestion on SPP’s transmission system and, thus, lower  
8 generation production costs. In its Application requesting a CCN for the transmission  
9 projects, Transource Missouri acknowledges that the Iatan-to-Nashua transmission line  
10 project is not intended to address local reliability issues<sup>1</sup>. The cost allocation methodology  
11 that the BOD approved for these “economic” projects is illustrated on Schedule AJB-3.  
12 Following BOD approval, SPP issued a notification to construct (“NTC”) to KCPL to build  
13 the Iatan-to-Nashua transmission line project.

14 Q. Please describe the Iatan-to-Nashua transmission line project.

15 A. The Iatan-to-Nashua transmission line project is an approximate 30 mile, 345  
16 kV transmission line between the KCPL substations located at Iatan and Nashua (illustrated in  
17 Schedule AJB-4). The overall project can be divided into four parts:

- 18 a. East Leg
- 19 b. West Leg
- 20 c. Northern/horizontal (Greenfield / Line 62)
- 21 d. Substation Upgrades

22 Q. Please describe the “East Leg”.

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<sup>1</sup> Application of Transource Missouri, LLC for a Certificate of Convenience and Necessity and Request of Waiver (File No. EA-2013-0098), page 9, paragraph 24-“...This project is not intended to address local reliability issues... .”

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1           A.     The “East Leg” refers to the location where the new 345 KV line will lie  
2 within the existing right-of-way of the current Nashua-to-Lake Road transmission line. KCPL  
3 originally built the current transmission line in 1947 between its Nashua substation and the  
4 Lake Road generation station in St. Joseph, Missouri. Recently, KCPL transferred this line  
5 and associated assets (poles, conductors, transformers, easements, etc.) to GMO, as the  
6 Commission authorized in File No. EA-2012-0479. The portion of this line between the  
7 Nashua substation and the northeast corner of the new Iatan-to-Nashua transmission line (the  
8 “East Leg”) will be removed and replaced with a new 345 kV line. Thus, the currently  
9 existing Lake Road-to-Nashua line will dead-end at this location (a radial line). It will be  
10 necessary to obtain additional easement width along this corridor to maintain adequate  
11 clearances for the new 345 kV Iatan-to-Nashua transmission line. This additional width has  
12 yet to be acquired.

13           Q.     Please describe the “West Leg”.

14           A.     The “West Leg” is the approximately five mile long southern end of the  
15 existing Iatan-to-St. Joseph transmission line that KCPL originally constructed in the late  
16 1970s in conjunction with the installation of the Iatan generation station. SPP has determined  
17 that this portion of the Iatan-to-Nashua project will be re-conducted “hot,” that is, the  
18 existing 345 kV line will remain energized while the new 345 kV Iatan-to-Nashua  
19 transmission line is installed. Additional easement width will also need to be acquired in  
20 order to install this portion of the Iatan-to-Nashua transmission line project, which has yet to  
21 be totally achieved. When this portion of the project is completed, both the existing Iatan-to-  
22 St. Joseph transmission line and the new Iatan-to-Nashua transmission line will be installed

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1 on either side of the same poles or structures along the “West Leg”. GMO reports that work  
2 is to begin on this portion of the project shortly, within the next month.

3 Q. Please describe the “Greenfield/(Line 62)” portion of the Iatan-Nashua  
4 transmission line project.

5 A. The “Greenfield” or “Line 62” portion refers to the northern, horizontal portion  
6 of the transmission line that connects the “East Leg” and “West Leg” (illustrated in Sections  
7 7, 8, and 9 on the map attached as Schedule AJB-5). This horizontal section of the project  
8 was originally planned to lie south of the current location (illustrated in Sections 3, 5, and 6  
9 on the map in Schedule AJB-5). This more southern routing was the option proffered in  
10 public meetings concerning this project beginning in the Fall of 2010 and continuing  
11 periodically throughout calendar year 2011. Public comments received by KCPL during this  
12 time from property owners, municipal and county leaders etc. ultimately led to a change in the  
13 routing of the Iatan-to-Nashua transmission line, culminating in the present route selection,  
14 (identified as the “Greenfield” or “Line 62”) announced in February of 2012. Landowners  
15 along this portion of the route (“Line 62”) have voiced organized opposition to its selection,  
16 including contacting the Office of the Public Council (“OPC”). OPC requested the  
17 Commission to open a docket concerning these landowners’ concerns, which it did (File No.  
18 EO-2012-0271). The Commission ordered KCPL to provide quarterly updates, noting the  
19 progress made in regard to the Iatan-to-Nashua transmission line project including easement  
20 acquisitions, equipment purchases, and construction timelines. The most current of these  
21 quarterly reports indicated that no easements have been acquired along this  
22 northern/horizontal portion of the project.

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1 Q. What substation upgrades are anticipated with the Iatan-to-Nashua  
2 transmission line project?

3 A. The existing Iatan substation will have to be expanded to accommodate the  
4 additional 345 kV circuits associated with the installation of the new Iatan-to-Nashua  
5 transmission line. At the Nashua substation, a 345/161 kV autotransformer will be installed  
6 enabling the use of the existing 161 kV facilities located at Nashua in addition to terminating  
7 this new Iatan-to-Nashua 345 kV transmission line.

8 Q. Who is the current Designated Transmission Owner (“DTO”) for the Iatan-to-  
9 Nashua transmission line?

10 A. It is Staff’s understanding that KCPL is the DTO for the Iatan and Nashua  
11 substation upgrades needed for this project and that GMO is the DTO for the transmission line  
12 itself.

13 Q. Please describe the Sibley-to-Nebraska City transmission line project.

14 A. The Sibley-to-Nebraska City transmission line project is one of six  
15 transmission projects, referred to as the “Priority Projects”, which were approved by SPP’s  
16 BOD in June 2010 (Schedule AJB-6). SPP said these projects were approved primarily to  
17 reduce grid congestion, increase east to west transfer capability, and enhance integration of  
18 renewable resources. Like the “Balanced Portfolio” package of projects, the “Priority  
19 Projects” are not meant to address local reliability issues<sup>2</sup>. The BOD approved the  
20 “Highway/Byway” cost allocation methodology as the means to pay for this set of projects,  
21 illustrated on Schedule AJB-3, which means that approximately 92% of costs of the line will  
22 be allocated regionally and approximately 8% to KCPL and GMO ratepayers in Missouri.

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<sup>2</sup> Application of Transource Missouri, LLC for a Certificate of Convenience and Necessity and Request for Waiver, page 9, paragraph 33-“...This project is not intended to address local reliability issues... .”

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1 Following BOD approval, SPP issued a NTC to GMO to build the Sibley-to-Nebraska City  
2 transmission line project. The Sibley-to-Nebraska City transmission line project is estimated  
3 to be an approximate 175 mile-long line, of which approximately 170 miles will be  
4 constructed in Missouri. The project's southern/eastern termination point is at GMO's Sibley  
5 substation. The project's northern/western termination point is at Omaha Public Power  
6 District's ("OPPD") Nebraska City substation. The project also includes a new substation,  
7 currently expected to be built near Maryville, Missouri. Unlike the Iatan-to-Nashua  
8 transmission line, no specifics currently are known concerning the routing of this transmission  
9 line, only its termination points.

10 Q. Have the Applicants' provided all the information required for approval  
11 without a specified route under Rule 4 CSR 240-3.105?

12 A. No. The required city or county consents, franchises and other potentially  
13 necessary government permits or approvals, such as from the U.S. Army Corp. of Engineers,  
14 have not been received. In addition, a list of electric lines, underground facilities or railroad  
15 tracks the Sibley-to-Nebraska City transmission line may cross cannot be provided. Such  
16 information is required to be provided by Rule 4 CSR 240-3.105 prior to obtaining the  
17 authority sought. This should also apply in regard to the Iatan-to-Nashua line. Despite the  
18 identification of the route for the Iatan-to-Nashua line, with no easements currently acquired  
19 on the northern/horizontal portion, some of this pertinent information has not been provided.  
20 Other important items, such as a control budget estimate for the Sibley-to-Nebraska City  
21 transmission line, cannot be determined and submitted until a route is selected. In the Direct  
22 Testimony of Brent C. Davis, Mr. Davis notes that the current estimated cost to GMO for the  
23 Missouri portion of the Sibley-to-Nebraska City line is 380 million dollars. "These estimates

1 are not control budget estimates; control budget estimates will be developed once the route  
2 has been selected.<sup>3</sup>

3 Q. Are there risks associated with not having the route selected?

4 A. Yes. In its request to the Federal Energy Regulatory Commission (“FERC”)  
5 for an award of an additional 100 basis points to its base Return on Equity (“ROE”) in its  
6 associated Formula Rate filing, Transource Missouri mentions the risk associated with not  
7 knowing the exact routing of the Sibley-to-Nebraska City transmission line. The FERC  
8 mentions in its award of an additional 100 basis points to the base ROE of Transource  
9 Missouri the risk associated with not knowing the exact routing of the Sibley-to-Nebraska  
10 City transmission line.<sup>4</sup>

11 Q. Has GMO begun the process of determining a specific route in regard to the  
12 Sibley-to-Nebraska City transmission line project?

13 A. Yes. GMO conducted kick-off meetings in August 2012, mainly with county  
14 and municipal leaders in the study area (Schedule AJB-7). Subsequently, there were sessions  
15 involving a number of State agencies. Initial meetings inviting potential landowners to  
16 participate in the evolution of the project are scheduled to be conducted in the next couple of  
17 weeks. GMO has also created a website containing information concerning this transmission  
18 project (<http://www.midwesterntransmissionproject.com>). Staff plans to attend one of these  
19 upcoming scheduled meetings and reserves the right to update the record with any pertinent  
20 information obtained during those meetings.

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<sup>3</sup> Direct Testimony of Brent C. Davis, page 12, lines 12-13 in File No. EO-2012-0367 and Direct Testimony of Brent C. Davis, page 13, lines 4-5 in File No. EA-2013-0098.

<sup>4</sup> *Order on Transmission Rate Incentives and Formula Rate Proposal And Establishing Hearing Procedures*, 141 FERC ¶61,075, paragraphs 35, 42, 76 (October 31, 2012).

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1 Q. What criteria has the Commission recently used in determining whether to  
2 grant CCNs?

3 A. In its Order approving Entergy Arkansas Incorporated's request for a CCN in  
4 File No. EA-2012-0321, the Commission listed five criteria that it used in determining  
5 whether the specific request for a CCN was "necessary or convenient for the public service"<sup>5</sup>:

- 6 • Is the service needed;
- 7 • Is the applicant qualified to provide the service;
- 8 • Does the applicant have the financial ability to provide the service;
- 9 • Is the applicants proposal economically feasible; and
- 10 • Does the service promote the public interest?

11 Q. Did Transource Missouri note these criteria?

12 A. Yes. In its Application requesting a CCN (File No. EA-2013-0098), at  
13 Paragraphs 39 and 40 on Pages 13-14, Transource Missouri lists these five criteria, and then  
14 states that its request for a CCN "must be granted."

15 Q. Does Transource Missouri say why its request "must be granted?"

16 A. Yes. In its Application, at paragraph 41 on page 14, Transource Missouri  
17 states that "it meets each of these five criteria and consequently, granting Transource Missouri  
18 a line CCN is both necessary and convenient to serve the public and is in the public interest".

19 Q. Would you agree with this conclusion?

20 A. No.

21 Q. Do you believe there is a need for the service?

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<sup>5</sup> Missouri Revised Statutes, Section 393.170, (2000).

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1           A.     The transmission projects were approved by the SPP BOD in 2009 and 2010.  
2 SPP found there is a need for these transmission projects and Staff does not dispute that  
3 determination. It is Staff's position that the issue in this case, rather, is whether Transource  
4 Missouri or KCPL and GMO<sup>6</sup> should construct, finance, own, operate and maintain these two  
5 projects. KCPL and GMO were originally assigned NTCs for these two projects as the DTOs.  
6 As is described in the Applications and in the Testimony, both KCPL and GMO will be  
7 providing needed services (engineering, design, procurement, and construction for example)  
8 to Transource Missouri, as these projects are installed, should these Applications be approved.  
9 Moreover, KCPL is said to be expected to provide operation and maintenance services as well  
10 as North American Electric Reliability Council ("NERC") compliance services for the  
11 duration of the projects' service lives<sup>7</sup>. KCPL and GMO have been providing quarterly  
12 updates to SPP concerning these transmission projects upon accepting SPP's NTCs. In these  
13 updates, KCPL and GMO were to notify SPP of any changes in their respective abilities to  
14 install these projects. Staff is not aware of any such notifications that have been provided to  
15 SPP by either KCPL or GMO. KCPL and GMO are quite capable of executing the  
16 installation of the projects, given that they are going to provide the majority of needed  
17 services, both as the projects are built and long after initial operation, to Transource Missouri.  
18 As noted above, KCPL and GMO are currently engaged in the process of route selection and  
19 acquiring needed easements.

20           Q.     The second criterion is that the applicant must be qualified to provide the  
21 service. Is Transource Missouri so qualified?

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<sup>6</sup> Great Plains Energy, Inc. (GPE), as the parent company of KCPL and GMO, was the focus of Staff's analysis related to the ability to finance the projects at issue.

<sup>7</sup> Direct Testimony of Antonio P. Smyth, page 16, line 19 through page 17, line 2.

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1           A.     Yes, Staff is not questioning that Transource Missouri is qualified to construct  
2 the projects. However, Staff's position is that given the Applicant, Transource Missouri, says  
3 it plans to utilize KCPL and GMO personnel to provide needed services, that KCPL and  
4 GMO are still constructing the projects.

5           Q.     The third criterion is that the applicant must have the financial ability to  
6 provide the service. Does Transource Missouri have the financial ability?

7           A.     Yes, Staff is not questioning Transource Missouri's ability to finance the  
8 projects. However, Staff believes that KCPL and GMO<sup>8</sup>, have the financial ability to provide  
9 the service without Transource Missouri. Please see the Rebuttal Testimony of Staff witness  
10 David Murray.

11          Q.     The fourth criterion is that the proposal must be economic feasible. Is  
12 Transource Missouri's proposal economically feasible?

13          A.     Staff is not contesting the economic feasibility of the projects as proposed by  
14 Transource Missouri. Rather, as discussed in the Rebuttal Testimony of Staff witness Charles  
15 R. Hyneman, Staff believes the projected benefits of the transmission projects are such that  
16 Missouri ratepayers would be harmed if KCPL and GMO did not maintain ownership and  
17 construct the transmission projects themselves.

18          Q.     Would approving these Applications promote the public interest?

19          A.     It is Staff's opinion that granting the Applicants' requests is not in the public  
20 interest, and is actually detrimental to the public interest. Transource Missouri touts the  
21 benefits of the partnership but offers no corresponding analyses depicting how the  
22 transactions would be of benefit to ratepayers. The benefits of the Transource partnership, at  
23 least as discussed by witness Antonio P. Smyth on pages 7 and 8 of his Direct Testimony, in

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<sup>8</sup> See note 6.

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1 File No. EA-2013-0098, are identified as potential “future competitive projects of significant  
2 geographic and financial scale,” seem to benefit Transource itself, not KCPL/GMO  
3 ratepayers, and are not directed specifically to the current projects. KCPL/GMO witness  
4 Brent C. Davis seeks to discuss the benefits of the partnership but does not clearly define nor  
5 specifically quantify what “synergies and potential cost savings”<sup>9</sup> that Transource Missouri  
6 would provide for the projects, or concretely identify what it can do that KCPL and GMO  
7 could not do. Mr. Davis states that “the parties anticipate that KCPL will continue to provide  
8 the ongoing construction management and cost control management for the Projects”<sup>10</sup> and  
9 “...[n]otably, even after the novation to Transource Missouri, KCP&L will continue to be  
10 responsible for the operation and maintenance of the Projects.”<sup>11</sup> As Staff views the  
11 Applications and the Direct Testimony, Transource Missouri has failed to adequately support  
12 the claim that the proposal for a CCN is in the public interest. Please also see the Rebuttal  
13 Testimony of Staff witness Charles R. Hyneman related to the Applications in File Nos. EA-  
14 2013-0098 and EO-2012-0367 failing to meet the appropriate standards for the Commission  
15 to grant the authority requested by Transource Missouri for a CCN and KCPL/GMO for a  
16 transfer of certain transmission assets/projects, i.e., the NTCs and other elements.

17 Q. The Applications and the various testimonies are written with emphasis being  
18 placed on FERC Order 1000.<sup>12</sup> Was Transource Missouri formed in response to regulatory  
19 changes?

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<sup>9</sup> Direct Testimony of Brent C. Davis, page 17, lines 16-17 in File No. EO-2012-0367 and Direct Testimony of Brent C. Davis, page 18, lines 14-15 in File No. EA-2013-0098.

<sup>10</sup> Direct Testimony of Brent C. Davis, page 17, lines 7-8 in File No. EO-2012-0367 and Direct Testimony of Brent C. Davis, page 18, lines 5-6 in File No. EA-2013-0098.

<sup>11</sup> Direct Testimony of Brent C. Davis, page 17, lines 10-11 in File No. EO-2012-0367 and Direct Testimony of Brent C. Davis, page 18, lines 8-10 in File No. EA-2013-0098.

<sup>12</sup> For example, Company witness Todd E. Fridley discusses FERC Order 1000 in his Direct Testimony (page 12, line 16, through Page 14, line 7) and also Company witness Antonio P. Smyth (page 3, line 11, through page 5, line 4).

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1           A.     Yes.     While FERC Order 1000 may be relevant for future regional  
2 transmission projects, the Iatan-to-Nashua and the Sibley-to-Nebraska City transmission line  
3 projects were approved in 2009 and 2010 respectively, which was prior to the issuance of  
4 FERC Order 1000 in July 2011. Therefore, these transmission projects are not affected by  
5 FERC Order 1000. Company witness Darren R. Ives agrees, as he stated in the Response to  
6 Staff Data Request No. 10 in File No. EA-2013-0098: “The rights to build the Iatan-Nashua  
7 345kV and Sibley-Nebraska City 345kV transmission projects are not subject to any changes  
8 resulting from FERC Order 1000.”

9           Q.     Mr. Ives discusses novating the NTCs. What does it mean to “novate”?

10          A.     Should KCPL and GMO’s Application to transfer certain assets be approved, it  
11 will be necessary to transfer KCPL’s and GMO’s current obligations/responsibilities as the  
12 DTOs for these transmission projects to Transource Missouri. This transfer process is called a  
13 novation. It will be necessary for the Applicants to enter into a Designation Qualification and  
14 Novation Agreement and gain its approval from the SPP BOD. Once the SPP BOD approves  
15 Transource Missouri as the alternate Designated Transmission Owner, SPP will then file the  
16 Designation Qualification and Novation Agreement with the FERC.<sup>13</sup>

17          Q.     Do you agree with Mr. Ives that no Commission approval is required under  
18 Missouri law to novate the NTCs previously issued to KCPL and GMO to Transource  
19 Missouri?

20          A.     Whether or not Missouri law requires approval, Mr. Ives states that the SPP  
21 requires “obtaining all state regulatory authority necessary to construct, own, and operate  
22 transmission line facilities within the state where the project is located.<sup>14</sup>” This includes

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<sup>13</sup> Direct Testimony of Darrin R. Ives (page 10, lines 3-10 in File No. EO-2012-0367).

<sup>14</sup> Direct Testimony of Darrin R. Ives, page 22, lines 7-8.

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1 obtaining a “CCN authorizing Transource Missouri to construct, finance, own, operate and  
2 maintain these Projects.<sup>15</sup>” Please see the Rebuttal Testimony of Charles R. Hyneman for a  
3 discussion of Staff’s position whether NTCs are electrical corporation assets.

4 Q. Does Staff recommend the Commission grant the Applicants’ request for a  
5 CCN for Transource Missouri in regard to these two transmission line projects?

6 A. No. The Staff recommends the Commission deny Transource Missouri’s  
7 request for a CCN and KCPL and GMO’s accompanying requests for transfer of assets and  
8 waiver from certain affiliate transaction rules. Should the Commission grant these requests,  
9 the Staff recommends it make the granting of a CCN for the Sibley-to-Nebraska City line  
10 conditional upon the Commission’s review of the selected route. The Transource Application  
11 in File No. EA-2013-0098 does not comply with the requirements of 4 CSR 240-3.105. For  
12 both the Sibley-to-Nebraska City and the Iatan-to-Nashua transmission line projects,  
13 Transource Missouri has yet to provide route information of complete construction  
14 specifications as required by 4 CSR 240-3.105(B). Thus, the Staff recommends the  
15 Commission require the Applicants to provide quarterly updates on the status of the Sibley-to-  
16 Nebraska City transmission line project, including any progress toward route selection. These  
17 quarterly reports would be similar to the quarterly reports the Commission ordered KCPL to  
18 provide regarding the progress of the Iatan-to-Nashua transmission line project in File No.  
19 EO-2012-0271.

20 Q. Does this conclude your Rebuttal Testimony?

21 A. Yes.

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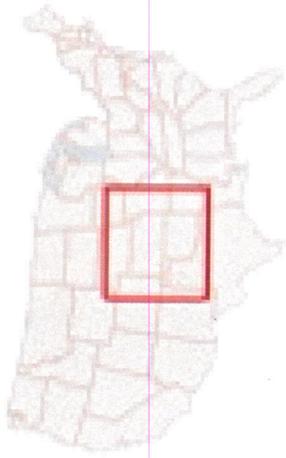
<sup>15</sup> Direct Testimony of Darrin R. Ives, page 10, lines 3-5.

TESTIMONY AND REPORTS  
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

BY ALAN J. BAX

COMPANY	CASE NUMBER
Aquila Networks – MPS	ER-2004-0034
Union Electric Company d/b/a AmerenUE	EO-2004-0108
Empire District Electric Company	ER-2002-0424
Kansas City Power and Light Company	EA-2003-0135
Union Electric Company d/b/a AmerenUE	EO-2003-0271
Aquila Networks – MPS	EO-2004-0603
Union Electric Company d/b/a AmerenUE	EC-2002-0117
Three Rivers and Gascoage Electric Coops	EO-2005-0122
Union Electric Company d/b/a AmerenUE	EC-2002-1
Empire District Electric Company	ER-2001-299
Aquila Networks – MPS	EA-2003-0370
Union Electric Company d/b/a AmerenUE	EW-2004-0583
Union Electric Company d/b/a AmerenUE	EO-2005-0369
Trigen Kansas City	HA-2006-0294
Union Electric Company d/b/a AmerenUE	EC-2005-0352
Missouri Public Service	ER-2001-672
Aquila Networks – MPS	EO-2003-0543
Kansas City Power and Light Company	ER-2006-0314
Macon Electric Coop	EO-2005-0076
Aquila Networks – MPS	EO-2006-0244
Union Electric Company d/b/a AmerenUE	EO-2003-0271
Union Electric Company d/b/a AmerenUE	EC-2004-0556
Union Electric Company d/b/a AmerenUE	EC-2004-0598
Empire District Electric Company	ER-2004-0570
Union Electric Company d/b/a AmerenUE	EC-2005-0110
Union Electric Company d/b/a AmerenUE	EC-2005-0177
Union Electric Company d/b/a AmerenUE	EC-2005-0313
Empire District Electric Company	EO-2005-0275
Aquila Networks – MPS	EO-2005-0270
Union Electric Company d/b/a AmerenUE	EO-2006-0145
Empire District Electric Company	ER-2006-0315
Aquila Networks – MPS	ER-2005-0436
Union Electric Company d/b/a AmerenUE	EO-2006-0096
West Central Electric Cooperative	EO-2006-0339
Union Electric Company d/b/a AmerenUE	EO-2008-0031
Union Electric Company d/b/a AmerenUE	EC-2009-0193
Empire District Electric Company	ER-2008-0093

Missouri Rural Electric Cooperative	EO-2008-0332
Grundy Electric Cooperative	EO-2008-0414
Osage Valley Electric Cooperative	EO-2009-0315
Union Electric Company d/b/a AmerenUE	EO-2009-0400
Union Electric Company d/b/a AmerenUE	EO-2008-0310
Aquila Networks – MPS	EA-2008-0279
West Central Electric Cooperative	EO-2008-0339
Empire District Electric Company	EO-2009-0233
Union Electric Company d/b/a/ AmerenUE	EO-2009-0272
Empire District Electric Company	EO-2009-0181
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power and Light Company	ER-2009-0089
Kansas City Power and Light – GMO	ER-2009-0090
Union Electric Company d/b/a AmerenUE	ER-2010-0036
Union Electric Company d/b/a AmerenUE	ER-2010-0036
Empire District Electric Company	ER-2010-0130
Laclede Electric Cooperative	EO-2010-0125
Union Electric Company d/b/a AmerenUE	EC-2010-0364
Union Electric Company d/b/a AmerenUE	EO-2011-0052
Kansas City Power and Light Company	ER-2010-0355
Kansas City Power and Light – GMO	EO-2011-0137
Kansas City Power and Light – GMO	ER-2010-0356
Union Electric Company d/b/a AmerenUE	ER-2011-0028
Kansas City Power and Light – GMO	EO-2012-0119
Kansas City Power and Light Company	EO-2011-0137
Ameren Missouri	ER-2012-0121
Empire District Electric Company	EO-2011-0085
Empire District Electric Company	EO-2012-0192
Empire District Electric Company	EO-2013-0313
Ameren Missouri	ER-2012-0180
Ameren Missouri	ER-2013-0013
City Utilities of Springfield	EO-2012-0441
Empire District Electric Company	ER-2011-0004
Ameren Missouri	ER-2012-0166
Kansas City Power and Light Company	ER-2012-0174
Ameren Missouri	ER-2013-0044
Kansas City Power and Light – GMO	ER-2012-0175
Empire District Electric Company	ER-2012-0345
Kansas City Power and Light Company	EO-2012-0367

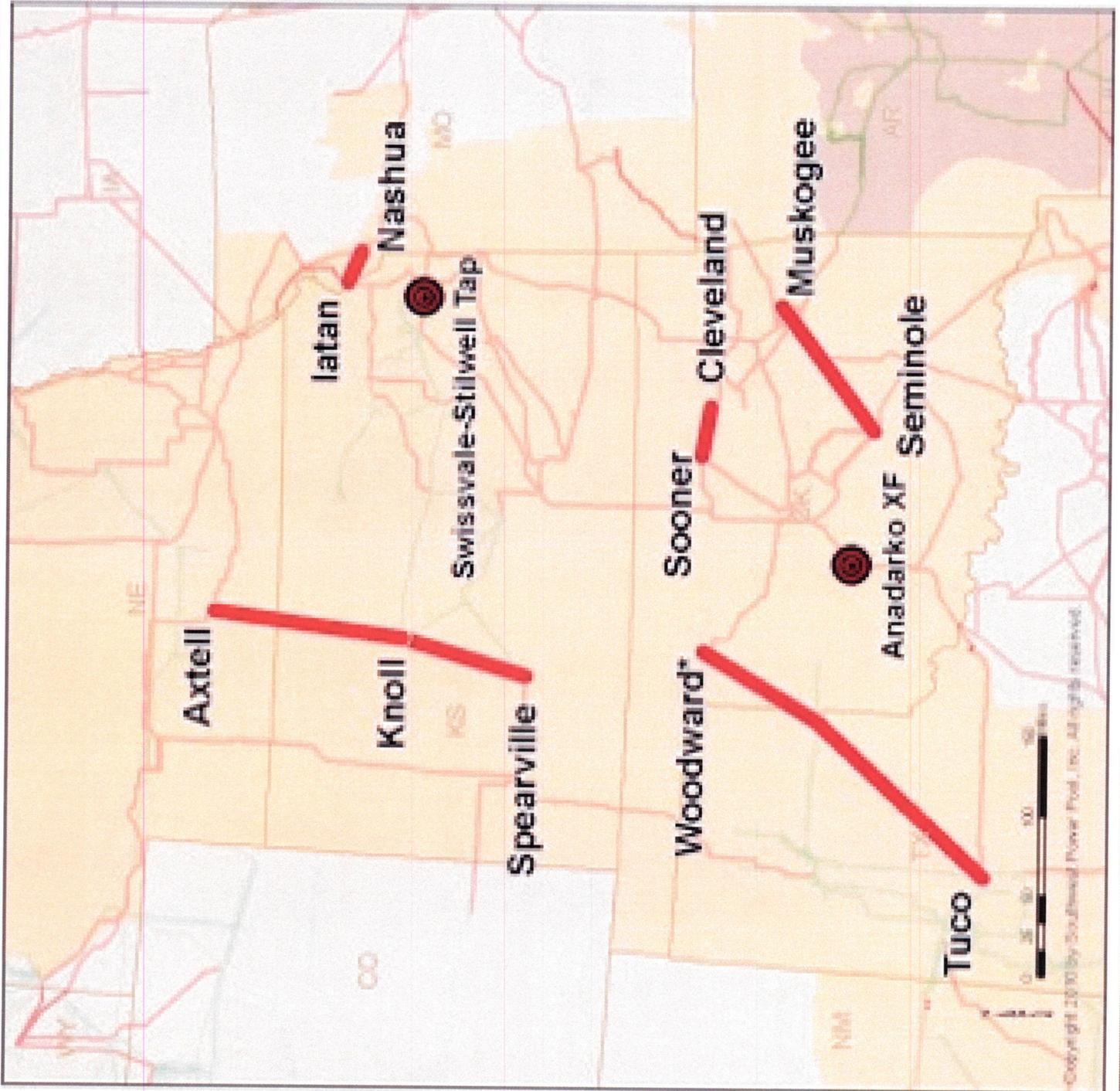


# Approved Balanced Portfolio

(June 2009)

All SPP Transmission Expansion Plans are subject to change.

- Substation
- Portfolio 3-E
- Southwest Power Pool
- Energy ICT
- \*Woodward District EHV



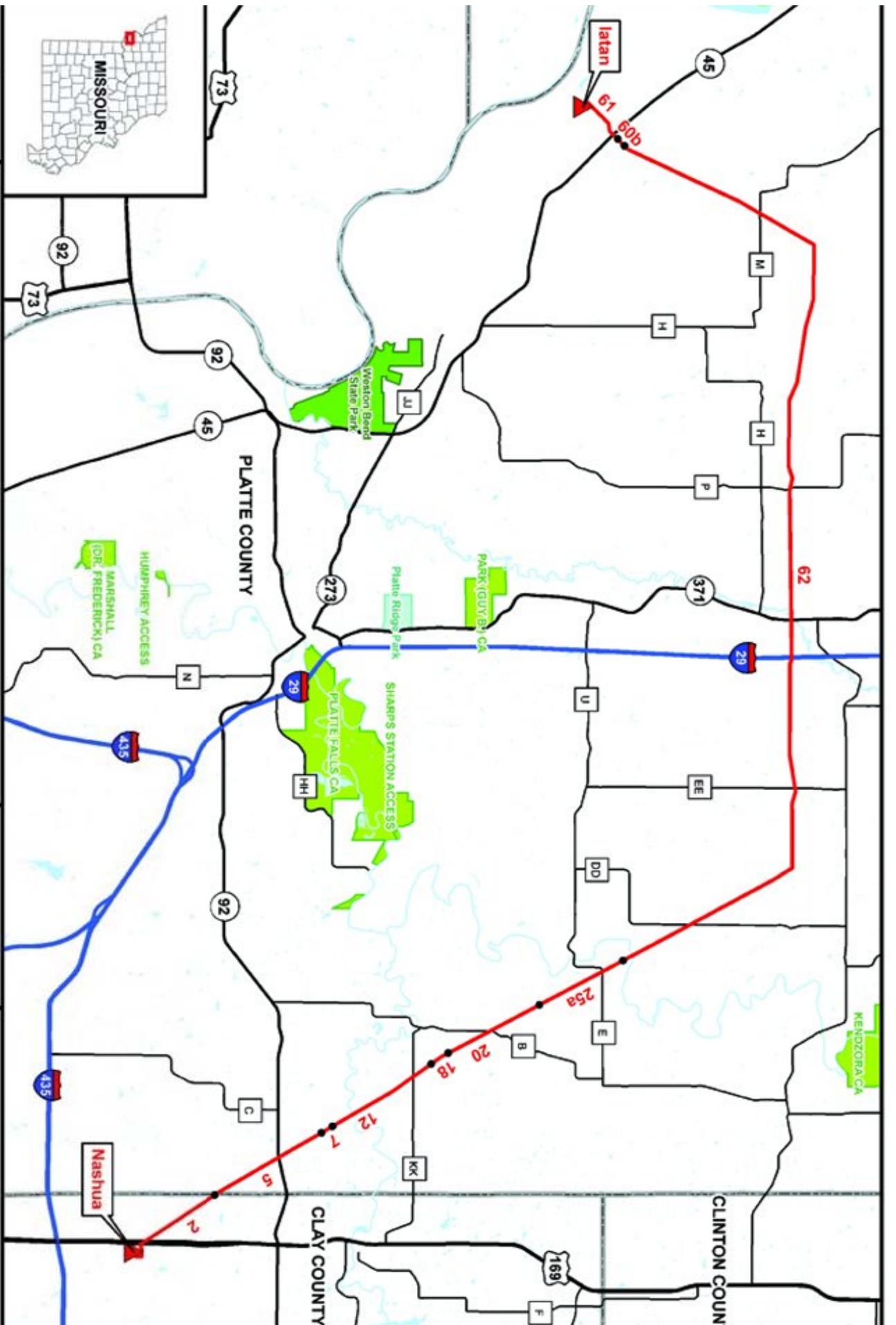
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# Who pays for transmission?

Type	Reliability	Economic	Sponsored	Highway/Byway
Funded	"Base Plan Funding" 33% / 67%	"Balanced Portfolio" "Postage Stamp" for 345 kV projects with balancing transfers	Directly assigned w/ revenue credits	Postage Stamp
Reason	Criteria or Designated Resource	Aggregate and Individual Transmission Owner Benefits / Cost $\geq 1$	Sponsor(s) nominate projects	ITP projects
Voltage	Transmission	345 kV and above		
Effective	2005	2008	2009	2010

## Highway/Byway

Voltage	Paid for by Region	Paid for by Local Zone
300 kV and above	100%	0%
above 100 kV and below 300 kV	33%	67%
100 kV and below	0%	100%



**LEGEND**

- Substation
- Selected Route
- County Boundary
- State Parks
- State Conservation Areas
- Local Parks



2.5

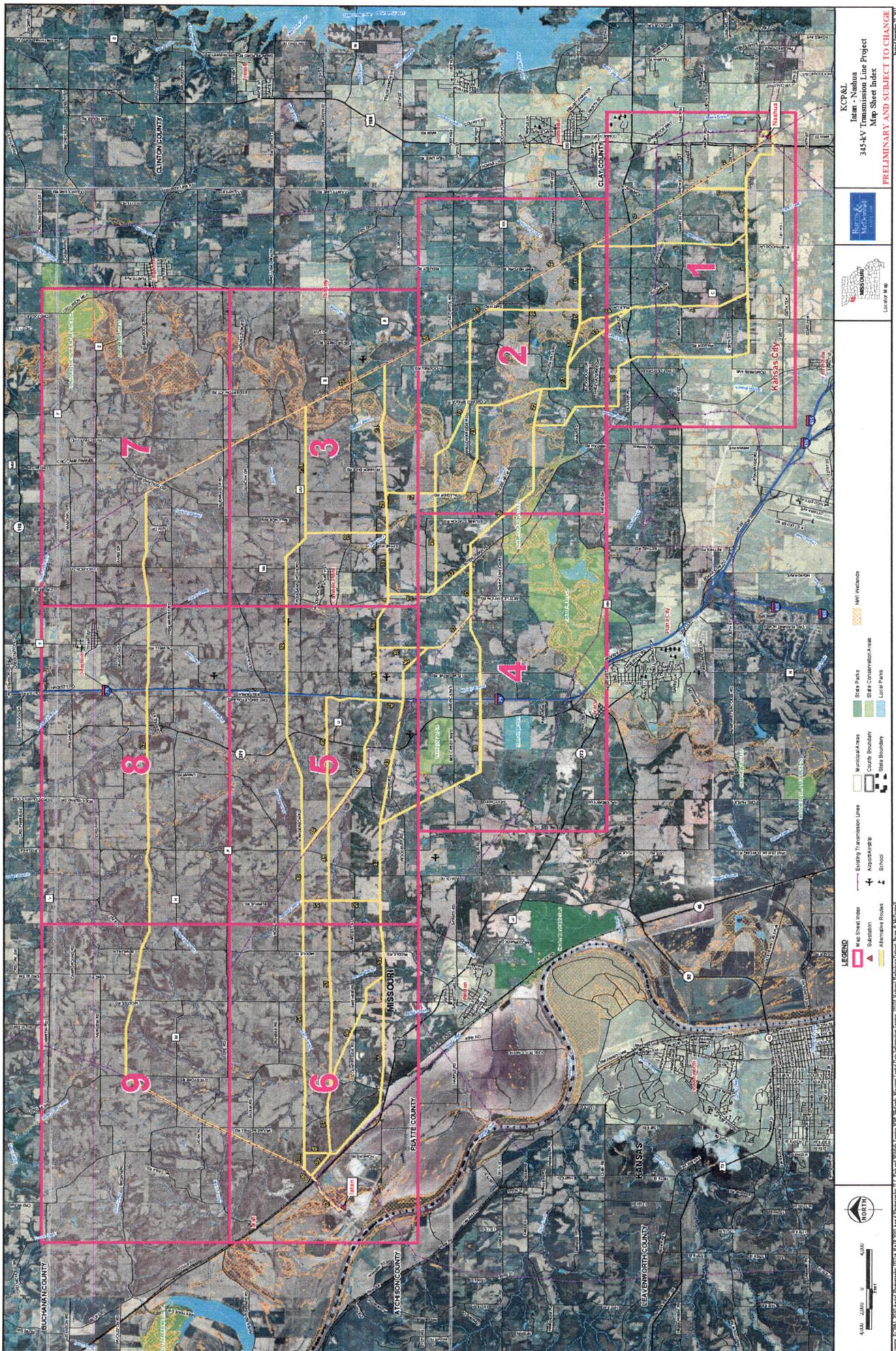
Miles



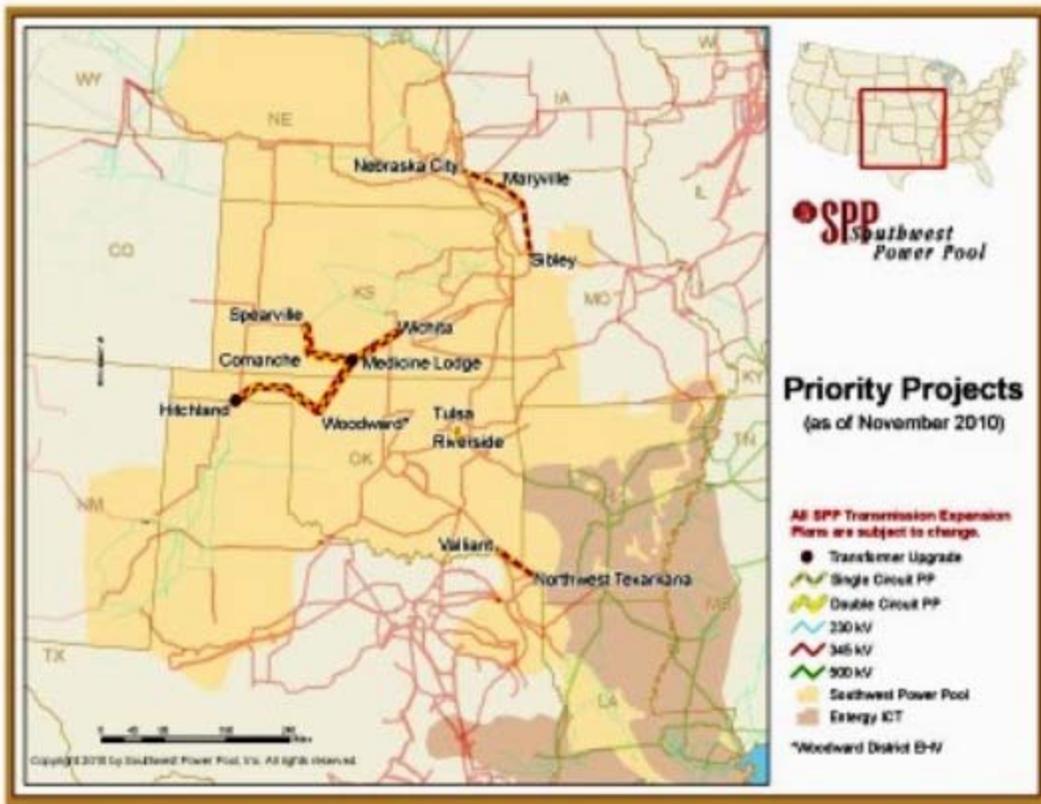
**KCP&L**  
Iatan - Nashua  
345-kV Transmission Line Project  
Selected Route

Source: Missouri Spatial Data Information Service; USGS National Hydrology Dataset; ESRI Data; Burns & McDonnell.

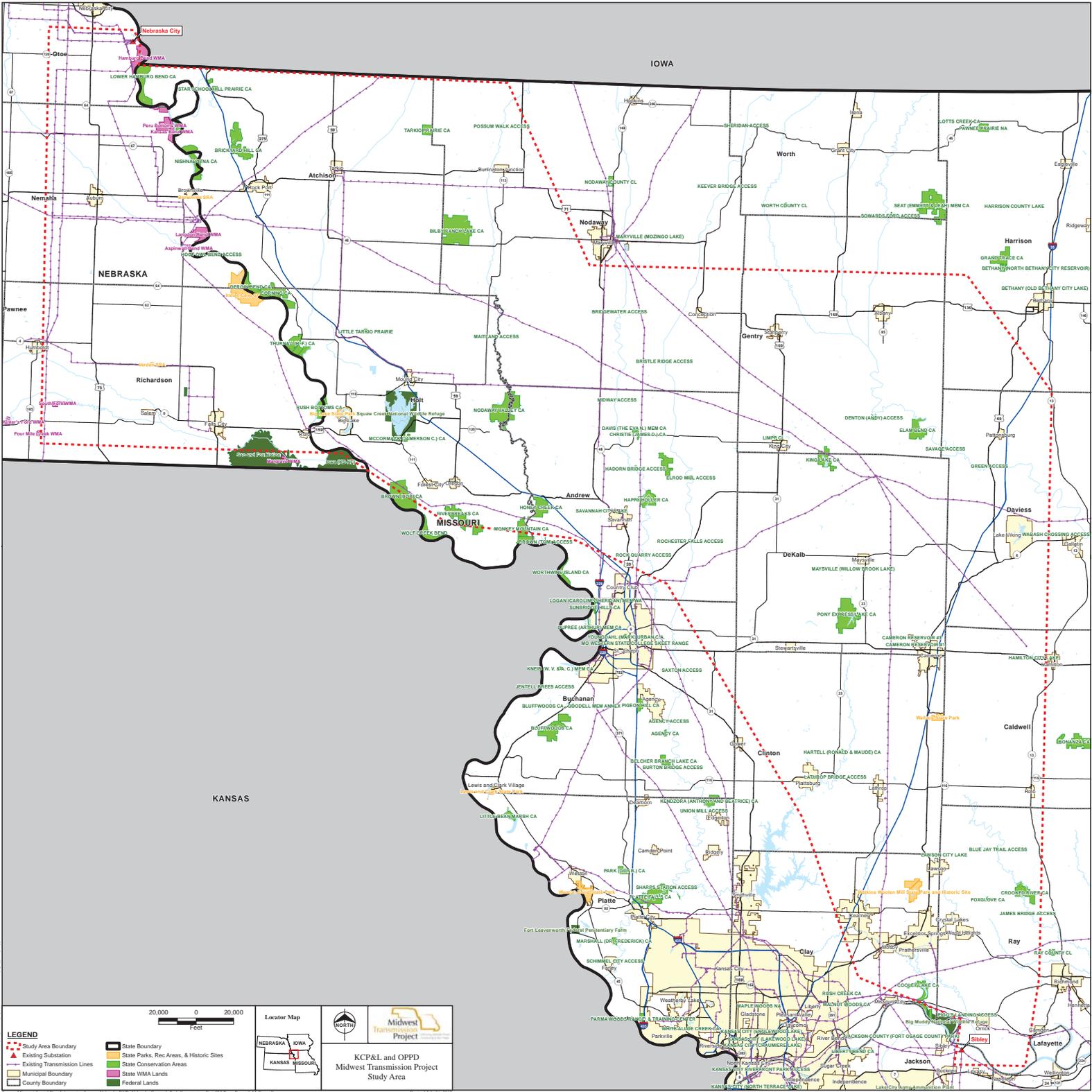
Revised February 03, 20



Schedule AJB-5



- Double-circuit 345-kV line from Spearville, Kansas; to Comanche County, Kansas; to Medicine Lodge, Kansas; to Wichita, Kansas
- Double-circuit 345-kV line from Medicine Lodge, Kansas, to Woodward, Oklahoma\*
- Double-circuit 345-kV line from Woodward, Oklahoma to Hitchland, Texas
- 345-kV line from Nebraska City, Nebraska; to Maryville, Missouri; to Sibley, Missouri
- 345-kV line from Valliant, Oklahoma to Texarkana, Texas
- New equipment in Tulsa County, Oklahoma



Source: Missouri Spatial Data Information System; Nebraska DNR; Nebraska Game & Park Commission; Esri GIS Data; Bunn & McDonald. Revised July 16, 2012