

**FILED**

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**Missouri Public  
Service Commission**

Exhibit No.

Issue:

Witness: Robert Janssen

Sponsoring Party: Dogwood Energy, LLC

Type of Exhibit: Rebuttal Testimony

Case No.: EO-2008-0046

**BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**

In the Matter of the Application of Aquila,	)	
Inc., d/b/a Aquila Networks - MPS and Aquila	)	Case No. EO-2008-0046
Networks - L&P for Authority to Transfer	)	
Operational Control of Certain Transmission	)	
Assets to the Midwest Independent Transmission	)	
System Operator, Inc.	)	

**REBUTTAL TESTIMONY OF**

**ROBERT JANSSEN ON BEHALF OF**

**DOGWOOD ENERGY, LLC**

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**ATTORNEYS FOR DOGWOOD ENERGY, LLC**

*Dogwood*  
Exhibit No. 15  
Case No(s). EO-2008-0046  
Date 4-15-08 Rptr 41

STATE OF District of Columbia )  
COUNTY OF \_\_\_\_\_ ) SS.

**BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**

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Operational Control of Certain Transmission )  
Assets to the Midwest Independent Transmission )  
System Operator, Inc. )

**AFFIDAVIT OF ROBERT JANSSEN**

COMES NOW Robert Janssen, of lawful age, sound of mind and being first duly sworn, deposes and states:

1. My name is Robert Janssen, I am Vice President for Kelson Energy, Inc., the corporate parent of Dogwood Energy, LLC.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony in the above-referenced case.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge, information and belief.

Robert J Janssen  
Robert Janssen

SUBSCRIBED AND SWORN to before me, a Notary Public, this 29<sup>th</sup> day of November, 2007.

Graciela V. Baten  
Notary Public

My Commission Expires:  
(SEAL)

GRACIELA V. BATEN  
Notary Public District of Columbia  
My Commission Expires October 15, 2008

**REBUTTAL TESTIMONY OF**  
**ROBERT JANSSEN ON BEHALF OF**  
**DOGWOOD ENERGY, LLC**

1   **Q.     PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND TITLE.**

2   A.     My name is Robert Janssen. My business address is 6700 Alexander Bell Drive,  
3           Suite 360, Columbia, MD 21046. I have held the position of Vice President for  
4           Kelson Energy Inc. ("Kelson") since February 2007. From October 2005 to  
5           February 2007, I was a Director with Kelson. I also hold the position of President  
6           of Redbud Energy, L.P., which is a 1,200 MW generating facility wholly owned  
7           by Kelson and located in Oklahoma.

8

9   **Q.     ON WHOSE BEHALF ARE YOU TESTIFYING?**

10  A.     I am testifying on behalf of Dogwood Energy, LLC ("Dogwood").

11

12  **Q.     WHAT IS THE RELATIONSHIP BETWEEN DOGWOOD AND KELSON**  
13  **ENERGY?**

14  A.     Kelson is a power generation holding company that wholly owns Dogwood and  
15           the Dogwood 600 MW combined cycle generating facility located in Aquila's  
16           Missouri Public Service ("MPS") service territory, in Pleasant Hill, Missouri.<sup>1</sup>

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<sup>1</sup> This facility was formerly owned by Calpine and known as the Aries facility. Dogwood acquired it at the end of 2006.

1   **Q.   PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
2   **PROFESSIONAL EXPERIENCE.**

3   A.   I have attached a copy of my resume as Schedule RJ1, which outlines my relevant  
4       background and experience. In brief, my experience includes (a) development  
5       and management of generating facilities, (b) analysis of electricity markets and  
6       transmission systems, (c) analysis of, and development of testimony regarding,  
7       utility rates and other filings before federal and state regulatory commissions, (d)  
8       due diligence analysis of power purchase agreements and fuel contracts, (e)  
9       financial analysis of utility and independent power producer assets such as power  
10      plants and water supply systems, and (f) monitoring and reviewing the results of  
11      power supply Requests for Proposals.

12  
13   **Q.   WHAT ARE YOUR RESPONSIBILITIES?**

14   A.   In my current position, I am responsible for, among other things, the operations of  
15       the Redbud Energy generating facility, representing Kelson and its subsidiaries at  
16       the Southwest Power Pool (SPP) Regional Transmission Organization (RTO),  
17       state and federal regulatory affairs, power market development, and North  
18       American Electric Reliability Corporation ("NERC") compliance for  
19       approximately 4,000 MW of Kelson's generating capacity within the United  
20       States, including Dogwood's Missouri facility. This includes coordinating  
21       Dogwood's potential future participation in electricity markets in the SPP.

1    **Q.    HAVE YOU TESTIFIED IN OTHER REGULATORY PROCEEDINGS?**

2    A.    Yes, I have submitted written testimony in nine prior proceedings before this  
3           Commission and the Federal Energy Regulatory Commission, the Louisiana  
4           Public Service Commission, the Oklahoma Corporation Commission, the Public  
5           Service Commission of Wisconsin, the City Council of New Orleans, and the  
6           Public Utility Commission of Texas.

7

8    **Q,    DO YOU HOLD THE OPINIONS YOU EXPRESS IN THIS TESTIMONY**  
9           **TO A REASONABLE DEGREE OF CERTAINTY AS AN EXPERT**  
10          **REGARDING    ELECTRICAL    POWER    GENERATION    AND**  
11          **TRANSMISSION?**

12   A.    Yes.

13

14   **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

15   A.    In this testimony, I respond to the direct testimony of Aquila witness Dennis  
16           Odell and recommend: (1) that the Commission reject Aquila's application to join  
17           MISO; and (2) order Aquila to take all actions necessary to join SPP as soon as  
18           possible.

19

20   **Q.    HAVE YOU ADDRESSED THIS ISSUE IN OTHER PROCEEDINGS**

1           **BEFORE THIS COMMISSION?**

2       A.     Yes. In Case No. EM-2007-0374,<sup>2</sup> I have recommended that the Commission  
3           condition its approval of the proposed acquisition of Aquila, Inc. by Great Plains  
4           Energy (GPE) and resulting combination of the operations of Aquila with KCPL  
5           so as to require Aquila to join SPP with KCPL and to require that Aquila and  
6           KCPL consolidate their Balancing Authority ("BA") areas.<sup>3</sup>

7

8       **Q.     IS YOUR RECOMMENDATION IN THIS CASE THE SAME**  
9           **REGARDLESS OF WHETHER OR NOT GPE ACQUIRES AQUILA?**

10      A.     Yes.

11

12      **Q.     WHAT IS AT STAKE FOR DOGWOOD IN THIS PROCEEDING?**

13      A.     Aquila and KCP&L are potential customers of Dogwood's generating capacity.  
14           Further, Dogwood's generating facility will "move" with Aquila's transmission  
15           facilities into whichever RTO Aquila ultimately joins, so Dogwood believes that  
16           its interests are aligned with those of Aquila and its customers in ensuring robust  
17           access to both transmission and power supplies in the region. Finally, as a  
18           potential transmission customer of Aquila, Dogwood benefits from Aquila's  
19           transmission facilities being operated in the most efficient manner possible under

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<sup>2</sup> Odell Direct, p. 6.

<sup>3</sup> The term "Balancing Authority" refers to an entity, such as a utility or an RTO, which is responsible for maintaining a balance between loads and resources within a particular area. Specifically, this entity integrates resource plans ahead of time, maintains load-interchange-generation balance within an area defined by metered boundaries, and supports interconnection frequency in real-time.

1 the SPP RTO.

2

3 **Q. WHAT IS THE PRIMARY FUNCTION OF AN RTO?**

4 A. RTOs facilitate open and non-discriminatory electric transmission access and  
5 pricing, with regional open access tariffs, planning, and coordinated reliability  
6 operations.

7

8 **Q. CAN YOU DESCRIBE, FOR EXAMPLE, HOW SPP FULFILLS THAT**  
9 **FUNCTION?**

10 A. For example, KCPL is a SPP RTO member and SPP currently performs the  
11 Planning Coordinator function for KCPL on a regional basis. KCPL participates  
12 in the SPP regional planning process which includes an annual transmission  
13 reliability assessment of the SPP RTO footprint. The SPP Transmission  
14 Expansion Plan (STEP) analyzes the transmission system for compliance with  
15 NERC Reliability Standards and SPP Criteria. Where standard or criteria  
16 violations exist, SPP and Transmission Owners (i.e. KCPL) work together to  
17 develop mitigation plans that eliminate problems. These mitigation plans may  
18 include new or upgraded transmission facilities. The STEP also performs a  
19 screening analysis of potential economic transmission projects. These  
20 assessments do not study individual control area transfer capability but rather  
21 projects that may improve transmission congestion across the SPP footprint.

1        These projects are ranked based on a cost/benefit analysis of generation dispatch  
2        cost savings compared to the cost of the potential project. These projects are  
3        typically bulk transmission projects (345kV and above) not required by standards  
4        or criteria that cross multiple control areas and/or states and would require project  
5        sponsors to actually agree to fund and construct.

6        As part of the planning process, SPP also performs an Aggregate Study three  
7        times per year that collectively analyzes specific transmission service requests,  
8        including service associated with generation interconnection requests, across the  
9        SPP footprint. These service reservations are modeled based on control area to  
10       control area transfers. The transmission system is assessed with these potential  
11       service requests and, where needed, transmission improvements are identified that  
12       would enable the service to occur without standard or criteria violations. Once  
13       the customer that has made the service request agrees to the conditions of the  
14       system improvement the project is included in the STEP.

15       SPP has recently completed an EHV<sup>4</sup> Overlay Study that provides a strategic  
16       assessment of how to meet SPP's future reliability and capacity needs through the  
17       use of a 500kV and 765kV transmission system overlaying the existing SPP  
18       footprint. This study focused on providing a foundation for long range planning

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<sup>4</sup> Extra-High Voltage



1 and detailed economic assessments that can help SPP work with neighbors to  
2 create an interstate transmission superhighway.

3  
4 Further information from the SPP website, including a map, is attached hereto as  
5 Schedule RJ2.

6  
7 **Q. WHAT IS YOUR UNDERSTANDING OF THE CURRENT STATUS OF**  
8 **AQUILA REGARDING RTO PARTICIPATION?**

9 A. Aquila is a conditional member of the Midwest Independent Transmission System  
10 Operator (MISO). However, according to Aquila's response to Dogwood Data  
11 Request 2-11 in Case No. EM-2007-0374, "Aquila is in the transmission footprint  
12 of SPP and all point to point service requests are processed through SPP." I also  
13 understand that Aquila was originally a full member of SPP. As Mr. Odell  
14 testifies, "Aquila is receiving other services [besides security coordination, which  
15 is obtained from MISO], including tariff administration, OASIS<sup>5</sup> administration,  
16 available transmission capacity and total transmission capacity calculations,  
17 scheduling agent, and regional transmission planning from SPP." (Odell Direct, p.  
18 6).

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<sup>5</sup> Open Access Same Time Information Service.

1    **Q.    WHAT IS YOUR UNDERSTANDING OF THE PLAN FOR THE**  
2    **MERGED KCP&L/AQUILA REGARDING RTO PARTICIPATION?**

3    A.    I am uncertain as to the plan, as there is conflicting information available. On the  
4           one hand, KCPL witnesses seem to testify in Case No. EM-2007-0374 that there  
5           is a strong desire to operate the combined entities in a single RTO. KCPL witness  
6           Spring describes the "proposed action plans for combining the Aquila  
7           transmission operations and facilities into KCPL once the merger is completed",  
8           including that both entities will be run out of a single transmission control center.  
9           (Spring Direct, p. 6). He also testifies that "there are significant benefits for  
10          operating the resulting combined organization within a single RTO structure."  
11          (Spring Direct, p. 9). He lists various benefits that KCP&L would expect to  
12          realize from a single RTO membership, including:

- 13               - avoidance of transmission seam issues, with reduced flowgates,<sup>6</sup>  
14               simplified management of transmission capacity, and increased  
15               flexibility of power transactions;
- 16               - reduced costs to support activities in governance, market development,  
17               transmission planning and expansion, reliability standards development,  
18               and tariff administration;
- 19               - savings related to participation in a single regional transmission tariff,  
20               with simplified administration and minimized proceedings with FERC;

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<sup>6</sup> A flowgate is one or more transmission elements that form a potential constraint in the transmission system that are monitored for the purpose of calling curtailments.

- 1           - maintenance of consistency across both companies, coordinated
- 2           transmission cost sharing, lower administrative costs, and more
- 3           congruent investment structures;
- 4           - facilitation of consistent retail rate structures;
- 5           - more effective transmission planning and expansion and avoidance of
- 6           inefficient, redundant or even conflicting solutions;
- 7           - ensured consistent development and adherence to bulk power reliability
- 8           standards and criteria. (Spring Direct, p. 10-11).

9           KCPL witness John Marshall touts combined RTO membership as an aspect of  
10          transmission synergy. (Marshall Supplemental Direct, p. 13). KCPL witness  
11          Crawford testifies that the companies will not realize the additional savings that  
12          would result from joint dispatching of KCPL and Aquila generating resources  
13          unless Aquila joins the SPP with KCPL. (Crawford Direct, p. 5-6).

14  
15          On the other hand, Mr. Spring acknowledges that there is a “potential of KCPL  
16          and Aquila having membership in separate RTOs.” (Spring Direct, p. 9). And in  
17          this case, Aquila has applied to the Commission for authority to transfer  
18          operational control of transmission assets to MISO, instead of SPP.

19  
20       **Q.   HOW HAVE KCP&L AND AQUILA PROPOSED TO RESOLVE THE**  
21       **ISSUE OF APPROPRIATE RTO MEMBERSHIP?**

1 A. Again, the picture is murky. In Case No. EM-2007-0374, Mr. Spring indicates a  
2 desire by KCPL to evaluate the strategy of RTO membership when the merger is  
3 completed. (Spring Direct, p. 9). Witness Marshall makes the same statement.  
4 (Marshall Direct, p. 7). However, in this case Aquila has actively petitioned the  
5 Commission to authorize it to join MISO, which would seem to effectively  
6 preclude any post-merger evaluation, at least for a significant period of time. In  
7 my opinion, it is not a simple matter for a company to jump in and out of RTO  
8 membership even within a matter of years. The information contained in Aquila's  
9 application and direct testimony in this case demonstrates that there would be  
10 contractual limitations on the timing of an exit from an RTO.

11

12 **Q. WHAT IS YOUR UNDERSTANDING OF THE BASIS FOR AQUILA'S**  
13 **APPLICATION TO JOIN MISO?**

14 A. From Aquila's application and Mr. Odell's eight-page piece of direct testimony,  
15 and the various attachments thereto, it is my understanding that Aquila has  
16 applied for Commission approval to become a full member of MISO and to  
17 transfer operational control of Aquila's Missouri electric transmission system to  
18 MISO, because Aquila believes it is obligated to do so as part of a 2003  
19 settlement with MISO. (Odell Direct, p. 6, 8).

1       Aquila seems to have applied for authority to join MISO to fulfill what have  
2       become stale commitments rather than to address the current public interests at  
3       stake, both as to Aquila's separate operations and as to the new opportunities  
4       presented by the merger application. In its application, Aquila describes how it  
5       agreed to join MISO in connection with a merger application to FERC, when  
6       MISO was the only approved RTO in existence and when Aquila expected  
7       AmerenUE to function as if it were a part of MISO. Aquila also describes how  
8       there were subsequent delays in AmerenUE joining MISO, which resulted in  
9       Aquila withdrawing pending applications to join MISO due to its dependence  
10      upon AmerenUE for physical connection to the MISO area. In its Application,  
11      Aquila describes additional starts and stops in its process of attempting to join  
12      MISO, including dismissal of a pending application by this Commission to allow  
13      for completion of comparative cost/benefit studies regarding joining SPP versus  
14      MISO.

15  
16   **Q.   WHY DOES DOGWOOD OPPOSE AQUILA'S APPLICATION TO JOIN**  
17   **MISO?**

18   **A.**   It is not in the public interest for Aquila to join MISO rather than SPP. With its  
19       application, Aquila submitted a copy of a comparative cost/benefit analysis as  
20       Appendix G. (Odell Direct, Schedule DO-3). The study demonstrates that there  
21       would be a \$66 million (or 4 times) greater benefit for Aquila to join SPP (before

1 considering the additional benefits of a merged KCPL/Aquila entity being in a  
2 single RTO). The study describes in detail how those greater benefits flow from  
3 Aquila's greater involvement and connection with SPP. (Odell Direct, Schedule  
4 DO-3, p. 4-6, 19-22). Mr. Odell acknowledges in his direct testimony that the  
5 study shows that the net benefits of Aquila joining SPP are greater than the  
6 benefits of joining MISO. (Odell Direct, p. 8).

7  
8 As discussed in the study, trading patterns and transmission interconnectivity  
9 demonstrate that SPP is the more natural and appropriate market for Aquila,  
10 rather than MISO. The study confirms "Aquila is located on the western side of  
11 Missouri and is heavily interconnected with KCPL in particular." (Odell Direct,  
12 Schedule DO-3, p. 5).<sup>7</sup> The study states: "The total tie-line capacity in MVA<sup>8</sup> on  
13 the transmission lines that interconnect Aquila Missouri with SPP RTO members  
14 (KCP&L and Westar Energy) is more than five times as large as the capacity on  
15 tie-lines that interconnect Aquila Missouri with Midwest ISO market members  
16 (AmerenUE)." (Id.).<sup>9</sup> The study continues: "These physical inter-ties between  
17 Aquila Missouri and the SPP RTO exist regardless of whether Aquila Missouri is  
18 in the SPP RTO or the Midwest ISO." (Id.). Accordingly, the study observes that  
19 if Aquila joined MISO, cost impediments such as wheeling charges for

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<sup>7</sup> A map of the SPP transmission and operating region is included in Schedule RJ2. For comparison, a map both the SPP and MISO regions, from the IRC website, is attached hereto as Schedule RJ3. The ISO/RTO Council (IRC) is an industry organization consisting of representatives of North American ISO/RTOs.

<sup>8</sup> Mega Volt Amperes – a measure of transmission line capacity.

<sup>9</sup> In his direct testimony, page 2, Mr. Odell confirms Aquila's various interconnections.

1 transactions with SPP would provide “a substantial impediment to Aquila  
2 Missouri trade.” (Id.). Further, the study notes that Aquila Missouri would be able  
3 to displace control area generation “with less expensive market purchases to a  
4 greater extent in the SPP RTO case.” (Id, p. 5-6 and note 12). I can confirm that  
5 Dogwood has sold significant amounts of power to Westar, KCP&L and other  
6 customers in SPP during 2007, and I expect this trend to continue.<sup>10</sup> At such  
7 levels of sales by Dogwood to parties other than Aquila, the study indicates that  
8 Aquila would benefit more than documented in the study from being an SPP  
9 member. (Id.).

10  
11 The study documents that Aquila would realize significantly more trade benefits  
12 (reduction in net cost to serve load) by joining SPP rather than MISO – by more  
13 than \$65 million. (Id., p. 14). The study attributes the greater trade benefits  
14 primarily to Aquila’s interconnection with SPP members as described above. (Id.,  
15 p. 14-15).<sup>11</sup>

16  
17 **Q. HOW DO YOU RESPOND TO THE STUDY SUGGESTION THAT**  
18 **THERE IS SOME DEGREE OF UNCERTAINTY AS TO SPP MARKET**  
19 **DEVELOPMENTS?**

---

<sup>10</sup> 83% of Dogwood’s direct sales for 2007 through the end of October were to customers other than Aquila.

<sup>11</sup> Odell Direct, p. 8.

1 A. The study indicates that its quantitative results are premised on additional market  
2 developments occurring in the SPP RTO. The study is dated March 28, 2007,  
3 barely two months after the start-up of SPP's imbalance energy market. Since  
4 then, there have been further developments in the SPP. SPP is a full RTO with an  
5 imbalance energy market that has been in service for nearly a year.<sup>12</sup> It has plans  
6 to develop Day Ahead Energy and Ancillary Services markets within the next  
7 three years. I expect that the details and timing of these developments will be  
8 resolved during the course of the next year.

9

10 **Q. IN AQUILA'S RECITATION OF THE HISTORY OF ITS PURSUIT OF**  
11 **RTO MEMBERSHIP, IT REFERENCES CERTAIN OBSTACLES**  
12 **RELATED TO AMERENUE'S RTO STATUS. ARE YOU AWARE OF**  
13 **DEVELOPMENTS REGARDING AMERENUE'S RTO STATUS?**

14 A. Yes. I am aware of AmerenUE's application in Case No. EO-2008-0134, in  
15 which it recites that its current authority to participate in MISO is set to expire  
16 April 30, 2009 and in which it seeks an extension of that authority for an  
17 additional three years. AmerenUE does not seek authority for permanent MISO  
18 membership because it wants to preserve the option of withdrawing from MISO  
19 and either joining SPP or pursuing non-RTO alternatives. Indeed, AmerenUE

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<sup>12</sup> Mr. Odell confirms that SPP became a full RTO in 2004, subsequent to Aquila making its settlement agreement with MISO in 2003. (Odell Direct, p. 5).



1 notes at page 8 of its application that it could elect to seek permission to withdraw  
2 from MISO before April 30, 2012.  
3

4 **Q. DOES YOUR RECOMMENDATION TO THE COMMISSION IN THIS**  
5 **CASE DEPEND UPON THE OUTCOME OF THE PENDING AMERENUE**  
6 **PROCEEDING (CASE NO. EO-2008-0134)?**

7 A. No. Transmission connectivity between Aquila and MISO, which is essential to  
8 obtaining additional benefits from joining MISO, is unlikely to improve  
9 measurably in the foreseeable future, given Aquila's extensive interconnection  
10 with SPP members and given that Associated Electric Cooperative, Inc. (AECI),  
11 which does not participate in an RTO, sits between Aquila and AmerenUE.  
12

13 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION?**

14 A. In my opinion, the Commission should not be constrained by any prior  
15 commitment that Aquila may have made to MISO and should require Aquila to  
16 join the SPP in light of all the public benefits that would flow from such  
17 membership. Without question, Aquila needs to join an RTO and realize the  
18 many benefits that attend such membership. The net financial benefits of Aquila  
19 joining the SPP are substantially higher than any benefits of it joining MISO.  
20 Furthermore, in light of the proposed merger, the significant benefits that would  
21 attend membership in a single RTO by Aquila and KCPL, and KCPL's

1        established membership in SPP, the Commission should require Aquila to join  
2        SPP and operate its generation and transmission facilities under the auspices of  
3        the SPP RTO as soon as possible (and within four months after approval of the  
4        merger.<sup>13</sup>

5

6    **Q.    DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

7    **A.    Yes.**

---

<sup>13</sup> The standard Energy Imbalance Service (EIS) Market registration timeframe for new participants is four to six months after submission of registration materials to the SPP. However, it is possible that Aquila's participation could be accommodated more quickly since its information is already included in SPP's Energy Management System and planning models.

# ROBERT J. JANSSEN

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6700 Alexander Bell Drive, Suite 360 • Columbia, MD 21046 • (202) 249-0215 •  
rob.janssen@kelsonenergy.com

## SUMMARY OF QUALIFICATIONS

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- Energy professional with a technical background and thirteen years of experience in the electricity and natural gas industries, including power plant management, acquisition, development, and financial analysis; electricity market analysis, design and monitoring; utility rate analysis and development; and expert testimony and litigation support.

## EXPERIENCE

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### **Kelson Energy, Baltimore, MD**

October 2005 - Present

Vice President, Kelson and President, Redbud Energy	6/07 – Present
Vice President, Kelson and Vice President, Redbud Energy	2/07 – 6/07
Director, Kelson and Vice President, Redbud Energy	1/06 – 2/07
Director, Kelson	10/05 – 1/06

Primary Areas of responsibility include:

- Redbud Energy operations and maintenance
- NERC reliability standards compliance
- State and Federal regulatory and legislative affairs
- Market development and participation

Southwest Power Pool Committee Memberships on behalf of Redbud Energy:

- Members Committee
- Strategic Planning Committee
- Corporate Governance Committee
- Market Operations and Policy Committee

### **Boston Pacific Company, Inc., Washington, DC**

October 1997 – September 2005

Project Director	10/01 – 9/05
Project Manager	10/98 – 10/01
Senior Consultant	10/97 – 10/98

Consulting practice focusing on three primary areas:

- Power Plant Development, Acquisition and Sale Support
- Electricity Market Analysis, Design and Monitoring
- Expert Testimony and Litigation Support

### **UGI Utilities, Inc., Reading, PA**

July 1994 – October 1997

Commercial Engineer II	5/96 – 10/97
Industrial & Commercial Marketing Engineer I	7/94 – 5/96

Served as a technical expert and program manager for the Industrial and Commercial marketing department.

## **EDUCATION**

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**University of Pennsylvania:** GPA 3.39 / 4.00

1990-1994

B.S. in Mechanical Engineering with a Minor in Economics

**Johns Hopkins University:** GPA 4.00 / 4.00

2000-2002

Finance and Accounting Graduate Level Classes:

- Financial Accounting
- Managerial Finance
- Corporate Financial Theory

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## Operating Region

Non-Coincidental Peak Load

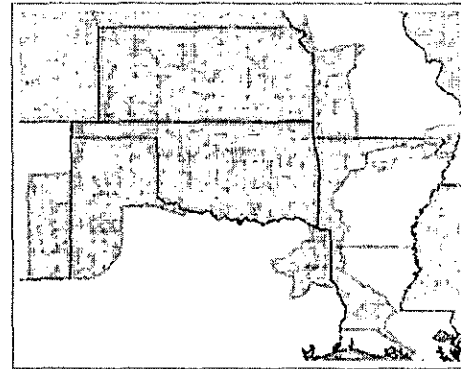
**SPP Footprints Defined**  
**SPP Fast Facts**

### SPP's Electric Industry

Substations (modeled)	5,026
Transmission Voltage Levels	500, 345, 230, 161, 138, 115, 69KV
Generating Plants	451
2006 System Peak (coincident)	42,227 MW
2006 Demand for Electricity	42,882 MW

### 2006 Capacity - 45,168 MW

Coal	36%
Gas	36%
Dual Fuel	8%
Hydro	7%
Nuclear	4%
Oil	2%
Other	7%

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Schedule RJ-2



# Fast Facts

In North America, Southwest Power Pool is one of nine Regional Transmission Organizations/ Independent System Operators, one of eight Regional Entities, and one of eight regional Reliability Councils. SPP is mandated by the Federal Energy Regulatory Commission to ensure reliable supplies of power, adequate transmission infrastructure, and competitive wholesale prices of electricity.

SPP covers a geographic area of 255,000 square miles and has members in eight states: Arkansas, Kansas, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma, and Texas. SPP manages transmission in seven of the above states.

SPP's footprint includes 17 balancing authorities and 52,301 miles of transmission lines.

SPP has 50 members that serve over 4.5 million customers. SPP's membership consists of 12 investor-owned utilities, 8 municipal systems, 11 generation and transmission cooperatives, 2 state authorities, 3 independent power producers, 11 power marketers, 1 contract participant, and 2 independent transmission companies.

## ***Our Mission:***

***Helping our members work  
together to keep the lights on –  
today and in the  
future***

## **Primary Services Provided to Members and Customers:**

**Tariff Administration:** SPP administers the Open Access Transmission Tariff and processes an average of 16,000 requests during the winter and 18,000 during the summer.

**Reliability Coordination:** SPP monitors power flow throughout our footprint and coordinates regional response in emergency situations or blackouts.

**Regional Scheduling:** SPP ensures that the amount of power sent is coordinated and matched with power received.

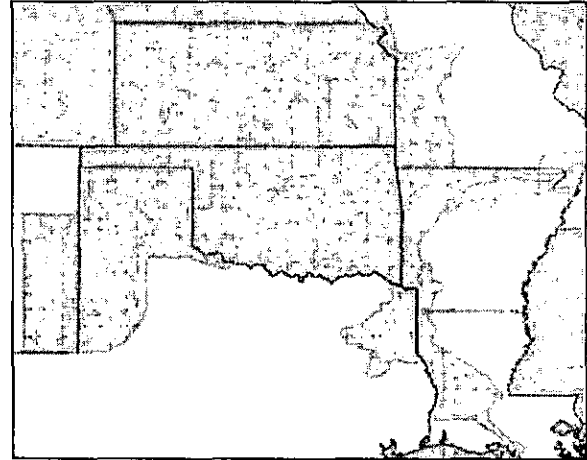
**Market Operations:** SPP recently implemented an Energy Imbalance Services Market. SPP monitors resource/load balance and ensures that less expensive power is used to serve load before expensive power, as long as system reliability is met.

**Transmission Expansion Planning:** SPP's planning process seeks to identify system limitations, develop transmission upgrade plans, and track project progress to ensure timely completion of system reinforcements.

**Contract Services:** SPP provides reliability coordination, tariff administration, and scheduling on a contract basis.

## Transmission and Operating Region

Electric Industry Substations (modeled): 5,026	
Transmission Voltage Levels: 500, 345, 230, 161, 138, 115, 69 kV	
Generating Plants: 451	
2006 System Peak (coincident): 42,227 MW	
2006 Total Demand for Electricity: 42,882 MW	
In 2006, 18 transmission projects totaling \$27,800,000 were completed, including terminal upgrades, reconductors, and transformers.	
2006 Electricity Generation Capacity: 45,168 MW	
Coal	36%
Gas	36%
Dual Fuel	8%
Hydro	7%
Nuclear	4%
Oil	2%
Other	7%



## Strategic Plan for the Future

Center of Excellence - Establish a Center of Excellence to leverage collective knowledge and provide thought, leadership, and shared service to members.

Communication and Education - Develop a systematic program for communicating with and educating the region's federal and state regulatory and legislative constituencies.

Balancing Authority - Offer Balancing Authority services to SPP members to facilitate ancillary services market development and compliance efforts in the region.

Membership Development - Pursue expansion of SPP membership and geographic footprint to further leverage capabilities and lower costs.

Transmission Expansion and Project Tracking - Actively monitor and support the progress of approved transmission expansion projects.

Economic Upgrades - Continue to identify potential economic upgrades and develop more direct means to decouple ownership and operation.

Market Development and Design - Evaluate a comprehensive market services design for the region.

Contract Services - Continue to offer services on a contract basis to increase revenues, further membership, and enhance the quality of existing services.

Regional Reliability - Become a Regional Entity under the new Electric Reliability Organization to continue offering reliability and transmission services in an efficient and cost-effective manner.



# Did You Know?

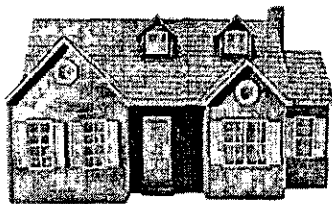


On a typical monthly residential electric bill of \$100 (10¢/kilowatt hour), SPP's cost represents only 40¢.

A 2005 independent analysis by Charles River Associates estimated a 270% return on investment for SPP Market services alone over the next 10 years.

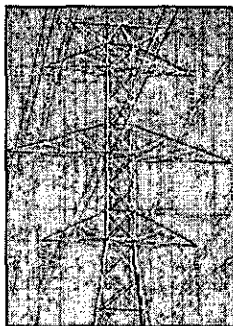


The SPP region added 347 megawatts of renewable generation in 2006.



The SPP region's 2006 electric generation capacity of 45,168 megawatts would power over 36 million homes in moderate weather.

The 52,301 miles of transmission lines in SPP's footprint would circle the earth - twice.



SPP's transmission owners spend almost \$500 million annually to operate their electric transmission facilities.

Between 1998 and 2006, SPP settled \$1.36 billion in transmission revenues.



# SPP Footprints



There are five different SPP footprints:

- Regional Reliability Organization / NERC
- Reserve Sharing Group
- RC: Reliability Coordinator Area
- Regional Transmission Organization/Tariff
- EIS Market Region

Below are definitions of SPP's footprints and lists of the members, Balancing Authorities (BAs), Transmission Operators (TOPs), and/or Transmission Owners (TOs) in each footprint.

## **Regional Reliability Organization / NERC**

The RRO is formed under the North American Electric Reliability Council (NERC) for the purposes of ensuring that a defined area of the Bulk Electric System is reliable, adequate and secure.

The SPP RRO footprint is comprised of SPP's members, which includes investor-owned utilities, cooperatives, municipals, power marketers, independent power producers, and governmental agencies.

The RRO footprint is most commonly cited when people ask about the "SPP Footprint."

For a list of SPP members, visit [www.spp.org](http://www.spp.org) and select Members.

Balancing Authorities in the RRO/NERC Footprint:

SECI	Sunflower Electric
SPS	Southwest Public Service
WFEC	Western Farmers Electric Cooperative
OKGE	Oklahoma Gas & Electric Transmission
CSWS	American Electric Power
EDE	Empire District Electric Co
GRDA	Grand River Dam Authority
KCPL	Kansas City P&L Power Supply
WR	Westar Energy Generation
KACY	Kansas City Board of Public Utilities
MPS	Missouri Public Service Transmission
INDN	Independence P&L
SPA	Southwest Power Administration
CLEC	Central Louisiana Electric
LAFA	City of Lafayette
LEPA	Louisiana Energy & Power Authority

## **Reserve Sharing Group**

The Reserve Sharing Group footprint is currently comprised only of Balancing Authorities. The Reserve Sharing footprint includes all SPP Regional Reliability Organization BAs and certain other BAs who have contracted with SPP to provide them with Reserve Sharing services.

### Reserving Sharing Footprint:

AECI	Associated Electric Co-Op
BUBA	City of Benton, Arkansas
CSWS	American Electric Power
CLEC	Central Louisiana Electric
CNWX	Constellation Energy (Conway)
DENL	Constellation Energy (North Little Rock)
DESR	Constellation Energy (Ruston)
WMUC	Constellation Energy (West Memphis)
EDE	Empire District Electric Co
EES	Entergy Generation
GRDA	Grand River Dam Authority
INDN	Independence P&L
KACY	Kansas City Board of Public Utilities
KCPL	Kansas City P&L Power Supply
LAFA	City of Lafayette
LAGN	Louisiana Generating (NRG)
LEPA	Louisiana Energy & Power Authority
MPS	Missouri Public Service Transmission
OKGE	Oklahoma Gas & Electric Transmission
SECI	Sunflower Electric
SME	Southern Mississippi Electric Power Association
SPA	Southwest Power Administration
SPS	Southwest Public Service
WFEC	Western Farmers Electric Coop
WR	Westar Energy Generation

## **RC: Reliability Coordinator Area**

The RC footprint is comprised of those Balancing Authorities and Transmission Operators for which SPP acts as a Reliability Coordinator. RC is a NERC designation.

The SPP RC footprint currently includes all SPP RRO member Balancing Authorities and transmission owners, with the exception of the Aquila BAs and certain BAs in the Southeastern Electric Reliability Council RRO.

### **Reliability Coordinator Footprint:**

BCA	Batesville Generating Station
BUBA	City of Benton, Arkansas
CSWS	Central and South West Services
CNWX	City of Conway
DENL	City of North Little Rock
DERS	City of Ruston
WMUC	City of West Memphis
CLEC	CLECO Power
EDE	The Empire District Electric Company
GRDA	Grand River Dam Authority
INDN	City Power & Light, Independence, Missouri
KACY	The Board of Public Utilities, Kansas City, Kansas
KCPL	Kansas City Power and Light Company
LAFA	City of Lafayette, Louisiana
LEPA	Louisiana Energy & Power Authority
LAGN	Louisiana Generating
OKGE	Oklahoma Gas and Electric
SECI	Sunflower Electric Power Corporation
SPA	Southwestern Power Administration
SPS	Southwestern Public Service Company
PUPP	Union Generating Station
WFEC	Western Farmers Electric Cooperative
WR	Westar Energy, Inc.
MIDW	Midwest Energy – TOP in WR Balancing Authority Area
CUS	City Utilities of Springfield, MO – TOP in SPA Balancing Authority Area

## **Regional Transmission Organization / Tariff**

The RTO/Tariff footprint is comprised of the Balancing Authorities and Transmission Owners who have committed their transmission facilities to the SPP Open Access Transmission Tariff.

### **RTO/Tariff Footprint:**

SECI	Sunflower Electric Power Corporation
SPS	Southwestern Public Service Company
WFEC	Western Farmers Electric Cooperative
OKGE	Oklahoma Gas and Electric
CSWS	Central and South West Services
EDE	The Empire District Electric Company
GRDA	Grand River Dam Authority
KCPL	Kansas City Power and Light Company
WR	Westar Energy, Inc.
MPS	Missouri Public Service Transmission
CUS	City Utilities of Springfield (part of the Southwest Power Administration BA, which is not under the SPP tariff)
MIDW	Midwest Energy (a distinct tariff entity which is part of the Westar Balancing Authority)

## **EIS Market Region**

The Market Region consists of Balancing Authorities and Transmission Owners who participate in the SPP EIS Market. All load and generation connected to the transmission facilities of these transmission owners are subject to terms and conditions of the EIS market.

### **SPP Market Region Footprint:**

SECI	Sunflower Electric Power Corporation
SPS	Southwestern Public Service Company
WFEC	Western Farmers Electric Cooperative
OKGE	Oklahoma Gas and Electric
CSWS	Central and South West Services
EDE	The Empire District Electric Company
GRDA	Grand River Dam Authority
KCPL	Kansas City Power and Light Company
WR	Westar Energy, Inc.
KACY	Kansas City Board of Public Utilities

