

Exhibit No:
**Issues: Substation and
Transmission**
Witness: P. Jay Caspary
Sponsoring Party:
Southwest Power Pool
Case No: EA-2006-0309

**Before the Public Service Commission
of the State of Missouri**

FILED³

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Missouri Public
Service Commission

Rebuttal Testimony

of

P. Jay Caspary

Exhibit No. 31
Case No(s) EA-2006-0309
Date 4-26-06 Rptr KF

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
REBUTTAL TESTIMONY OF P. JAY CASPARY
ON BEHALF OF SOUTHWEST POWER POOL, INC.
CASE NO. EA-2006-0309**

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

2 **A.** My name is P. Jay Caspary, Director of Engineering , Southwest Power Pool
3 (“SPP”), 415 North McKinley, Suite 140, Plaza West, Little Rock, AR 72205-
4 3020.

5 **Q. What are your duties and responsibilities in your current position?**

6 **A.** As Director, Engineering, I am responsible for managing the regional planning,
7 tariff studies and engineering modeling/analyses for SPP.

8 **Q. Please describe your educational and professional background.**

9 **A.** I graduated from the University of Illinois in Urbana with a Bachelor of Science
10 degree in Electrical Engineering in May 1981. I have completed all the course
11 requirements for a Masters of Engineering degree from Iowa State University, and
12 taken several courses in the Masters of Business Administration program at the
13 University of Illinois at Springfield. I was promoted to this current position of
14 Director, Engineering at Southwest Power Pool in August 2005. Prior to my
15 current position at SPP, I was Manager, Planning where my primary
16 responsibility was the development and implementation of the SPP RTO
17 Expansion Plan. I joined SPP in early 2001 as the Manager, Engineering, after a
18 19-plus year career with Illinois Power where I held positions with increasing

1 responsibility in Transmission Planning, Electric & Gas Resource Planning,
2 System Planning, Pricing, Customer Solutions and Transmission Services.

3 **Q. What is the purpose of your testimony?**

4 **A.** The purpose of my testimony is to provide an overview of SPP and its roles and
5 responsibilities with regard to transmission expansion planning and reliability.
6 SPP supports Aquila's petition to not dismantle the South Harper generating
7 facilities and the associated substations based on the adverse impacts which
8 would result to the transmission system, in general, and the local reliability of
9 electric service in the area, in particular.

10

11 **HISTORY, FUNCTIONAL CONTROL AND RTO EVOLUTION**

12 **Q. Please give a brief history of SPP.**

13 **A.** SPP is an Arkansas non-profit corporation with its principal place of business in
14 Little Rock, Arkansas. SPP came into existence in 1941, when 11 companies
15 joined together voluntarily to serve critical national defense needs during World
16 War II. When the war ended in 1945, SPP's Executive Committee decided the
17 organization should be retained to further the benefits of coordinated operation of
18 their electric systems. As a result of the northeast power interruption in late 1965,
19 a number of reliability councils were organized, and in 1968 SPP joined with 12
20 other entities to form the National Electric Reliability Council, now known as the
21 North American Electric Reliability Council (NERC). SPP incorporated as a not-
22 for-profit corporation in 1994.

1 SPP currently has forty-six (46) members serving more than 4 million
2 customers in a 400,000 square mile area covering all or part of the States of
3 Arkansas, Kansas, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma and
4 Texas. SPP's membership includes 13 investor-owned utilities, seven municipal
5 systems, nine generation and transmission cooperatives, two state authorities,
6 three independent power producers and twelve power marketers. Aquila is one
7 such investor-owned utility member of SPP.

8 Since 1998, SPP has administered open-access transmission service across
9 the SPP region under the terms of SPP's open-access transmission tariff, filed
10 with and approved by the Federal Energy Regulatory Commission ("FERC").
11 The transmission facilities used to provide service under the SPP tariff are
12 comprised of the transmission facilities owned by a number of public utility and
13 non-public utility members of SPP that are currently committed to the SPP tariff.
14 Customers taking service under the SPP tariff now possess the ability to receive
15 and/or deliver power throughout the SPP region with one-stop shopping, while
16 paying only a single non-pancaked transmission charge for service under the SPP
17 tariff.

18 FERC Order No. 2000¹ strongly encouraged all public utilities that own,
19 operate or control interstate transmission facilities to participate in a Regional
20 Transmission Organization ("RTO") that will exercise functional control over
21 their transmission assets. On October 15, 2003, SPP submitted a filing pursuant

¹*Regional Transmission Organizations Order No. 2000*, III FERC Stats & Regs.,
Regs. Preambles ¶ 31,089 (1999), order on reh'g, *Order No. 2000-A*, III FERC Stats. &
Regs., Regs. Preambles ¶ 31,092 (2000).

1 to Section 205 of the Federal Power Act ("FPA"), 16 U.S.C. § 8244, and Section
2 35.34 of the FERC's regulations, to establish the SPP RTO. This filing sought
3 recognition that the SPP RTO satisfied the requirements of Order 2000 and the
4 FERC's regulations issued thereunder. In a series of orders issued October 1,
5 2004, FERC granted SPP RTO status.

6 **Q. Are there additional organizational or functional details concerning SPP's**
7 **history and responsibilities?**

8 **A.** Yes. There are at least three other functions that are worthy of comment. First, in
9 1991, SPP began to administer a reserve-sharing program among its members that
10 allows the combined resources of the participating members to be used to meet
11 the NERC criteria for the maintenance of reserve generation, which is equal to 1.5
12 times the largest unit scheduled for operation in a given period on the SPP system.
13 Absent this program, individual members would have to maintain a higher level
14 of reserves than that which is required using a joint approach.

15 Second, SPP began providing security coordination in a more formal
16 manner in 1997. This included monitoring the reliability needs of the members in
17 both real time and forward-looking scenarios. Because of the nature of interstate
18 and inter-control area transactions, the regionalization of the security coordination
19 function has provided much greater reliability to the electric transmission grid
20 within SPP's footprint.

21 Third, in 2001, SPP began providing regional scheduling that allowed SPP
22 to be the scheduling entity for all agreements and transactions. This consolidation

1 not only eased the administrative burden for market participants, but also ensured
2 that SPP was responsible to monitor and record each transaction.

3 **Q. What did you mean above when you said that RTOs will exercise “functional**
4 **control over transmission facilities?”**

5 A. Although the term, “functional control,” is not defined in the governing
6 documents of SPP, the SPP Membership Agreement (SPP MA) provides a
7 concise definition of SPP’s authority to control the transmission system. Section
8 2.1.1(k) of the SPP MA states, “SPP shall have the authority to direct the day-to-
9 day operations of the Tariff Facilities in order to carry out its responsibilities as a
10 Transmission Provider and Reliability Coordinator as described in SPP’s
11 Operational Authority Reference document...” Section 1.17 defines Tariff
12 Facilities as “[t]he Electric Transmission system and the Distribution Facilities
13 subject to SPP’s tariff administration.” Finally, the Operational Authority
14 Reference document lists the functions that are included in SPP’s authority and
15 that involve functional control. These functions are as follows:

- 16 • Scheduling authority over tariff facilities,
- 17 • Determining the Available Transmission Capacity under the SPP
18 OATT,
- 19 • Coordinating with other regions,
- 20 • Directing transmission construction under coordinated planning
21 criteria or under the SPP OATT,
- 22 • Acting as a reliability coordinator,
- 23 • Directing control areas to maintain adequate reserves,

- 1 • Coordinating reliability with other regions,
- 2 • Directing the emergency response of any of SPP's members,
- 3 including the shedding of firm load,
- 4 • Monitoring and coordinating voltage schedules,
- 5 • Directing redispatch of generation in accordance with the SPP
- 6 OATT,
- 7 • Reviewing and coordinating transmission and generation
- 8 maintenance schedules, and
- 9 • Redirecting maintenance outage schedules for reliability reasons
- 10 and providing compensation.

11 **Q. Are the functions listed in the Operational Authority Reference document**
12 **consistent with the required functions of a Regional Transmission**
13 **Organization?**

14 **A. Yes, they are. The RTO Functions as enumerated in the FERC's Order No. 2000**
15 **as well as its February 10, 2004, Order in Docket Nos. RT04-1-000 and ER04-48-**
16 **000, in which dockets SPP was ultimately granted RTO status, are as follows:**

- 17 1. Tariff Administration and Design,
- 18 2. Congestion Management,
- 19 3. Parallel Path Flow,
- 20 4. Ancillary Services,
- 21 5. OASIS,
- 22 6. Market Monitoring,
- 23 7. Planning and Expansion, and

1 8. Interregional Coordination.

2 More specifically:

3 1. The RTO is to be the sole administrator and provider of transmission
4 service. SPP meets this required function. This is a continuation of services that
5 SPP has performed over an extended period of time. These services affect
6 facilities covered by SPP's Open Access Transmission Tariff (OATT) and other
7 facilities subject to SPP's control with regard to non-grandfathered, non-bundled
8 load transmission.

9 2. FERC Order 2000 contained certain requirements with regard to
10 congestion management that are the responsibility of SPP as an RTO. SPP has
11 managed real-time congestion pursuant to its Tariff through transmission line
12 loading relief (TLR). Beyond the existing procedure for the control of
13 congestion, the February 10, 2004 RTO Order assigned to the SPP Regional State
14 Committee ("RSC") "primary responsibility" for the determination of the timing
15 and methodology of a replacement for the TLR approach.

16 3. As an RTO, SPP must also have procedures in place to address parallel
17 path flows within its region and other regions. SPP has a long history in this area
18 of responsibility as the regional security coordinator and has met this requirement.

19 4. The RTO must be the provider of last resort for ancillary services. While
20 market participants have the right to self-supply ancillary services, the SPP Tariff
21 contains provisions for SPP (through its members) to provide these services. This
22 fulfills the ancillary services requirement.

1 5. An RTO must be the single administrator of the OATT, and SPP has met
2 this requirement.

3 6. The RTO must engage in market monitoring. SPP has engaged Boston
4 Pacific as an Independent Market Monitor (IMM). This function has been
5 fulfilled and the first required annual report was released and submitted to the
6 RSC and SPP Board on May 31, 2005. Internally, SPP has also established an
7 Independent Market Monitoring Unit that is in the initial stages of formation in
8 parallel with the scheduled implementation of an imbalance energy market in the
9 fall of 2006.

10 7. The RTO must be responsible for planning and expansion of the
11 transmission system. SPP has developed a regional planning process and an
12 associated transmission expansion plan. SPP has also filed a cost allocation plan
13 at FERC that was developed by the SPP Regional State Committee and approved
14 by FERC.

15 8. Finally, the RTO must be responsible for interregional coordination. SPP
16 is a NERC regional reliability council and has a joint operation agreement with
17 the Midwest Independent Transmission System Operator. SPP continues to fulfill
18 its commitment to interregional coordination.

19 **Q. Have you read the testimony of Aquila witness Carl Huslig and do you have**
20 **any comments which you would like to make in that regard?**

21 **A.** Yes. I have read testimony of Carl Huslig. I find it was reasonable for the
22 transmission planning department to conclude that load growth on the south side
23 of Kansas City ("West Area" in Mr. Huslig's testimony) "would result in

1 unacceptable system performance.” (See page 5, line 9 of Mr. Huslig’s Direct
2 Testimony) As I will point out in my testimony, the addition of the South Harper
3 generating facility and associated substations will relieve loadings on other
4 transmission facilities on the south side of Kansas City and benefit the overall
5 operation of the transmission system in that area. It follows that removing these
6 Aquila facilities will increase the loadings to KCPL’s Stilwell 345/161 kV
7 transformers as well as the Martin City – Stilwell 161 kV line.

8 **Q. Of the required RTO functions listed above, which is most pertinent with**
9 **regards to the scope of this docket?**

10 A. As the RTO, SPP is responsible for the development and implementation of the
11 region’s transmission expansion plan which addresses not only the reliability, but
12 also the economic needs, of the SPP Region. The dismantling of the South
13 Harper generating facility and associated substations will affect SPP’s ability to
14 fulfill this function, and as a consequence, the reliability of the transmission.

15 **Q. Please briefly describe SPP’s transmission planning process.**

16 A. SPP utilizes a top-down and bottom-up approach to transmission expansion
17 planning. The foundation of the expansion plan is to maintain reliability
18 standards which are defined by SPP or member Transmission Planning Criteria.
19 SPP Staff relies on the knowledge and expertise of the member systems to
20 identify local needs and recommend proposed solutions. SPP, as the RTO, will
21 review and independently assess these member-driven solutions and incorporate
22 approved projects into the SPP RTO Expansion Plan. In addition to reliability
23 needs, SPP identifies potential economic expansion projects which provide

1 benefits in terms of production cost savings to project sponsors. The SPP RTO
2 Expansion Plan compliments a core belief at SPP that reliability and economics
3 are inseparable. The SPP RTO Expansion Plan is a living document which is
4 updated periodically to incorporate not only changes to planned projects, but also
5 new projects which are driven by customer requests for new service which were
6 not considered in the original plan. SPP has worked with Aquila and other
7 members to create an initial SPP RTO Expansion Plan to address reliability needs,
8 and update the plan based on new information as it becomes available.

9 **Q. Has SPP incorporated the South Harper generating facilities and associated**
10 **facilities into the SPP RTO Expansion Plan?**

11 A. Yes. Although these facilities were not identified as expected projects when SPP
12 initiated its SPP RTO Expansion Plan process in late 2003 and early 2004, these
13 facilities were incorporated into the plan as part of one of the initial updates in
14 2005. SPP Staff did assess the impact of the South Harper peaking facilities and
15 associated facilities on the timing and need for other reliability projects in the SPP
16 RTO Expansion Plan. The implementation of these Aquila facilities did not
17 create the need to accelerate or implement new reliability projects in the planning
18 horizon.

19 **Q. Would removal of the South Harper generating facility and associated**
20 **substations have an adverse impact on the reliability of the transmission**
21 **system?**

22 A. Yes. Although the SPP RTO Expansion Plan did not identify the need for a new
23 345kV source into the 161kV system near Peculiar, Missouri, it is clear that this

1 addition will provide reliability benefits to the bulk transmission system in the
2 area. The associated substations provide strong 161kV sources to the 69kV loads
3 in this growing area. These additional transmission sources support the local
4 distribution in providing greater access to generation and relieving congestion.
5 The reliability benefits of these new sources to support the future needs of this
6 area are unquestionable.

7 **Q. Are there regional benefits beyond the local area associated with the South
8 Harper generating facility and associated substations?**

9 A. Yes. Transmission expansion projects that integrate the 161 and 345kV systems
10 in this portion of the SPP footprint will improve not only the reliability of the bulk
11 power transmission system, but also the overall efficiency and economics of
12 transmission operations. The transmission grid is a dynamic system. Without an
13 adequate transmission system, interconnected with other facilities, power can not
14 be moved efficiently from the various locations where it is generated. Without
15 such facilities, it would not matter how much generating capacity is available. It
16 would not be deliverable to the load. The benefits of the South Harper generating
17 facility and associated substations go well beyond the needs of Aquila to integrate
18 a new peaking facility into the local transmission system and improve reliability
19 of service to local load centers.

20 **Q. In addition to the transmission expansion benefits with regard to reliability
21 and economics, are there other expected benefits of the South Harper
22 generating facility and associated substations?**

1 A. Yes. The South Harper generating station can be expected to provide reactive
2 support to the local loads as well as the bulk power transmission which may be
3 needed during actual operations to maintain system security. A generator
4 produces reactive power in order to maintain system voltage. System voltage
5 must be maintained in order for the transmission system to operate properly. If
6 the system voltage fails, the entire transmission system fails. This resource and
7 the associated substations are expected to provide substantial support to
8 maintaining system voltage and reliability for local and regional loads,
9 particularly as load continues to grow in this portion of SPP.

10 **Q. Has SPP incorporated the South Harper generating facility and associated**
11 **substations into its models which are used by SPP as the Transmission**
12 **Provider to evaluate the impacts of future generator interconnection and**
13 **transmission service requests?**

14 A. Yes. SPP performs generation interconnection and transmission service request
15 studies based on the latest available models. Beginning with the Summer 2005
16 models, SPP incorporated the South Harper generating facility and associated
17 substations into its network models which were used to evaluate future generator
18 interconnections and transmission service requests.

19 **Q. Would the removal of the South Harper generating facility and associated**
20 **substations have a potentially adverse impact to SPP and its customers?**

21 A. Yes. Although studies have not been performed to determine the impact of
22 removing these Aquila facilities on new interconnections and transmission service
23 granted since these facilities were incorporated in the network models, SPP has

1 sold service “across these facilities” and may have to implement mitigation plans
2 if they are removed from service in the future.

3 **Q. Does this conclude your testimony?**

4 **A. Yes.**

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI


In the matter of the Application of Aquila,)
Inc. for Permission and Approval and a)
Certificate of Public Convenience and)
Necessity authorizing it to acquire, construct,)
Install, own, operate, maintain, and otherwise)
Control and manage electrical production and)
Related facilities in unincorporated areas of Cass)
County, Missouri near the town of Peculiar.)

Case No. EA-2006-0309

County of Pulaski)
) ss
State of Arkansas)

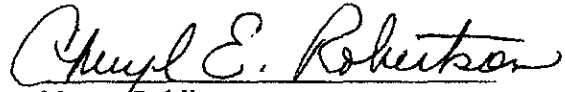
AFFIDAVIT OF P. JAY CASPARY

P. Jay Caspary, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of P. Jay Caspary"; that said testimony was prepared by him and under his direction and supervision; that if inquiries were made as to the facts in said testimony, he would respond as therein set forth; and that the aforesaid testimony is true and correct to the best of his knowledge, information and belief.



P. Jay Caspary

Subscribed and sworn to before me this 31 day of March, 2006.



Notary Public

My Commission expires:

12/31/13

