Exhibit No.:	
Issue:	Generation Operations
Witness:	Robert F. Steinke
Type of Exhibit:	Supplemental Direct Testimony
Sponsoring Party:	Great Plains Energy Incorporated and Kansas City Power & Light Company
Case No.:	EM-2007-0374
Date Testimony Prepared:	August 8, 2007

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: EM-2007-0374

SUPPLEMENTAL DIRECT TESTIMONY PURSUANT TO THE SCHEDULING ORDER

OF

ROBERT F. STEINKE

ON BEHALF OF

GREAT PLAINS ENERGY INCORPORATED

AND

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
August 2007

SUPPLEMENTAL DIRECT TESTIMONY

PURSUANT TO THE SCHEDULING ORDER

OF

Robert F. Steinke

Case No. EM-2007-0374

Q: **Please state your name and business address.**

A: My name is Robert F. Steinke. My business address is 2689 Willow Grass Court, Colorado Springs, Colorado 80920.

Q: **By whom and in what capacity are you employed?**

A: I am an independent consultant employed by Bridge Strategy Group LLC, a management consulting firm based in Chicago.

Q. **Please describe your education, experience and employment history.**

A. I graduated with a degree in Mechanical Engineering from Steven's Institute of Technology in 1958 and attended the Program for Management Development at the Harvard Business School in 1980. I am the President of Robert F. Steinke & Associates, a consulting firm specializing in power generation management and operation. I have more than 48 years of consulting and industrial experience serving the power industry worldwide. For the last 16 years I have specialized in analyzing and making recommendations in the area of power plant operation and management effectiveness, conducting in-depth power plant analysis evaluation programs for over 250 fossil and gas-turbine power plant units worldwide. Prior to founding Robert F. Steinke & Associates, I was a Vice President at Public Service Electric and Gas Company

("PSE&G"). I served as a Corporate Officer for five years, managing the Business and Technical Support department and the Fuel Supply department. Prior to that, I served as General Manager Fossil Operations managing and directing the overall operation, maintenance, and control of seven major fossil power plants and 49 gas turbine units. I also served in many managerial and supervisory capacities at PSE&G, for more than 27 years in the Electric Production department.

Q. Have you previously testified in a proceeding at the Missouri Public Service Commission?

A. No, I have not.

Q. What is the purpose of your testimony?

A. I have been asked by Bridge Strategy Group and Kansas City Power & Light Company ("KCPL") to assist in evaluating the potential synergies resulting from the combination of Great Plains Energy and Aquila two power systems generating fleets.

Q. When did this process begin?

A. I began my work on this project in March of 2007

Q. What is your level of familiarity with Aquila's Missouri operations and KCPL's total operations?

A. I have conducted in-depth onsite inspections and analysis of the following Aquila operations: Lake Road power plant, Sibley power plant, all gas turbine operations, facilities, engineering, support group, and various other management and executive personnel. At KCPL, I have conducted detailed analysis of: central maintenance facility, turbine overhaul support group, fuel supply organization, construction support group, and various other management and executive personnel.

Q. What process did you use to make your analysis?

A. Over the last three month period I conducted a detailed on-site inspection, investigation, and analysis of Aquila's entire generation fleet. In this process I conducted over 75 detailed interviews with management, staff, and employees. I reviewed many documents and a considerable amount of historical data. I conducted detailed three-hour plant inspection investigations of each facility. I also participated in a number of plant Operations Integration Team meetings with both Aquila and KCPL staff.

Q. Mr. Dana Crawford is presenting some findings and conclusions in this proceeding that address several synergies that will be derived from the merger. Can you describe those synergies and explain from you standpoint how you see those coming about?

A. I support Mr. Crawford's testimony in the five synergy initiatives and savings proposed. Specifically, these are:

1- Restoring additional capability of Aquila's Sibley Unit 3 generating unit

2- Implementing KCPL's Boiler Tube Failure Reduction and Cycle Chemistry Improvement ("BTFR/CCI") program on the Aquila coal-fired fleet.

3- Combining the Combustion Turbine ("CT") fleets under one consolidated organization

4- Increasing production on Sibley Units 1 & 2 by reducing the number of outage days needed for boiler cleaning.

5- Improvement of plant heat rate at the Aquila power plants

Q. How did you arrive at your conclusions?

A. My conclusions were the result of the detailed on-site work and analysis that I did at both Aquila and KCPL, coupled with my 18 years of experience with over 250 power plants world wide.

Q. What are your supporting findings, conclusions, and comments on the first synergy?

A. The first synergy deals with improving the full load capability of Aquila's Sibley Unit 3 generating unit. The Sibley Unit 3 capacity improvement project includes multiple items to improve the capacity factor of the unit. The unit is currently rated at 400.6 MW net accredited capacity.

Due to convection pass slagging, the unit cannot operate at this level on a continuous basis. The unit currently operates at a normal maximum output of about 360 MW net (except for relatively short periods of critical system needs). KCPL has demonstrated considerable expertise in combustion optimization of cyclone boilers. KCPL's fuel procurement and blending programs have helped their plants achieve optimized operation. Improved instrumentation and monitoring equipment needs to be installed to improve the effectiveness of sootblowing. Furnace heat flux sensors will also improve on-line convective pass cleanliness. Improved coal blending will also play a key role in improving the unit's capacity factor. The addition of booster ID fans will also improve the unit's capability. Although Sibley Unit 3 is an older unit, it has been well maintained. KCPL will be restore the unit to design full load capability by applying its "best practice" principles of combustion optimization, furnace cleanliness, fuel blending, and coal test burns. "Best Practices" are processes, techniques, and methodologies that are developed and used by excellent companies to achieve continuous improvement performance.

Q. How has KCPL demonstrated expertise in combustion optimization?

A. KCPL has, in their engineering organization, dedicated engineers that are highly skilled at optimizing boiler and furnace combustion. Those engineers have many years of experience in working with plant operators to optimize cyclone boiler combustion. Furnace optimization is a combination of an art as well as an engineering science. KCPL units have performed well using blended coals. In the past, KCPL regained a significant increase of capacity on LaCygne Unit 1 by applying this expertise to that coal-fired, supercritical boiler.

Q. Why can't Aquila do this now?

A. Aquila has not developed the necessary expertise because of its smaller-sized fleet of coal units.

Q. What are your supporting findings, conclusions, and comments on the second synergy?

A. The second identified merger-related synergy deals with the application of KCPL's BTFR/CCI program to the Aquila fleet. KCPL has an excellent BTFR/CCI program, which it has successfully implemented to reduce the amount of forced outage time on its base load coal units. This program includes a group of trained boiler engineers who document all boiler tube leaks, evaluate the root cause and recommend corrective action. In addition, KCPL has a metallurgical lab and an on-staff metallurgist who evaluates the majority of boiler tube failures to verify or determine the failure mechanism. In addition, the boiler engineers work together to complete boiler inspections and monitor boiler repairs during unit outages. Aquila does not have a formal boiler tube failure reduction

program. KCPL will apply its BTFR/CCI program to Sibley Units 1 and 2 and Lake Road Boilers 5 and 6, in addition to Sibley Unit 3.

Q. What are your supporting findings, conclusions, and comments on the third synergy?

A. The third synergy deals with combining the companies' CT generation fleet. A number of the CT units are very similar in design. Combining the CT fleets under one consolidated organization will focus its mission and maximize the fleet performance. (Peaking and Cycling). Technical expertise in both companies will be blended to optimize performance as well. For example, Aquila has demonstrated its capability by developing and operating the South Harper and the Greenwood plants very well. This expertise will benefit both fleets. Synergies of people, processes and equipment will lead to improved operating performance and cost savings. In addition, KCPL's excellent Central Maintenance Facility may also be used to repair gas turbine components realizing additional savings.

Q. How will this synergy be achieved?

A. By developing a specific organization, with a focused mission, strategy, measurable goals and objectives, and a specialized CT skilled work force. Aquila has excellent expertise in CT generation because they have more units. By combining fleet operation and management they will use their expertise to enhance the total generation fleet.

Q. What is KCPL's Central Maintenance Facility and why is it excellent?

A. KCPL has an excellent "Central Maintenance Facility" with a skilled, well staffed, and a well equipped shop near LaCygne generating station. Currently, the shop provides

services for KCPL's coal fossil fleet. Its mission could easily be expanded to include CT work that is now being performed by more costly OEM and outside shops.

Q. What are your supporting findings, conclusions, and comments on the fourth synergy?

A. The fourth identified merger-related synergy deals with Sibley Units 1 & 2 need for both spring and fall outages. These outages are a result of severe furnace slagging and fouling. These outages can be reduced and minimized by using the same combustion optimization principles and techniques outlined in synergy 1.

Q. What are your supporting findings, conclusions, and comments on the fifth synergy?

A. The fifth identified merger-related synergy is in the area of heat rate improvement. Applying additional resources and "State of the Art Technology" to plant hardware and software will provide the necessary data and information to improve plant heat rate. KCPL has expertise in these areas. Its "Engineered Performance" heat rate improvement program will yield improved benefits across the board. A focused heat rate improvement program at all plants will produce significant savings and results. Currently, Aquila does not have data acquisition systems or performance monitors on their coal-fired units. KCPL uses OSI-PI data acquisition and "EndResult" performance monitor (PMIS) on all of its large coal units. In addition, KCPL employs performance engineers at each station to monitor and address heat rate issues and a defined "Engineered Performance" heat rate improvement program. Sibley personnel had been using an extensive heat rate improvement program on Unit 3 in the 1980's. Many of these improvements are still in

place, but there has not been a focused heat rate improvement program at Aquila for several years, with the exception of a few Six Sigma initiatives.

Q. What is the "State of the Art Technology"?

A. "State of the Art Technology" is new and proven technology that has recently been developed to improve power plant performance and operation.

Q. How will "Engineered Performance" heat rate improvement program yield improved benefits across the board?

A. A focused heat rate improvement program using an" Engineered Performance Tool" will provide the process, goals, and metrics for plant operators to monitor, evaluate, analyze, and make adjustments to plant critical variables affecting unit heat rate.

Q. Why can't Aquila do this without the merger?

A. That might be possible but it needs to be done in a systematic way over the next several years with a focused program and expertise.

Q: What is the total net effect of these five identified synergies?

A: I would agree with KCPL's assessment that the total net effect of these five identified synergies at $27.9 million over a 5-year time period is achievable.

Q. Does that conclude your testimony?

A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Joint Application of Great Plains Energy Incorporated, Kansas City Power & Light Company, and Aquila, Inc. for Approval of the Merger of Aquila, Inc. with a Subsidiary of Great Plains Energy Incorporated and for Other Requester Relief	))))))	**Case No. EM-2007-0374**

AFFIDAVIT OF ROBERT F. STEINKE

STATE OF MISSOURI)
) **ss**
COUNTY OF JACKSON)

Robert F. Steinke, being first duly sworn on his oath, states:

1. My name is Robert F. Steinke. I am employed by Bridge Strategies Group and supporting the Kansas City Power & Light Company project as a consultant.

2. Attached hereto and made a part hereof for all purposes is my Supplemental Direct Testimony on behalf of Great Plains Energy Incorporated and Kansas City Power & Light Company consisting of eight (8) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Robert F. Steinke

Subscribed and sworn before me this 8th day of August 2007.

Nicol A. Wehry
Notary Public

My commission expires: Feb. 4 2011

" NOTARY SEAL "
Nicole A. Wehry, Notary Public
Jackson County, State of Missouri
My Commission Expires 2/4/2011
Commission Number 07391200