Exhibit No.:	
Issue:	Resource Plan Monitoring; In-Service Criteria; Status of Missouri Tall Tower Installations
Witness:	John R. Grimwade
Type of Exhibit:	Direct Testimony
Sponsoring Party:	Kansas City Power & Light Company
Case No.:	ER-2006-____
Date Testimony Prepared:	January 27, 2006

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. ER-2006-____

DIRECT TESTIMONY

OF

JOHN R. GRIMWADE

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
January 2006

"[redacted]**" Designates that "Proprietary" Information has been Removed.**
"Proprietary" Information has been Removed from Certain Schedules Attached to This Testimony Designated ("P") Pursuant to the Standard Protective Order.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariff to Begin the Implementation of Its Regulatory Plan	)))	Case No. ER-2006-____

AFFIDAVIT OF JOHN R. GRIMWADE

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

John R. Grimwade, being first duly sworn upon oath, states:

1. My name is John R. Grimwade. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Senior Director, Construction.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of seventeen (17) pages and Schedules JRG-1 through JRG-4, all of which having been prepared in written form for introduction into evidence in this 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.

_____
John R. Grimwade

Subscribed and sworn before me this ____ day of January 2006.

_____
Notary Public

My commission expires: _____

DIRECT TESTIMONY

OF

JOHN R. GRIMWADE

Case No. ER-2006-____

Q: Please state your name and business address.

A: My name is John R. Grimwade. My business address is 1201 Walnut, Kansas City, Missouri 64106-2124.

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

A: I am employed by Kansas City Power & Light Company ("KCPL") as Senior Director, Construction.

Q: What are your responsibilities?

A: My responsibilities include the development, design, procurement, construction and commissioning of the power supply projects included in KCPL's Comprehensive Energy Plan ("CEP"). These projects include: (1) the 100-MW wind project for 2006; (2) the Iatan Unit 2 850-MW coal-fired unit; (3) the LaCygne Unit 1 Selective Catalytic Reduction ("SCR") system; (4) a similar SCR upgrade and other environmental controls at Iatan Unit 1; and (5) the LaCygne Unit 1 scrubber and baghouse retrofits.

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

A: I graduated in 1979 with a Bachelor of Science degree in Mechanical Engineering from Worcester Polytechnic Institute, Worcester, Massachusetts, and in 1988 I received my Master of Business Administration degree from Rockhurst College, Kansas City, Missouri. I was first employed at KCPL in 1987 as a Grade II Engineer in the Power Engineering Division. In 1990 I transferred to the Generation Planning Department as a

Generation Planning Engineer. In 1996 I moved to KCPL's non-regulated affiliate KLT Power as a Project Manager for China Development and in 1997 I became a Developer for U.S. Business Development. When KCPL sold KLT Power in 1998, I returned to KCPL as Supervisor, Resource Planning and Development. In 1999 I was promoted to Manager, Energy Resource Management. In 2005 I was promoted to my present position. Prior to joining KCPL, I worked for the Babcock & Wilcox Co. from 1979 to 1987 as a Field Service Engineer and a Sales Engineer.

Q: Have you previously testified in proceedings before the Missouri Public Service Commission or before any other utility regulatory agency?

A: Yes, I have testified before both the Missouri Public Service Commission ("MPSC") and the Kansas Corporation Commission ("KCC") on numerous issues regarding integrated resource planning and generation plant siting. Most recently, I testified in the MPSC and KCC proceedings concerning KCPL's CEP.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to describe the current status of the near-term supply-related commitments KCPL made in the Stipulation and Agreement concerning KCPL's Regulatory Plan, which was approved by the MPSC in Case No. EO-2005-0329 ("Regulatory Plan Stipulation and Agreement"). I will also discuss the in-service criteria for those commitments. Finally, I will discuss the status of KCPL's plans to study wind in Missouri.

Q: Please summarize the supply-related commitments made by KCPL in the Regulatory Plan Stipulation and Agreement.

A: KCPL committed to a list of strategic projects that are described on page 1 of Appendix D to the Regulatory Plan Stipulation and Agreement. The projects were the culmination of an extensive planning effort by KCPL in which it conducted numerous workshops, public forums and strategic planning seminars involving employees, customers, regulators, energy experts, financial experts, the general public, consumer groups, manufacturers, industrial trade groups, environmental organizations, other utility companies, and government and community leaders. The intent of the workshops and forums was to solicit comment on KCPL's proposed CEP, which is designed to achieve the following objectives:

A. Provide additional generation capacity in KCPL's service territory;

B. Establish the mix of new generation that will result in reliable and cost-effective service for Missouri customers;

C. Implement proactive environmental solutions relating to new and existing generation facilities;

D. Enhance investment in a highly reliable transmission and distribution facilities; and

E. Establish customer efficiency and affordability programs, and develop new technologies and applications for demand management programs.

I. 100-MW Wind Project for 2006

Q: What is the status of the 100-MW wind generation facility planned for 2006?

A: KCPL agreed in the Regulatory Plan Stipulation and Agreement to install 100 MW of wind generation in 2006. Consistent with that pledge, KCPL announced on December 13, 2005 that it had selected enXco, Inc. to develop and construct the Spearville Wind

Energy Facility ("Spearville Facility"). enXco, Inc. will turn over ownership of the Spearville Facility to KCPL when completed. Land rights were secured under a separate assignment agreement and will be transferred after title review and acceptance. The 100.5 MW project will be constructed near Spearville, Kansas, approximately 17 miles northeast of Dodge City. The Spearville Facility is scheduled to be in service by October 1, 2006. The project will consist of sixty-seven General Electric ("GE") 1.5 MW turbines to be located over a land area consisting of approximately 5,500 acres. Included with the Spearville Facility will be a transmission substation, constructed and owned by KCPL on a site adjacent to the project, and substation upgrades made by Aquila, West Plains Energy for the interconnection from the Spearville Facility to the Southwest Power Pool ("SPP") through Aquila's Spearville Substation. Since 1987 enXco has developed, constructed, operated and managed wind energy projects in the United States. enXco is an affiliate of EdF Energies Nouvelles.

Q: Has anything changed since the signing of the Regulatory Plan Stipulation and Agreement with respect to this wind project?

A: Yes, several components of the CEP related to the wind project have changed since the signing of the Regulatory Plan Stipulation and Agreement, but, as I will explain, none of these changes are material. First, the Spearville Facility will have a total installed capacity of 100.5 MW instead of the 100 MW planned for in the CEP. The additional 0.5 MW was a result of the selection of GE turbines, each of which is rated to produce up to 1.5 MW. Sixty-seven turbines will be used for the Spearville Facility which, at 1.5 MW for each turbine, yields a total project installed capacity of 100.5 MW. Sixty-seven was the number of turbines required to come as close to the planned 100 MW as possible

using the GE technology. The second component of the CEP related to the wind project that has changed is the expected annual capacity factor of the project which has increased from the preliminary estimate of 38.4% included in the CEP to an expected annual capacity factor from the Spearville Facility of ** [redacted] **. The third component of the CEP that has changed is the assumption for the availability of the benefits derived from a Federal Production Tax Credit ("PTC"). Current Federal law provided through the passage of the Energy Policy Act of 2005 allows qualifying renewable energy projects that are installed prior to December 31, 2007 to be eligible for a tax credit of approximately 1.9 cents per kilowatt hour adjusted over time. The integrated resource planning base wind alternative included in the CEP did not include the benefits of a Federal PTC for the project because no such credit was available at the time. Finally, the fourth component of the wind project that has changed since the signing of the Regulatory Plan Stipulation and Agreement is that the project is expected to cost approximately $166 million (excluding AFDC), which is an increase from the preliminary cost estimate of $130 million (excluding AFDC) reported in the CEP. As I will explain, the increased cost is expected to be offset by the other changes described above.

Q: What process did KCPL follow in selecting the site and the developer for the Spearville Facility?

A: KCPL has been following the development of wind technology in Kansas and Missouri as part of the integrated resource planning process that was performed to support the development of the CEP. From this process we gained an understanding of the projects that were under development in both states, the developers, the manufacturers and other

information related to the development of wind energy projects. We learned that there was a significant amount of interest among developers for projects to be developed in Kansas and only marginal interest for projects to be developed in Missouri. To leverage this interest and to obtain the best competitive bids possible, KCPL issued a request-for-proposals ("RFP") for a fully-developed wind farm to be transferred to KCPL's ownership upon completion. In response to the RFP, we received nine bids that complied with the terms of the RFP, all of which were for projects to be developed on sites in Kansas. The bids were wide-ranging in terms of the technology and the variety of turbines, as well as methods to construct, operate and manage the facility. As part of an evaluation process to select a preferred site, KCPL assessed a number of criteria, which included, but was not limited to: proposed capital cost; the quality of the wind resource; long run operating costs; operations and maintenance costs; 10- and 20-year Net Present Value of Revenue Requirements ("NPVRR"); wind turbine manufacturer; turbine model operating history; technology risk; developer access to sufficient number of wind turbines; developer experience; contractor experience; contractor proposal for inclusion of minority- and women-owned businesses; transmission accessibility; SPP transmission studies completion; transmission interconnection costs; project schedule; community involvement and acceptance; community permits required; land rights option agreements; landowner acceptance; landowner opposition; various environmental considerations, such as environmental assessments, archaeological assessments, the amount of destruction of native tall grass prairie, the presence or disturbance of endangered species, interference with migratory avian flyways, and viewscape issues. We met with developers, community leaders, landowners both for and against wind development, environmental

groups, Kansas Fish and Wildlife, the Kansas Energy Commission and the Office of the Kansas Governor. Through a screening process, which took into account the cost, the ability of the developer to meet the required on-line schedule, and wind turbine technology maturity and environmental impacts, we narrowed the potential sites down to four preferred sites for which we conducted a more extensive economic analysis, site due diligence and technology assessment. Through this process, the Spearville, Kansas site was chosen as the preferred site.

Q: What factors contributed to the expected increase in cost for the Spearville Facility?

A: Several factors led to the expected increase in project cost. At the time KCPL was finalizing our expected project costs that were to be included in the CEP, we obtained indicative project costs for a generic project from GE and several wind developers. The passage of the Energy Policy Act of 2005 in August 2005 included an extension of the PTC for renewable energy projects completed before December 31, 2007. The passage of the PTC created a very high demand for wind turbines for projects that could be completed before December 31, 2007. This high demand for wind turbines exceeded wind turbine manufacturers' capacity to build wind turbines in the timeframe of eligibility for the PTC and therefore developers and speculators that had secured production slots for turbines were able to derive a premium for their turbines. Projected costs for generic wind projects executed after the passage of the PTC increased by 30% over cost projections for projects estimated prior to the passage of the PTC. The other factor that contributed to a higher capital cost was the quality of the wind resource at the various sites. Because our assessment of the projects looked at minimizing revenue requirements over the life of the project, proposed projects that had higher quality wind resources

could charge a premium in capital cost over sites with lower wind quality and remain competitive. These factors primarily led to the increase in the capital costs that were assessed in the CEP.

Q: How were transmission costs for the wind alternatives assessed?

A: KCPL, as a member of the SPP, coordinates with the SPP for transmission interconnection and transmission service requests. The process for requesting transmission service from the SPP requires that a request be made to the SPP for transmission service for a specific project and SPP performs a study of the impact of the requested transmission service in aggregate along with all other requests they have received for transmission service. The studies are conducted only several times per year and do not allow for the assessment of multiple sites. So that KCPL could assess the transmission costs related to the four preferred sites in the timeframe needed for selection of the preferred wind site, we retained Black & Veatch to perform a transmission study for each of the four sites. Black & Veatch transmission planners use the same load flow model and data-base that is used by the SPP in their aggregate studies. Black & Veatch's analysis assessed the impacts to the transmission system in order to provide network transmission service from each wind site to KCPL's control area. The analysis also assessed the amount of available transmission capacity that could be used for transmission service as well as the costs to upgrade the transmission system to accommodate transmission service from each site. The results of Black & Veatch's study are shown in Schedule JRG-1 **(P)**.

Q: Can you elaborate further on the economic analysis that KCPL performed with regard to the assessment of RFP proposals?

A: KCPL conducted a fairly extensive and objective economic analysis using the MIDAS™ model. This model is described in the testimony of KCPL witness Burton L. Crawford. This analysis incorporated the wind facility into KCPL's supply portfolio to serve its native load. We assessed various capacity factors for the wind project, which addressed the uncertainty of the quality of the wind resources. We compared the 10- and 20-year NPVRR for the various wind projects that allowed us to understand the value of the wind resource production against the upfront capital cost for the project. As part of this analysis we included the value of PTCs. The results of the economic analysis of the sites are shown as Schedule JRG-2 **(P)** to this testimony.

Q: What other factors were considered in the site selection analysis?

A: Once the four preferred sites were chosen, additional information was collected that would further narrow the choices. Of the four preferred sites, two of the proposals incorporated a new type of wind turbine proposed by Clipper that existed only in a single prototype unit. KCPL investigated this wind turbine by examining the prototype, meeting with a member of the National Renewable Energy Laboratory, where early testing of the prototype components took place, and visiting the proposed factory where these wind turbines were to be built. The factory was recently opened and no major production of turbines had yet taken place. While the technology looked promising, there was very little operating history and manufacturing history for this turbine for KCPL to gain any assurance that this technology would not have problems after commissioning. Based upon the development status of this wind turbine and the factory operational status, it was felt that there was too much technological risk and supply risk to undertake which would offset any cost advantage. The two remaining projects were then evaluated from a

community acceptance, an environmental impact and a cost standpoint that incorporated the Black and Veatch transmission study cost data.

Q: What was your conclusion, based upon your site selection analysis?

A: KCPL concluded that the RFP involving the Spearville Wind Energy Facility was the preferred project based on total cost, environmental impact, wind turbine technology and community acceptance.

Q: With a higher than expected capital cost for the wind project, is the decision to proceed with the addition of the 100.5 MW Spearville Facility still just and reasonable from the perspective of KCPL's customers?

A: Yes, it is. Although the capital cost exceeds our preliminary estimates used in the CEP process, the inclusion of the PTC in our economic analysis as a result of the extension of this tax provision and the higher than expected output from the Spearville site compared to the expectations in the CEP process will yield lower costs to KCPL's customers than were computed during the CEP process. As part of the RFP evaluation process, we compared wind expectations included in the CEP process to the results of the analysis of the preferred sites. The analysis shows that the Spearville Facility is expected to have an NPVRR approximately $74 million dollars lower than that shown in the Integrated Resource Plan ("IRP") process supporting the CEP. Schedule JRG-3 shows the results of this analysis.

Q: Were in-service criteria specified for this wind project?

A: Yes, the Regulatory Plan Stipulation and Agreement set forth in Appendix H, a series of in-service test criteria for various plant and facilities, including the wind generation project. Such criteria were specified, in part, because an asset must be "used and useful"

before it can be included in a company's rate base. The in-service criteria are designed to serve as evidence that an asset is performing and, therefore, is used and useful for the purpose of serving customers.

Q: When does KCPL anticipate that the Spearville Facility will enter into service?

A: KCPL anticipates that the Spearville Facility will be in service by October of 2006.

II. Iatan Unit 2 850-MW Coal-Fired Plant

Q: What is the status of Iatan Unit 2?

A: In November 2005, KCPL announced that Burns & McDonnell had been selected to provide engineering design services for the Iatan Unit 2 850-MW coal-fired generating plant, which will be built at the existing Iatan Generating Station in Platte County, Missouri, where the Iatan Unit 1 coal-fired generating plant currently operates. Detailed project engineering and design work has commenced. Specifications and RFPs have been sent to qualified bidders for the boiler, turbine generator and air quality control equipment for Units 1 and 2. KCPL expects to procure the steam generator, steam turbine and air emission control equipment in the spring of 2006. Plant construction is expected to commence during the fourth quarter of 2006.

Q: What are the long-range plans for Iatan Unit 2?

A: The Iatan Unit 2 plant is scheduled to go into service in 2010, and will be a significant component of KCPL's long-term CEP to maintain an affordable and stable supply of electricity for the Kansas City region. It will be a high efficiency, super-critical coal-fired plant featuring state-of-the-art emission control equipment designed to exceed current and future clean air requirements. KCPL continues to work with the U.S. Army Corps of Engineers, the Missouri Department of Natural Resources ("MDNR") and the

Environmental Protection Agency ("EPA") on environmental permits. KCPL will own approximately 465 MW of Unit 2 capacity, with the remainder jointly owned by other local electric utilities.

Q: Has the amount of capacity KCPL will receive from the new Iatan Unit 2 facility changed from the capacity stated in the CEP and supply-related commitments KCPL made in the Regulatory Plan Stipulation and Agreement?

A: Yes, the CEP called for KCPL's share of the new Iatan Unit 2 facility to be an approximately 500 MW share of an 800 to 900 MW facility. KCPL's expected share of the plant is now approximately 465 MW. The change resulted from several factors. First, the plant size is now targeted to be 850 MW based on more detailed design engineering being performed. Second, negotiations with potential partners, incorporating participation levels committed to in the Regulatory Plan Stipulation and Agreement reduced KCPL's share.

Q: Will the reduction of KCPL's share of the plant from 500 MW to approximately 465 MW result in a shortage of energy for KCPL's customers?

A: No, the reduction of approximately 35 MW from the originally planned 500 MW will not create shortages immediately after Iatan Unit 2 comes on-line. Based on current forecasts, the capacity required to maintain expected levels of reliability on the system is expected to be met by existing or currently planned resources through the year 2014. However, KCPL will need to assess in future IRPs how this loss in baseload capacity will be replaced.

Q: Has KCPL changed its expectations for the capital cost and schedule for Iatan Unit 2 from the cost and schedule shown in the CEP?

A: No, it is too early in the procurement process for the major components of the plant to be able to assess whether a change in either the cost estimate or schedule is warranted. Our assessment of cost and schedule provided in the CEP was based on current market data at the time for plants of this type and was the best information that could be obtained. We do know that there is a large demand for coal-based generation in the United States and throughout the world, and this large demand could result in increases in the cost for various components of the plant and lengthen the construction schedule. Factors we are following and are concerned with include increases in prices for commodities such as steel, stainless steel, and copper, limited manufacturing capacity and potential shortages of skilled labor needed to construct the plant. We will have a better understanding of the market conditions driving cost and schedule following the receipt of proposals for major components such as the steam generator, turbine and AQCS equipment later in 2006.

III. LaCygne Unit 1 SCR System

Q: Please describe the status of the SCR system at LaCygne Unit 1.

A: In mid-December 2005 KCPL announced that The Babcock & Wilcox Co. ("B&W") had been selected to install the SCR system at Unit 1 of the LaCygne Generating Station. B&W will engineer, procure and construct an SCR system at LaCygne Unit 1 that should result in significant reductions of nitrogen oxide ("NOx") emissions, with the intent to help to improve air quality in the Kansas City area. The expected reduction in NOx emissions should contribute to improvements in ground-level ozone concentration, especially during the summer months when ozone levels are the highest.

Q: What is the schedule for the installation of the SCR?

A: The SCR upgrade is scheduled to be completed by May 2007, in time to affect the summer ozone season and before applicable regulations require such measures be implemented.

Q: Was a competitive bid process employed to select B&W?

A: Yes, in response to KCPL's RFPs, we received and reviewed a total of four bids. Through an evaluation process, a number of criteria were assessed. B&W was determined to be the preferred bidder. Capital cost, schedule, evaluation of SCR performance and B&W's overall experience in designing and constructing SCRs were all factors in our decision. Of all the bidders, B&W had the best knowledge of LaCygne Unit 1, having built the Unit's boiler in the first place. Additionally, KCPL believes that B&W presented the best plan to utilize the scheduled ** [redacted] ** outage of LaCygne Unit 1 to maximize SCR construction time and minimize any additional down-time in 2007 that would be required to complete the retrofit.

Q: Did KCPL agree in the Regulatory Plan Stipulation and Agreement to in-service criteria for the SCR System at LaCygne Unit 1?

A: No, KCPL, the Staff of the MPSC and the Office of Public Counsel agreed that in-service criteria would be developed for the emissions equipment that is to be installed on KCPL coal-fired units prior to the installation of such equipment, and that the equipment would satisfy the criteria before the costs for the equipment would be included in rate base.

Q: Did the Regulatory Plan Stipulation and Agreement address in-service criteria for emissions control equipment generally?

A: Yes, the in-service criteria for coal plant agreed upon in Appendix H of the Regulatory Plan Stipulation and Agreement provides that "Equipment installed to comply with

emission requirements shall be operational and demonstrate the ability to remove 93% or more of the NOx, SO_2, particulate, and mercury emissions they were installed to remove over a continuous four (4) hour period while operating at or above 95% of its design load. This equipment shall also be required to demonstrate that it is able to remove 88% or more of these same emissions it was installed to remove over a continuous 120-hour period while operating at or above 80% of its design load."

Q: What in-service criteria does KCPL propose for the SCR System at LaCygne Unit 1?

A: Consistent with the applicable in-service criteria for coal plant quoted above, KCPL proposes the in-service criteria attached as Schedule JRG-4 for the SCR at LaCygne Unit 1.

Q: Will these in-service criteria be satisfied before KCPL seeks to include the SCR system at LaCygne Unit 1 in its rate base?

A: Yes. It is expected that in-service criteria for the SCR will be met shortly after Unit 1 is brought on-line in **[redacted]**.

IV. Missouri Wind Power Study

Q: What did KCPL commit in the Regulatory Plan Stipulation and Agreement to do regarding the study of wind power in Missouri?

A: In order to assess the feasibility of wind power in Missouri, KCPL agreed to gather and assess information from two tall-tower wind sites in Missouri. The Regulatory Plan Stipulation and Agreement provided that KCPL would contract to install wind measuring equipment and evaluate data collected at levels between 50 meters up to and including 100 meters above ground level for the purpose of producing site specific measurements

that could be used to quantify wind resources in Missouri. The towers were to be installed and operating by December 31, 2005. The Regulatory Plan Stipulation and Agreement provided that an Initial Report would be completed by March 31, 2007 and a Final Report would be completed by December 31, 2007.

Q: What is the status of wind data collection in Missouri?

A: Since the approval of the Regulatory Plan Stipulation and Agreement, KCPL evaluated several alternatives for satisfying these requirements regarding the installation of wind data collection towers. These alternatives included KCPL installing the towers, hiring a wind developer to install the towers, or collaborating with MDNR, a signatory to the Regulatory Plan Stipulation and Agreement, and the University of Missouri on their existing tall-tower research program. After assessing these alternatives, KCPL committed to participate in the existing tall tower research program. KCPL has been working with Mr. Rick Andersen at MDNR and Dr. Neil Fox at the University of Missouri on their current effort, known as the "Tall Tower Investigations of Western Missouri Wind Patterns Research Project" ("MU Tall Tower Project"). The MU Tall Tower Project plans to use existing communications towers to gather data. The objectives of the project are to:

1) Expand the participants' understanding of the frequency, intensity, height, and duration of low-level jets (fast moving layers of air close to ground level) in southwestern Missouri;
2) Establish a framework of wind speed data at 50 meters, 100 meters and up to 150 meters above ground level to: (a) define regional near-ground atmospheric patterns, and (b) create a detailed record of actual readings to

help determine if computerized wind speed models that employ regional-scale weather pattern information provide reliable forecasts of wind speeds at heights over 50 meters above ground level, and if such models need to be refined to include Midwest-specific atmospheric conditions such as low-level jets; and

3) Provide data needed for initial wind energy resource assessments in areas where the wind maps prepared for western Missouri (including the Kansas City area) predict there are wind energy resources with an average annual wind speed of over 7 meters per second at 100 meters.

Q: Does KCPL's participation in the MU Tall Tower Project for collecting wind data meet the terms of the Regulatory Plan Stipulation and Agreement?

A: Yes, I believe it does. Although KCPL's participation in this Project did not occur by the initial December 31, 2005 deadline specified in the Regulatory Plan Stipulation and Agreement, both KCPL and MDNR believe that the data received from the MU Tall Tower Project will provide more accurate and comprehensive information for the feasibility study. Moreover, data from the MU Tall Tower Project will be available for utilization in both the March 2007 Initial Report and December 2007 Final Report called for in the Regulatory Plan Stipulation and Agreement.

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 Application of Kansas City Power & Light Company to Modify Its Tariff to Begin the Implementation of Its Regulatory Plan	)))	Case No. ER-2006-____

AFFIDAVIT OF JOHN R. GRIMWADE

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

John R. Grimwade, being first duly sworn upon oath, states:

1. My name is John R. Grimwade. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Senior Director, Construction.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of seventeen (17) pages and Schedules JRG-1 through JRG-4, all of which having been prepared in written form for introduction into evidence in this 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.

John R. Grimwade

Subscribed and sworn before me this 30th day of January 2006.

Notary Public

My commission expires: Feb. 4, 2007

NICOLE A. WEHRY
Notary Public - Notary Seal
STATE OF MISSOURI
Jackson County
My Commission Expires: Feb. 4, 2007

SCHEDULE JRG-1

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION NOT AVAILABLE TO THE PUBLIC

SCHEDULE JRG-2

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION NOT AVAILABLE TO THE PUBLIC

Comparison of CEP and Spearville Wind Plans

20-year NPVRR ($'s in Millions)

Plan	Wind Capacity Factor High	Base	Low
CEP	$ 10,730.8	$ 10,749.1	$ 10,767.4
Spearville	$ 10,640.3	$ 10,674.6	$ 10,708.9
Change from CEP	(90.470)	(74.446)	(58.485)

Schedule JRG-3

In-Service Criteria for the SCR at LaCygne Unit 1

(i) All major construction of the SCR system shall be completed;

(ii) All pre-operational tests for the SCR system shall be completed;

(iii) The SCR system shall be operational and demonstrate its ability to remove 93% or more of the NOx emissions it was installed to remove over a continuous four (4) hour period while LaCygne Unit 1 is operating at or above 95% of its design load; and

(iv) The SCR system shall also demonstrate its ability to remove 88% or more of the NOx emissions it was installed to remove over a continuous 120-hour period while LaCygne Unit 1 is operating at or above 80% of its design load.

Schedule JRG-4