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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2009-0089

REBUTTAL TESTIMONY

OF

KENNETH M. ROBERTS

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

Kansas City, Missouri
March 2009

"[redacted]**" Designates "Highly Confidential" Information Has Been Removed. Certain Schedules Attached to This Testimony Also Contain Highly Confidential Information and Have Been Removed Pursuant to 4 CSR 240-2.135.**

REBUTTAL TESTIMONY

OF

KENNETH M. ROBERTS

Case No. ER-2009-0089

Q: Please state your name and business address.

A: My name is Kenneth M. Roberts. My business address is 6600 Sears Tower, 233 South Wacker Drive, 60606, Chicago, Illinois 60606.

Q: Are you the same Kenneth M. Roberts who has previously testified in this matter?

A: Yes.

Q: What is the purpose of your testimony?

A: My testimony generally rebuts the implication in the Direct Testimony of Messrs. Featherstone, Dittmer and Kumar that KCP&L has not prudently managed the cost of the Iatan project. Specifically, I discuss: (1) the appropriate standard for prudence and the application of the prudence standard for purpose of this case; (2) the costs of the Iatan project contained in Messrs. Dittmer, Kumar, and Featherstone's testimony in this case; and (3) KCP&L's application of the Cost Control System to the Iatan Unit 1 Project.

PRUDENCE

Q. Have you reviewed the prudence standard as discussed by Company witness Dr. Kris R. Nielsen in his rebuttal testimony?

A. Yes, I have.

Q. Do you agree with Dr. Nielsen's analysis of the prudence standard as it is applied in Missouri for purposes of determining whether KCP&L was prudent in the construction of the Iatan Unit 1 project?

A. Yes. Schiff Hardin LLP, ("Schiff") identifies the following aspects of Dr. Nielsen's testimony as critical in evaluating the prudence of the decisions of KCP&L's senior management and project management throughout the Iatan Unit 1 project:

Data development – What information was available; were management systems and procedures organized and implemented to produce information to enable analysis; was the data reliable; what was the timeliness of the data to the decision?

Information Flow – To whom and when was data transmitted; what data was communicated; in what format was the information made available?

Analysis – What does the information mean; what alternatives were identified or where possible, what benefits and impacts are projected; how does the decision mesh with project and corporate needs?

Decision – What decision was made; when was the decision made; how was the decision made; was the decision reviewed as assumptions and circumstances changed?

Prudence, therefore is a determination of reasonableness. As stated by Dr. Nielsen, prudence can only be judged in light of conditions and circumstances which were known or reasonably should have been known when the decision was made, and cannot be viewed in hindsight.

RESPONSE TO FEATHERSTONE, DITTMER AND KUMAR

Q. Are you familiar with the testimony of Messrs. Featherstone, Dittmer and Kumar filed in this case?

A. Yes.

Q. Did anything contained in the testimony of Messrs. Featherstone, Dittmer and Kumar raise a question of KCP&L's reasonableness as defined by Missouri law?

A. No.

Q. Does anything in their testimony establish a nexus between the alleged costs overruns of the Iatan project and the prudence of KCP&L's management?

A. No, and in the remainder of my testimony I explain why.

PROJECT CONTROLS

Q. What project management tools did KCP&L utilize to manage the Iatan Project?

A. KCP&L implemented the various governance considerations, management procedures, and cost control protocols (including Project Controls) identified in the Comprehensive Energy Plan Construction Projects Construction Cost Control System ("Cost Control System"). See Schedule SJ-1.

Q. How did you become familiar with this document?

A. KCP&L asked Schiff to review it and to help develop portions of it.

Q. What are "Project Controls"?

A. As defined by the Cost Control System document (Schedule SJ-1) "Project Controls" include the systems developed by KCP&L "to monitor, control, and report the schedule, cost, and other relevant information for the respective CEP Projects. The CEP Projects will be managed in accordance with control budgets and baseline schedules that are established at the start of each Project."

Q. What "Project Controls" are in place for the Iatan Project?

A. The Project Controls contemplated by the Cost Control System include: (1) development of a detailed, integrated and baselined project schedule; (2) earned value tracking of contractors; (3) development of a Control Budget Estimate that would be reforecasted as necessary to track trends and contingency; and (4) the development of commercial terms

and conditions for the major procurements; and (5) early development and enforcement of the Change Management procedure. In addition to the Project Controls suite set forth in the Cost Control System, KCP&L has developed the following for Units 1 and 2:

- A robust Notice and Notification Procedure that is vigorously enforced by KCP&L. (See Rebuttal Testimony of Company witness Steven Jones.)
- KCP&L's project team has developed user-friendly reporting tools for earned value, budget status, safety and project status that meets industry standard, and those tools as well as Schiff's independent overview and reports from Internal Audit are provided to KCP&L's senior management on an on-going basis.

Q. Was the Cost Control System ever submitted to Utility Operations Staff of the Missouri Public Service Commission ("MPSC Staff") for its review?

A. Yes. It is my understanding that the Cost Control System was presented to MPSC Staff on or about July 11, 2006.

Q. Do you believe the procedures discussed in the Cost Control System were adequate for KCP&L to manage the Iatan Unit 1 Project?

A. Yes.

Q. Based upon your experience, is the quality and accuracy of the data that is provided to KCP&L's senior management through the various Cost Control System protocols within industry standards?

A. Yes, in fact, I would consider this to be in conformance with industry best practices.

Q. To whom within KCP&L is this data provided?

A. In addition to the project team, as Company witness William Downey testified, there are

currently monthly meetings of the Executive Oversight Committee ("EOC"), at which such data is supplied to senior management. There are also weekly meetings on-site with sub-groups of KCP&L's senior management that focus on commercial and regulatory issues, at which this data is reviewed and discussed.

Q. How did these tools help KCP&L's senior management make timely decisions regarding Iatan 1?

A. The information that senior management received regarding the project allowed it to: (1) identify the need for a decision; and (2) make informed and timely decisions throughout the Iatan Project.

Q. Do you believe that the EOC had the right processes in place to receive adequate information to make decisions?

A. Yes.

Q. How successful has KCP&L been regarding cost management on Iatan Unit 1?

A. One of the project team's major successes has been cost management on Iatan Unit 1. The project team currently projects that Iatan Unit 1 will complete 5-8% under the Control Budget as reforecasted in the second quarter of 2008. Also, through effective change management and execution of the Notice and Notification Procedure, Iatan Unit 1 has managed to keep change orders to approximately 5-6% of the Control Budget, a very low number for a retrofit AQCS project. To achieve this, KCP&L initiated a rapid-response team comprised of commercial, legal, construction, and engineering personnel that focused on handling all aspects of change order requests, and requests for claims. The project team also currently projects a 15%-18% increase in the Iatan Unit 1 project's price from the original 2006 Control Budget Estimate.

A key reason for the project team's success has been its management of changes to the ALSTOM contract. To date, ALSTOM has been awarded change orders and claims (including what was settled in the ALSTOM Settlement Agreement) totaling **[redacted]** on both units, which equates to **[redacted]** of the total **[redacted]** contract price. The Association for the Advancement of Cost Engineering ("AACE") sets the industry standard for change orders on a project of this size at 10% or higher, depending on when engineering is completed.

Q. Why do you think KCP&L has been successful in the management of ALSTOM's costs?

A. The Project Controls requirements that KCP&L negotiated into ALSTOM's contract allowed for KCP&L to effectively manage ALSTOM even when difficulties with ALSTOM's performance arose. When necessary, KCP&L has made steps during the negotiations with its contractors to ensure that the major contracts include obligations that are consistent with the KCP&L Cost Control System. (See testimony of Company witness Steven Jones). KCP&L negotiated robust Project Controls into the ALSTOM contract. Typically, owners view contracts such as ALSTOM's Engineer, Procure and Construct ("EPC") fixed-price contract as "turnkey" projects, and do not typically require, nor do the contractors offer, much data with respect to the contractor's performance. **[redacted]**

[redacted]** As a result, the Project Controls section for the ALSTOM contract was heavily negotiated.

In mid-May 2006, during the contract negotiations, members of the KCP&L project team, Burns & McDonnell, and Schiff met with ALSTOM's project team at ALSTOM's offices in Windsor, Connecticut. **[redacted]**

Q. In establishing and tracking Iatan's schedule and the progress of contractors pursuant to the schedule, did Schiff work with any consultants?

A. Yes. Schiff worked extensively with Jim Wilson of Jim Wilson & Associates. Schiff has worked with Jim and his firm for over twenty years. Mr. Wilson has testified in numerous courts, arbitrations, and other proceedings regarding all aspects of project controls. His area of expertise includes, but is not limited to, scheduling; monitoring and evaluating the progress of contractors pursuant to the schedule; and the evaluating the

causation, responsibility, and durations of schedule impacts during construction. His resume is attached as Schedule KMR-1.

Q. What is a "baseline schedule?"

A. A baseline schedule is an important project tool. As defined in the Cost Control System: "a baseline schedule sets forth 'all planned work for the Project, including all engineering, procurement, and construction activities, along with associated man-hours required to perform each task in the schedule. The [b]aseline [s]chedule will identify the intended duration of the work, the resources required for performance, the logical relationships of the work and other scheduling tools." A baseline schedule is important because it allows KCP&L to compare the actual progress to the planned performance.

Q. When is the baseline schedule established for a project?

A. The baseline schedule is established at a point in a project where design engineering is mature enough for all of the performing contractors to prepare and integrate a work plan based upon the known project definition that is sufficiently detailed to depict the effort needed to execute the work.

Q. How was the baseline schedule for Iatan Unit 1 developed and managed by KCP&L?

A. The integrated baseline schedule for the Iatan Project was developed with input from ALSTOM, Burns & McDonnell and the early balance of plant contractors such as Kissick (foundations), ASI (material handling) and Pullman (chimney) and baselined in April 2007. The process for establishing this baseline schedule involved a detailed review of ALSTOM's schedule and the schedule initially developed by Burns & McDonnell to optimize the balance of plant design. This was the operative schedule for the Iatan

Project until the Revised Unit 1 Schedule was issued in July 2008.

Q. How do you define earned value?

A. As stated by KCP&L's Cost Control System: "earned value . . . is an industry-standard measurement of cost and schedule progress as compared to the Project's original plan" and the results of the comparison is then expressed in the form of ratios over time. As work is completed, man-hours are "earned" and compared against the original plan for both the amount of work completed and its timeliness. The ratio of earned hours to planned hours is known as the Schedule Performance Index ("SPI"). Cost Performance Index ("CPI") is the ratio of a work group's actual, or expended, man-hours as compared to the hours it has earned. This is a measure of the contractor's productivity.

As an example of SPI and CPI, if a scheduled task was planned to take 100 man-hours over a one week period, and the contractor earns 100 hours for the week, its SPI would equal 1.0. However, if the contractor earns 20 hours less than its plan, it will have an SPI of 0.80. If the same contractor spends 100 man-hours to earn 100 hours in that week, its CPI is 1.0. If it expends 120 hours and earns 100 man-hours, its CPI will be only 0.80. In other words, it costs more money than planned. These indices can be further reduced into percentages: in the hypothetical above, the contractor who has an SPI of 0.80 is 20% behind schedule for the period measured, and if its CPI was 0.80, it had a 20% loss of efficiency/productivity. With these indices, an SPI of 1.0 or greater means that the work group has maintained or bettered its planned pace, and for CPI an index of 1.0 or better means that the work group is working productively.

Q. How is earned value utilized in the construction industry?

A. In Schiff's experience, earned value has been heavily utilized by sophisticated owners,

contractors and engineering firms for at least the last 20 years. Ultimately, earned value is a tool that allows those who use it to gauge schedule compliance and productivity. Depending on how it is used and the level of detail inherent to the particular application, earned value is used to examine progress on a project at both a macro and a micro level.

Contractors use earned value to track the work necessary to meet their schedule commitments, and also use earned value to identify productivity issues. Earned value is a tool that assists contractors to understand where they are either efficient or not efficient in their work. Engineering firms also use earned value to track scheduled work in ways that are often similar to how contractors use it. From an owner's standpoint, earned value has become a popular and effective way for owners to understand and control both schedule and budget for large, complex projects. It is a method that allows one to summarize many hundred or even thousands of detailed schedule activities into simple time and cost indices. Additionally, owners use earned value to implement any contractual rights they may have to direct the contractor to submit a "recovery plan," accelerate the contractor's work or to ensure that the contractor pays for its own productivity losses.

Q. How does earned value help control costs on a project?

A. Because a major component of an earned value system is CPI, which measures productivity, an earned value system is useful in tracking the contractors' productivity in performance of the work. Once productivity issues are transparent through earned value, the data allows the project team to drill down to find the root cause. In addition, using earned value to track schedule performance allows the project team to forecast the work's completion. As discussed in Company witness Bill Downey and Brent Davis' testimony, the Tiger Team identified certain changes to the Unit 1 schedule. With these changes and

the earned value system, KCP&L was able to make a reasoned and prudent decision regarding the schedule.

Q. What information is needed in order to track earned value on a project?

A. Earned value relies on all work groups having a man-loaded baselined schedule, which identifies all of the project's activities and associated man-hours needed to complete those activities. Tracking earned value also requires that the contractors report their status and provide visibility to their earned and actual hours as required by the systems in place.

Q. For the Iatan Project, does KCP&L obtain the information needed for tracking earned value?

A. Yes. For the Iatan Project, the contractors report their earned and actual hours on a weekly basis, as required by the contracts that KCP&L has put into place. KCP&L's Project Controls group maintains the integrated level 3 detailed schedule to which the contractors each provide their weekly updates. The Cost Control System refers to the required data and metrics needed for the Iatan Project's earned value tracking and how the data is used. See Schedule SJ-1 on pp. 11-12.

Q. How does Schiff typically track earned value for a project such as Iatan?

A. **[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**

Q. How did KCP&L track earned value for the Iatan Project?

A. KCP&L, along with Project Controls oversight from Schiff, utilized the methods for tracking earned value as described above and applied that methodology to the Iatan Project. **[redacted]

[redacted]

[redacted]

[redacted]**. This chart shows a series of vertical lines that are color coded; the blue bars represent the contractor's planned hours, plotted over time; the yellow bars show the contractor's earned hours as compared over time to the planned hours; and the red bars show the actual hours that contractor expended over time. The grouping of vertical bars shows the planned, earned and actual progress broken into monthly increments. The hatched lines in the monthly bars further break the planned, earned and actual man-hours into weekly segments. This way, someone analyzing the data in the chart could readily identify and compare the contractor's planned, earned and actual hours on weekly or monthly basis. In addition, this chart shows a cumulative percent complete on a planned, earned and actual basis over time.

The earned value systems that have been established for the Iatan Project have identified when contractors have fallen behind schedule and in which areas the contractors' performance has lagged. By quantifying the number of hours behind schedule, the project team is able to identify ways to improve performance, remove impediments, foster jobsite coordination and/or hold the contractors accountable for establishing a recovery plan.

Q. Are there other ways in which KCP&L has tracked progress on the Iatan Project?

A. Yes. KCP&L has also tracked the progress to the schedule itself to insure that the contractors are not just performing work but also the work necessary to move the project along. All construction projects involve performing work in a logical sequence, and project as complex as Iatan 1 requires the contractors to maintain that logical sequence or there could be coordination difficulties in the field. Such problems almost always result in additional costs and time lost. So, in addition to tracking earned value hours, our team is constantly reviewing the current schedule determine if the contractors are performing to the baseline logic, and if not, informing the management team of its findings. In addition, as Company witness Daniel Meyer testified, KCP&L has been tracking the Iatan Project's cost performance against the Control Budget.

Q. How has KCP&L's senior management used earned value and other Project Controls implemented on the Iatan Project to make decisions?

A. KCP&L's senior management's decision-making has been prudent in large part because of the quality of the information it receives from the project team on a regular basis. With respect to earned value, in Schiff's experience, once senior management is educated regarding how to look at a project from an earned value perspective, it becomes a very

effective tool for them to understand and quickly gain access to data necessary for managing a project. Earned value allows the project team and the contractors to reduce a very complex construction project into something that can be readily seen and easily understood through tracking of targets. By utilizing this tool, KCP&L's senior management was able to understand where problems were with the Iatan Project's major contractors and were able to develop appropriate problem-solving strategies utilizing that information. In addition, the other key metrics that senior management receives regularly regarding progress by the contractors in meeting key milestones, quality and safety statistics and changes in scope and budget have been critical in providing the information necessary upon which it has made prudent decisions.

Q. Can you provide examples?

A. Yes. KCP&L's senior management was challenged to resolve commercial disputes with ALSTOM over the revised Unit 1 schedule that emanated from the Tiger Team analysis.

[redacted]

[redacted]**.

Another such instance in which data assisted senior management's decision-making was on the economizer cracking issue. Company witness Brent Davis testified as to the circumstances of the economizer cracking and its impact on the Iatan Project, and I agree with that testimony. The project team reviewed the Iatan 1 schedule and found the specific areas that were impacted by the economizer were very isolated, and that ALSTOM and the other contractors could continue working in virtually every area on Iatan 1 without impact. Because the tools were available to understand the impact of the economizer cracking on the remaining Unit 1 work, the affect of the cracking was isolated and mitigated from both a cost and schedule perspective.

Moreover, it is because of the level of and quality of analysis that senior management receives from the project team and the oversight teams that senior management has been able to communicate the Iatan Project's progress to the MPSC Staff, the joint owners and the other interested parties.

Q. To whom is the earned value data provided?

A. The information Schiff prepares is provided to KCP&L's senior management. In addition, the project team provides additional Project Controls analysis to senior management and the project team.

Q. Is the earned value data provided to KCP&L's senior management timely?

A. Yes.

Q. Is the earned value data sufficient to keep KCP&L's project team and senior management informed to make decisions as they occur?

A. Yes.

Q. What is the Control Budget Estimate?

A. The Cost Control System defines a "Control Budget" as a tool that details the expected cost of the work on the Project and includes appropriate contingency. The Control Budget Estimate was the estimate prepared by Burns & McDonnell for the Iatan Project which was approved by the KCP&L Board of Directors in December 2006 and which was used by the project team to initially set the budget and manage the Iatan Project's costs.

Q. How was the Control Budget Estimate developed?

A. The development of the Control Budget Estimate is discussed in detail in the testimony of Company witness Daniel Meyer.

Q. Who is Daniel Meyer?

A. Mr. Meyer is a consultant retained by Schiff with an expertise in cost engineering for large, complex construction projects. Dan works very closely on all aspects of cost issues with the Schiff team.

Q. Have you read Mr. Meyer's testimony?

A. Yes, I have.

Q. Does Mr. Meyer's testimony comport with your understanding of the work that he performed for Schiff?

A. Yes.

Q. Did members of Schiff work closely with Mr. Meyer, attend the same meetings and review the same documents referenced in Mr. Meyer's Rebuttal Testimony?

A. Yes.

Q. Do you agree with Mr. Meyer's description of those events and documents?

A. Yes.

Q. What are your opinions with respect to the statements made by Mr. Meyer in his testimony?

A. Mr. Meyer's testimony comports with my understanding of the events that have occurred on the Iatan 1 Project, and we share the same opinions and analysis with respect to those events.

Q. What is Schiff's opinion of the 2006 Control Budget Estimate?

A. **[redacted]**. Nonetheless, it was a tool that senior management needed at the time to manage the costs for the Iatan Project. Company witness Mr. Meyer testified that it was appropriate for KCP&L's budget for Iatan 1 on the Control Budget Estimate; I agree with that testimony.

Second, the initial Control Budget Estimate did not include all of the scope that would be performed during the Unit 1 Outage. When the Control Budget was revised in the second quarter of 2008, the budget was increased to $484.2 million (excluding AFUDC) to account for approximately **[redacted]**. It is important to remember, however, that as Company witness Mr. Meyer testified, the Control Budget Estimate was

based upon incomplete engineering, and had an accuracy level of Class 3 estimate, which AACE's cost estimate classification system ("AACE's Classification System") would find to be within the range of -15% to +30%.

Q. Why was the contingency in the 2006 Control Budget Estimate too low?

A. The 2006 Control Budget Estimate only included ** [redacted] ** at the outset. According to The Association for the Advancement of Cost Engineers, also known as AACE International ("AACE"), contingency at the outset of a retrofit project of this type should have been between 16% and 22%.

Q. In the fall of 2006, KCP&L used the term "Definitive Estimate" and then by December, when it set the control budget estimate, it changed the term to "Control Budget Estimate." Do you know why KCP&L made this change in its terminology?

A. ** [redacted] **. Moreover, as Company witness Mr. Meyer testified, the AACE has advised that the term Definitive Estimate has been superseded by Recommended Practice No. 17R-97 "Cost Estimate Classification System," and under the AACE's current nomenclature, a Class 2 estimate would be approximately equal to what was once called a Definitive Estimate.

Q. Why was the project only 20-25% engineered as of the end of 2006?

A. Because it was proceeding on a fast-track basis.

Q. In the fall of 2005, did you advise senior management of KCPL with respect to how they could meet the schedule contemplated by the Stipulation?

A. Yes.

Q. What was your advice?

A. **[redacted]**. It was possible to meet the in-service dates for the Iatan Project but KCP&L's senior management needed to make several key decisions fairly quickly.

Q. Was it prudent for KCP&L to proceed with the Iatan Project on a fast-track basis?

A. Yes. It could not have met the in-service dates any other way.

Q. What information does KCP&L's project team and senior management receive regarding costs on the Iatan 1 Project?

A. To the best of my knowledge, the information provided to KCP&L's project team and senior management follows the guidelines established in the Cost Control System, the project team reported to senior management using the Control Budget as a basis for tracking the Iatan 1 Project's costs and contingency. The Control Budget included tracking of: (1) costs committed to date; (2) actual costs paid to date; (3) change orders to date; (4) expected cost at completion based on current forecasts of the Iatan 1 Project's costs; (5) contract amounts with vendors under contract; and (6) identification of functional groups (e.g. engineering, project management, procurement, oversight) costs.

The reports provided to senior management also identify variances to the Control Budget Estimate, as well as assessments of cash flow.

Q. What is your opinion of the quality of the cost data reviewed by KCPL's project team and senior management regarding the Iatan 1 Project?

A. The information reviewed by the project team and senior management regarding the Iatan 1 Project's costs is consistent with industry standards for large construction projects such as the Iatan Project.

Q. Has the information provided to senior management regarding the costs of the Iatan 1 Project been timely so that senior management could make reasonable decisions regarding the Iatan 1 Project?

A. Yes.

Q. Why did KCP&L do a reforecast of the Control Budget Estimate?

A. I agree with the testimony of Company witness Daniel Meyer that owners on multi-year projects need to review costs and cost trends to test whether original assumptions hold true over time. From a corporate governance perspective, KCP&L's senior management has an obligation to its shareholders and rate payers to manage costs on the Iatan Project, which would include reforecasting the project's Control Budget when facts and circumstances result in changes to earlier assumptions.

Q. In your opinion, does the mere fact that the Control Budget number increased with the reforecast establish imprudence on the part of KCP&L?

A. No.

Q. Why not?

A. Because increases in costs on a project over time such as the Iatan Project are not

evidence of imprudence.

Q. How did KCP&L manage the major procurements for Iatan Unit 1?

A. I am familiar with and agree with Company witness Steven Jones' testimony regarding the management processes used for procurement of the Iatan 1 Project's materials and services. Most notably: (1) KCP&L developed and adhered to a schedule of major procurement packages that allowed the Iatan Project to maintain progress at a critical stage; (2) KCP&L utilized its Procurement Plan to purchase materials and services in a highly competitive market in a timely manner and generally within the Control Budget Estimate; and (3) the terms and conditions that KCP&L has utilized in the Iatan 1 Project's contracts have been very effective at holding the contractors and suppliers accountable to their obligations. In addition, the processes that have been put in place by KCP&L have been very effective at controlling costs and helping to advance the Iatan Project's schedule to date.

Q. How do the anticipated costs of the Iatan Unit 1 project compare with other facilities constructed around the same time?

A. Iatan Unit 1's cost performance compares very favorably to KCP&L's competition in the coal industry. At the same time that Iatan's costs rose by 15% to 18%, Cambridge Energy Research Associates (CERA), a leader in analyzing utility project cost data, stated in February 2008 that prices in the power industry rose by 27% in 2007, and 19% in just the last 6-months of 2007. CERA's Power Capital Costs Index shows that costs have risen 130% since 2000 and were poised to rise higher in 2008. (CERA Article, May 28, 2008) Translated, this means that a new power plant that cost $1 billion in 2000 would cost $ 2.3 billion in 2008.

Scrubber and SCR projects have been subjected to wide cost swings in the 2000's. The Electric Utility Cost Group (EUGC) reported the average FGD cost reported by the survey sample is $319/kW, an increase of 21% since 2005. (Power Magazine, July 15, 2007) On January 19, 2007, the Midwest Ozone Group (MOG) and the Lake Michigan Air Directors Consortium (LADCO) issued a white paper which states, "Recent capital cost estimates for conventional wet FGD and SCR reported by owners significantly exceed those estimated using information published by the supplier community or the EPA. Several factors are likely responsible for this discrepancy; one significant factor is the strong demand for environmental control equipment, coinciding with strong demand for general chemical process facilities. The confluence of these demands escalates the cost of labor and materials essential for this category of equipment." MOG also noted that utilities often understate the cost of these projects in public sources due to the rapid rise in costs.

Another recent study on SCRs notes that there is no such thing as a "one-size-fits-all" SCR design, and that site-specific characteristics of units and plants can drive a project's cost much higher than anticipated. Together, these conclusions suggest that "retrofit difficulty" is indeed relative. Units with a capacity of 600 to 900 MW appear to be more difficult to retrofit than those in other size ranges. (Mark Marano, Estimating SCR Installation Costs, Power, January/February 2006) This was certainly evident in the design and construction of Iatan Unit 1.

Q. What are some of the reasons for these market-wide increases?

A. From 2005 to 2008, contractors capable of performing large projects were becoming increasingly scarce. Competition for large EPC contractors was studied by the Edison

Foundation, who found that the composite backlog of Fluor Corporation, Bechtel Corporation, The Shaw Group Inc., and Tyco International Ltd. increased by 37% from 2005 to 2006, the same time that Iatan's initial major contracts were being negotiated. Edison concluded, "This significant increase in the annual backlog of infrastructure projects at EPC firms is consistent with the data showing an increased worldwide demand for infrastructure projects in general and also utility generation, transmission, and distribution projects. (Edison Foundation, September 2007). Other major vendors were also at capacity during the time that Iatan Unit 1 was being constructed. The four major stack vendors each had backlogs stretching to 2011. LADCO reported a 36-month procurement to build duration for wet FGD's. (LADCO, January 2007 White Paper). Additionally, commodity prices were also increasing. Structural steel is a good indicator of the general rise in commodity prices that affected Iatan. Structural steel mill orders increased from an average of 2-3 months in January 2004 to average of 8 months in January 2007(Source – Black & Veatch Power Plant Construction Cost Trends, January 2007). The price of steel has increased 60% since 2003 (Edison Foundation, September 2007).

Q. **In your view, did KCP&L's senior management act prudently when faced with key Project decisions on the Iatan Project?**

A. Overall, yes. As with any large, complex project, there were a number of key decisions that senior management made, and those decisions shaped the way the Iatan Project was managed and conducted thereafter.

Q. **In your opinion, did KCP&L's senior management render timely and prudent decisions?**

A. Yes.

Q. In your opinion, was KCP&L's senior management presented with sufficient data that was accurate and reliable in making key Project decisions?

A. Yes.

Q. In your opinion, in general, was KCP&L's senior management provided with alternatives to key Project decisions as part of the process of making these decisions?

A. Yes.

Q. In your opinion, was KCP&L's senior management generally apprised of the potential risks and/or opportunities of making or not making key Project decisions?

A. Yes.

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 Continue the Implementation of Its Regulatory Plan	)))	Case No. ER-2009-____

AFFIDAVIT OF KENNETH M. ROBERTS

STATE OF ILLINOIS)
) **ss**
COOK COUNTY)

Kenneth M. Roberts, being first duly sworn on his oath, states:

1. My name is Kenneth M. Roberts. I work in Kansas City, Missouri, and I am employed by Schiff Hardin, LLP, a law firm retained by Kansas City Power & Light Co.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Kansas City Power & Light Company consisting of Twenty-four (24) 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.

Kenneth Roberts

Subscribed and sworn before me this 11th day of March 2009.

Notary Public

My commission expires: 3/28/2010

"OFFICIAL SEAL"
Linda A. Kelly
Notary Public, State of Illinois
My Commission Exp. 03/28/2010

JIM E. WILSON

Jim E. Wilson, President of J. Wilson & Associates, Incorporated, has field and consulting experience in the design and construction industry since 1975. Mr. Wilson is an expert in the preparation and analysis of design and construction claims. He has provided this service for Owners, Contractors, Architects and Engineers from both a defense and a plaintiff's perspective. He has repeatedly analyzed the claimed delay effect of changed scope of work, delayed access and design drawings (errors and omissions) effect on construction status.

Mr. Wilson has provided expert testimony in State and Federal Courts, Arbitrations, before the Armed Services Board of Contract Appeals, Mediations and Depositions. He has experience in a wide range of construction projects that includes power plants, hospitals, industrial, water and sewage treatment plants, multiple housing projects, office towers, ship building and rapid transit systems. He has prepared and defended delay claims and provided construction management services on both private and government projects; *e.g.:* Northern Indiana Power Services Company (NIPSCo), Commonwealth Edison Utility Corporation (Mid-West Generation), the Chicago Housing Authority, the City of Chicago Rapid Transit System and Black and Veatch Engineers, International. Mr. Wilson has also provided on-site construction management services for ComEd, NIPSCo, Constellation Energy and Ontario Power Generation (OPG) of Canada during their more critical power plant outage periods.

Mr. Wilson's experience includes the review of contracts, specifications, and design drawing addendum and revisions, change order analysis and construction management. Previously, Mr. Wilson was a Cost and Scheduling Engineer with Daniel International Corporation's Power Division (Fluor-Daniel). He was President of Wilson, Gudgel, Kopmeyer Consulting and a Senior Consultant and manager of Wagner-Hohns-Inglis, Inc. regional office CPM scheduling department.

Mr. Wilson has lectured nationally on the topics of CPM Scheduling and Construction Delay Claims. The most recent lectures were for the Kansas Bar Association; Federal Publications' Practical Illinois Construction Law Seminars; Chicago Kent School of Law of Illinois and the American Association of Cost Engineers. Mr. Wilson has been an Adjunct Instructor at Central Missouri State University and the University of Kansas, and was a previous member of NAIT's National College Accreditation Board for five (5) years and is currently on the Advisory Committee of Central Missouri State University. Mr. Wilson is an active member of the American Arbitration Association and has served several times as an Arbitrator panelist on complex and multi-party disputes.

JIM E. WILSON
RESUME - PAGE 2

EDUCATION	Bachelor of Science in Building Construction Technology Central Missouri State University, 1975; Associate of Science in Architectural Design Central Missouri State University, 1973
PROFESSIONAL ASSOCIATIONS	American Arbitration Association American Association of Cost Engineers National Association of Industrial Technology

SPEAKER

Chicago Kent School of Law of Illinois
Institute of Technology, Chicago, Illinois, 1984, 1985 & 1986
"Construction Claims"

Federal Publications
Practical Illinois Construction Law

Kansas Bar Association
Construction Law

Society of Manufacturing Engineers,
Kansas City, Missouri, "Planning & Scheduling"

American Society of Cost Engineers,
"Delay Claim Analysis"

UNIVERSITY CLASSES & ADVISORY COMMITTEES

Adjunct Instructor, Central Missouri State University,
Construction Scheduling, M F & C 4000

Adjunct Instructor, University of Kansas,
Construction Scheduling, ARCE 650

Advisory Committee, Central Missouri State University,
Construction Engineering Department, 1991 to 1995

Advisory Committee, Pittsburgh State University,
Construction Management Department, 1990-1995

National Association of Industrial Technology
College Accreditation Board, 1988 to 1992

SCHEDULE KMR-2

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