<u>PUBLIC VERSION</u> **" Designates Confidential Information Has Been Removed. Certain Schedules Attached to this Testimony Also Contain Confidential Information And Have Been Removed.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

BRENT C. DAVIS

ON BEHALF OF KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MODIFY ITS TARIFFS TO CONTINUE THE IMPLEMENTATION OF ITS REGULATORY PLAN

DOCKET NO. 10-KCPE4<u>15</u>-RTS

1 Q: Please state your name and business address.

- 2 A: My name is Brent C. Davis. My business address is 1200 Main Street, Kansas City,
- 3 Missouri 64105.

66 ** *

- 4 Q: By whom and in what capacity are you employed?
- 5 A: I am employed by Kansas City Power & Light Company ("KCP&L" or the "Company")
- 6 as the Iatan Unit 1 Project Director.

7 Q: What are your responsibilities?

8 A: My responsibilities include oversight of the construction and installation of certain air
9 quality control equipment on the existing coal-fired generating unit at the Iatan
10 Generating Station ("Iatan Unit 1") and I serve as an advisor to the Iatan Unit 2 project.

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

2 I received a Bachelor of Science degree in engineering management from the University A: 3 of Missouri at Rolla in 1980, followed by a Master in Business Administration degree from Rockhurst University in 1999. I began working at KCP&L in 1981 as a 4 maintenance engineer at the Montrose Generating Station. In 1985 I left the Company 5 6 for a short period of time to accept a position at Dayco Manufacturing in Springfield, 7 Missouri as maintenance superintendent. I returned to KCP&L later that year. Since that 8 time. I have held various engineering and management positions at each of KCP&L's 9 coal-fired generating facilities, *i.e.*, the Montrose Generating Station, the La Cygne 10 Generating Station, the Iatan Generating Station, and the Hawthorn Generating Station. 11 Immediately prior to accepting my current position, I was plant manager at Hawthorn. I 12 was the Project Director for both Unit 1 and Unit 2 from June 2006 to November of 2007. 13 In 2007 I was asked to turn my full attention to Unit 1 as the Unit 1 Project Director, but I 14 have always been involved to a certain extent with the construction of Unit 2. Once the 15 construction completed on Unit 1, I was asked by Carl Churchman to work as an advisor 16 to Unit 2. My duties include assisting Robert Bell, Senior Director of Construction, and 17 his direct reports on the Unit 2 Project. I am also the primary interface between the Iatan 18 Unit 2 Project and KCP&L Operations and Maintenance.

19 Q: Have you previously testified in a proceeding at the Kansas Corporation 20 Commission ("KCC")?

A: Yes. I filed testimony in KCP&L's last rate case, Docket No. 09-KCPE-246-RTS
("246 Docket"). My direct and rebuttal testimony from that case is attached as Schedules
BCD2010-1 and BCD2010-2, respectively.

O:

What is the purpose of your current testimony?

A: The purpose of my testimony is: 1) to give an overview of the Iatan Unit 2 Project; 2) to
discuss the formation of the contract with Kiewit Power Constructors Co. ("Kiewit") for
the remaining balance of plant work on the Iatan Unit 2 Project; and (3) to discuss the
Project Definition Report ("PDR") issued by Burns & McDonnell in 2004 and the
Supplement issued in 2007; and (4) to provide information regarding the Iatan Unit 2
in-service criteria.

8

OVERVIEW OF THE IATAN UNIT 2 PROJECT

9 Q: Can you provide an overview of the key events for the latan Unit 2 Project?

10 A: The best way to explain the Project is through the "Level 1 Schedule" chart that we 11 include in the quarterly "Strategic Infrastructure Investment Status Reports," or simply 12 the "Quarterly Reports," given to the Staff of the KCC, Citizens' Utility Ratepayer Board 13 ("CURB") and the parties to the Stipulation and Agreement in Docket No. 04-KCPE-14 1025-GIE ("1025 S&A"). As Company witness Chris Giles testifies, we have also met 15 with Staff, CURB, and representatives of the 1025 S&A signatories¹ on a regular basis 16 ("Quarterly Meetings"), at which we review the Level 1 Schedule with the meeting's 17 attendees. I have attached the Level 1 Schedule that KCP&L presented as part of our 18 most recent Quarterly Report for third guarter 2009. (Schedule BCD2010-3)

19

Q: Please describe the Level 1 Schedule.

A: This schedule was developed to provide a high-level overview of the Project's major
 work in a critical path format. It shows the key sequences of work on a sub-project basis
 for the following areas: (1) Boiler/Steam Generator/Selective Catalytic Reduction

¹ All 1025 S&A signatories were given the opportunity to attend these meetings. However, not all 1025 S&A signatories attended every meeting.

1 System ("SCR")/Pulverizer & Air Heater (the "Boiler Path"), which was primarily 2 ALSTOM Power Inc.'s ("ALSTOM") scope of work; (2) Powerhouse/Turbine (the 3 "Turbine Generator Building Path"), which was primarily Kiewit's scope of work; 4 (3) Air Ouality Control Systems ("AOCS") including the absorber, fabric filter and ID 5 fans (the "AOCS Path"), for which ALSTOM had the primary responsibility; and (4) the 6 Unit 2 Balance of Plant, which is a series of ancillary systems such as the Coal and 7 Limestone Handling, Water Treatment, Cooling Tower and miscellaneous other 8 structures (the "Ancillary Balance of Plant Path"), which were procured and constructed 9 from a number of different vendors. Our Project Controls Team prepares this Level 1 10 Schedule as a summary of over 15,000 detailed schedule activities. The Level 1 Schedule summarizes those activities through its series of yellow, blue and red arrows on 11 12 the Level 1 Schedule. The flags that are shown in the Level 1 Schedule signify key 13 milestones or events that occurred throughout the Iatan Unit 2 Project. These bars and 14 flags on the Level 1 Schedule also include reference to two sets of dates: the "planned" 15 dates for an activity and the "actual" dates for an activity. The "actual" dates referenced, 16 or the dates that reflect when actual events occurred, are accompanied by an "A".

17

Q: What is the genesis of the Level 1 Schedule?

A: Company witness Ken Roberts testifies that during the first quarter of 2006, Burns &
McDonnell, the Project Team and Schiff Hardin, LLP ("Schiff"), our project oversight
team who has worked with us on project controls, procurement and compliance issues,
developed a strategic schedule for the work that identified the key procurement dates
needed for planning purposes. That strategic schedule was developed to provide a
guideline to the Project Team for the major procurements and is now the Level 1

Schedule. Even though KCP&L ultimately developed a detailed, computerized Level 3
 Schedule with over 15,000 activities for Iatan Unit 2, we continue to use the Level 1
 Schedule as a planning tool and for providing information to Staff and to our partners
 regarding the Project's status. We continue to update the information monthly to reflect
 the actual dates, update the color coding and record milestones as they occur.

6 Q: How has the Project Team used the detailed Level 3 Schedule?

A: The Level 3 Schedule is one of the essential management tools on the Iatan Unit 2
Project. It encompasses all of the activities for the work by all of the contractors on site,
who contributed their planned schedules at the outset of their work. Our Project Controls
Team worked with the contractors to develop the Level 3 Schedule so that it reflects the
proper sequence and duration for all of the work. The Level 3 Schedule is used in every
discussion KCP&L has with the contractors on the Project.

13 Q: How was the Level 3 Schedule developed?

14 After the execution of the contract with ALSTOM in August 2006, ALSTOM began A: 15 work on its detailed as-planned schedule, which is also referred to as a baseline schedule 16 that showed its plan for each of the portions of its work. Because of ALSTOM's 17 importance to the Iatan Unit 2 Project, KCP&L needed ALSTOM to complete its 18 baseline schedule as a precursor to developing a full Project schedule. In the fourth 19 quarter of 2006, our scheduling team began the process of integrating the baseline 20 schedules of ALSTOM, Burns & McDonnell and the other on-site contractors into an 21 overall computerized schedule network. This effort culminated in April 2007 when 22 KCP&L's Project Controls Team issued the Iatan Unit 2 Project's "Baseline Schedule" 23 that incorporated and integrated all of the work for the Project. This schedule also

1 included placeholders for the unawarded work, much of which was ultimately awarded to 2 Kiewit. Project Controls has been maintaining this Level 3 Schedule since that time, 3 utilizing input from the contractors on a weekly basis to update as the work is completed. 4 The schedule has also formed the basis for the Iatan Unit 2 Project's earned value system 5 that is used for tracking the progress and productivity of the contractors. 6 **Q**: What were some of the most important milestone dates on the Boiler Path? 7 A: After the award of the boiler to ALSTOM, the most important date to us was completing 8 the foundations in time for ALSTOM to begin its steel erection on August 15, 2007. As 9 the Level 1 Schedule shows, we met that date with a week to spare and ALSTOM started 10 its structural steel erection on time. The next major milestone on the Boiler Path was 11 ALSTOM's erection of pressure parts. The schedule showed ALSTOM's actual start 12 date of March 20, 2008 bettered its planned start date of April 15, 2008. ** 13 14 15 16 17 18 19 20 ** The Level 1 Schedule also includes a 21 high level depiction of the level of coordination needed between ALSTOM and Kiewit in 22 the Boiler Path. **

3 Q: Has KCP&L properly managed the work on the Boiler Path?

4 A: Yes.

5 Q: What were the key milestones in the Turbine Generator Building Path?

6 A: The first major milestone was the award of the steam turbine generator to Toshiba 7 Corporation on April 12, 2006. Making this award provided KCP&L and Burns & 8 McDonnell with the necessary weights, sizes, locations and structural details necessary 9 for Burns & McDonnell to design the turbine pedestal and the structure for the turbine 10 generator building. The design of the turbine pedestal was completed on March 28, 11 2007, approximately two weeks later than planned. The design of the turbine generator 12 building structure was completed on time on April 4, 2007. However, there was enough 13 information provided by Toshiba for KCP&L to bid and award the turbine generator 14 building steel package by October 3, 2007. It should be noted that the actual finish dates 15 for certain of the milestones and durations in the Turbine Generator Building Path were 16 late when compared to the plan. As stated in the testimony of Company witness Carl 17 Churchman, by the start of 2009, we were increasingly concerned that the progress on the 18 Turbine Generator Building Path was lagging and that the schedule float that was once 19 available to the Iatan Unit 2 Project on this path had been utilized. These concerns and 20 others led to the meetings described in the testimony of Company witnesses William 21 Downey, Carl Churchman and Chris Giles regarding the changes to the Iatan Unit 2 22 Project's major milestones and Provisional Acceptance dates.

23 Q: Did KCP&L effectively manage the work on the Turbine Generator Building Path?

1 A: Yes.

2 What was the reason for the changes to the original plan for the Turbine Generator **Q**: 3 **Building Path?**

4 A: I believe that differences in the "actual" dates when compared to the original "planned" 5 dates in the Level 1 Schedule were associated more with the fact that the planned dates 6 probably did not account fully for the complexity of the Turbine Generator Building 7 Path's work at the outset of the Project.

8 **O**:

Please explain the basis for your opinion.

9 A: Company witness Daniel Meyer testifies to the impact on the Iatan Unit 2 Project's 10 budget from design maturation, which as Mr. Meyer explains, resulted in two major 11 changes to the Project's costs: (1) increased scope and quantities from the completion of 12 design that were not known at the Project's outset; and, (2) the impact such increases had 13 on the schedule and performance of the work. I believe that when the original strategic 14 schedule was developed in early 2006, the dates for the Turbine Generator Building Path 15 underestimated the result of future design maturation as Mr. Meyer describes it. Because 16 the dates from the original strategic schedule were carried forward into the Level 1 17 Schedule, we are still tracking against those original planned dates.

18 Q: Nonetheless, the work on the Iatan Unit 2 Project is now scheduled to complete two 19 months later than the original plan. Why is that?

20 A: As Company witness Mr. Churchman testifies, we had to review all of the considerations 21 available to us in early-to-mid 2009 and identify the appropriate path forward for the 22 latan Unit 2 Project. This analysis took into account the balance of meeting schedule

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commitments with the final cost of the work. The current Level 3 Schedule reflects the results of this process.

3 Q: Please describe the major milestones on the AQCS Path.

The AQCS Path was less critical on the Iatan Unit 2 Project than on Iatan Unit 1 because 4 A: 5 the AOCS buildings and facilities are part of the common work that is shared by the two plants. Therefore, other than the absorber, fabric filter, ID fans and associated ductwork 6 7 that are unique to Iatan Unit 2, the remaining AQCS work was completed and put in 8 service with Iatan Unit 1 in April 2009. The most significant milestone for Iatan Unit 2 is 9 the draft test that ALSTOM will need to perform to prove that its fans work and the 10 ductwork from the boiler through the AQCS equipment to the stack is gas tight ("Draft 11 Test"). The Draft Test is scheduled for December 21, 2009, which is approximately 12 seven weeks later than the original planned date.

13 Q: Do you know why the Draft Test date has changed?

14 Yes. The changes to the Draft Test milestone date were part of the overall discussion A: 15 with ALSTOM and Kiewit regarding the optimal schedule for the work. Kiewit required 16 access to work areas to complete the hook-up of various Balance of Plant systems and 17 electrical wire to ALSTOM's equipment. Once the discussions regarding the changes 18 needed to the Project's schedule began, it was clear that neither ALSTOM nor Kiewit 19 could support the original Draft Test date of November 2, 2009 without significant 20 acceleration. Had this occurred, Kiewit's costs to accelerate its work would have resulted 21 in additional costs to the Project. When the Draft Test date was changed, Kiewit no 22 longer had to incur additional costs and could complete its work in support of ALSTOM.

23 Q: Do you believe that KCP&L effectively managed the work on the AQCS Path?

A: Yes. I agree with Company witness Carl Churchman that our active management of the
 contractors allowed KCP&L to save the Project money and allow the work to finish on a
 more predictable schedule.

4

O:

Please describe the key milestones of the Ancillary Balance of Plant Path.

A: These multiple structures really have not had any impact on the Iatan Unit 2 Project
schedule. The Level 1 Schedule depicts this work at a very high level. Overall, these
areas were less important to the Iatan Unit 2 Project schedule than the others described.

8 Q: Why were the Ancillary Balance of Plant systems of lesser importance to the Iatan 9 Unit 2 Project's development?

10 There are two reasons. First, most of the Ancillary Balance of Plant systems are common A: 11 Balance of Plant systems that had to be operational for start-up and operation of Iatan 12 Unit 1, so while completion of those systems may have been critical for the Iatan Unit 1 13 start-up, many of these systems were already in place for Iatan Unit 2 and only required 14 the distinct hook-up to the Iatan Unit 2 areas. Such systems included the water and air systems, the zero liquid discharge system, the ammonia system, and the reagent 15 16 preparation and gypsum dewatering systems we use in the operations of the latan Unit 1 17 AQCS system. Second, the other work that is part of this category had considerable schedule float and therefore could be "paced" behind the critical work of the Boiler, 18 19 Steam Turbine Generator and AQCS. This portion of the Ancillary Balance of Plant 20 work included the cooling towers and coal handling, which were being performed by 21 "furnish and erect" contractors who were responsible for design and construction of their 22 specialty items on sections of the plant that were physically out of the way from the 23 majority of the work for most of the Iatan Unit 2 Project's duration.

1	Q:	Did KCP&L effectively manage the work on the Ancillary Balance of Plant?
2	A:	Yes.
3		KIEWIT CONTRACT
4	Q:	Do you recall the strategy that KCP&L had planned to employ for the Balance of
5		Plant work at the time that you became the Project Director for the latan Unit 2
6		Project?
7	A:	Yes. The original contracting strategy for the Balance of Plant work was on a multi-
8		prime basis.
9	Q:	What does "multi-prime" mean?
10	A:	A multi-prime contracting strategy is when an owner contracts directly with several
11		different contractors of different disciplines to perform work on the same project at the
12		same time rather than contract with a single "general" contractor for all of the work.
13		Under a multi-prime strategy, the owner may function as the coordinator of the various
14		prime contractors, or hire a construction manager to do all of the coordination on its
15		behalf.
16	Q:	What are the advantages of a multi-prime contracting strategy over other
17		contracting strategies?
18	A:	The primary benefits to a multi-prime contracting strategy can include the following: if
19		the project is well run, a multi-prime project is potentially less costly due to eliminating
20		additional contractor profit, overhead and maybe excess contingency depending on the
21		pricing method used; the owner's project team has greater degree of control of schedule
22		and progress and retains the ability to determine the scheduling priorities; the owner's
23		project team has significant control of key data regarding the project's progress and can

instill a high level of transparency over the work; and the owner's engineer functions on
the owner's behalf, and is an important advocate in maintaining control over the design
and construction process.

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Q: What are the potential downsides of a multi-prime project?

A: The most significant downside is that the owner accepts greater risk due to accepting full
coordination of construction work and responsibility for design. The owner also takes on
risk for the availability and quality of the labor force, safety and site management,
materials management and project controls.

9

Q: How did KCP&L assess the risk of labor availability for the latan Unit 2 Project?

10 A: In February 2006, as part of its development of the Iatan Unit 2 Project's estimate, Burns
11 & McDonnell commissioned an independent consultant to assess the likely labor
12 conditions during the construction phase of the Iatan Unit 2 Project.

13 Q: Who was Burns & McDonnell's consultant?

14 A: Gary Schumacher of Schumacher Consulting LLC was Burns & McDonnell's consultant.
15 Company witness Daniel Meyer testifies regarding Schumacher. Schumacher's
16 February 14, 2006 report is attached to Mr. Meyer's testimony as Schedule DFM2010-5.

17 Q: What was the substance of Schumacher's assessment of local labor conditions?

A: Mr. Schumacher identified a high risk around craft labor availability and the high
potential for labor shortages within certain trades. Mr. Schumacher identified a number
of competing projects, both in the utility industry and local commercial construction that
would be competing with the Iatan Unit 2 Project for craft labor resources. As an
example, Mr. Schumacher identified a potential shortage of pipefitters. Mr. Schumacher
noted that Kansas City Local 533 for the Pipefitters Union employs 600 craft workers.

During the Iatan Unit 2 Project's projected peak period of fall of 2008 to spring of 2009, Mr. Schumacher predicted that the Project would need as many as 800 pipefitters. Based on other scheduled projects for the area, the Local 533 was predicted to need 200-250 craft workers for other work. As a result, Mr. Schumacher concluded that there was a potential shortage of 400 pipefitters at a time when Iatan's construction on both units would be peaking.

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7 Q: Were you familiar with the labor market in Kansas City in 2006?

8 A: Yes. I have had a long association with the locals in Kansas City. After I joined the
9 Iatan Unit 2 Project in June 2006, I became the primary interface with the Kansas City
10 Building Trades.

11 Q: Does Mr. Schumacher's report comport with your recollection of the labor market 12 in Kansas City at this time?

A: Yes. I believe Mr. Schumacher accurately described the market at that time. There was a lot of uncertainty expressed by the unions regarding labor availability during the 2006 to 2008 time frame.

16 Q: What experience do you have with multi-prime construction projects?

A: I have been involved in a number of plant outages and upgrades that employed a multiprime contracting method. The most notable multi-prime project in my career at KCP&L
was the rebuilding of Hawthorn Unit 5 after an explosion on February 17, 1999 destroyed
the existing boiler. However, while Hawthorn Unit 5 was a large and successful project,
it was entirely schedule driven. The construction cost of rebuilding the plant was
significantly less than the cost of replacement power necessary while the plant was nonoperational. As a result, decreasing the construction schedule duration took precedence

over minimizing the construction costs. Moreover, the Balance of Plant scope was not
nearly as large as on the Iatan Unit 2 Project because we were replacing the boiler and
adding the AQCS, but the turbine generator building was intact. Nonetheless, I have had
quite a bit of experience with multi-prime projects and the specialty contractors typically
involved in such projects. I am very familiar with the companies in the Kansas City area
that perform specialty work, and have probably been involved with each and every one of
the larger Kansas City contractors over the course of my career.

8 Q: Do you know why the Iatan Unit 2 Project's plan was to proceed on a multi-prime 9 basis?

10 A: My understanding is that the multi-prime method was viewed as preferable for a few 11 notable reasons. First, we had been successful at Hawthorn Unit 5 using several small to 12 medium sized, Kansas City-based specialty contractors for Balance of Plant work. 13 Second, it was recommended by Burns & McDonnell that we proceed with a multi-prime 14 strategy to expedite procurement by converting design packages into construction 15 packages as soon as possible as they were completed. Third, my understanding at that 16 time, which is corroborated by the testimony of Company witness Steven Jones, is that 17 there was no interest among the handful of large general contractors who were capable of 18 performing the Balance of Plant work for the Iatan Unit 2 Project. So, the multi-prime 19 method was not only the preferred method at that time, it may have been our only option 20 in the absence of interest by a major contractor like Kiewit, Fluor, Bechtel or others of 21 that nature.

Q: By the end of 2006, was the Company still intent on performing the Balance of Plant on a multi-prime basis?

A: Yes. The Project Team completed the cost estimate that ultimately became the Control
 Budget Estimate ("CBE") and was approved by the KCP&L Board of Directors in
 December 2006. However, as the Project Team developed the Control Budget Estimate,
 the risks of coordinating all of the multiple contractors were clear.

5

Q: How did the Project Team come to this realization?

A: As we worked through refining the estimate, and in particular the contingency for the
Control Budget Estimate, KCP&L realized that it would not only have the inherent risk
of coordinating the multiple specialty contractors but could potentially also have
problems getting the local contractors to competitively bid the work.

10 Q: Why is that?

A: As I previously testified, concerns regarding the local labor market had been raised by
 Mr. Schumacher and others as we were developing the Control Budget Estimate in
 December 2006. My concern was these market conditions would limit the availability of
 the local specialty contractors when the design was completed for bidding of the different
 packages for the Iatan Unit 2 Project.

16 Q: What made you think that there would be difficulty competitively bidding the17 Balance of Plant packages?

18 A: KCP&L had a lack of interest on the very first of the Balance of Plant packages, the
19 foundations and substructures contract that we ultimately awarded to Kissick. As is
20 reflected in the Recommendation to Award Letter for this procurement (Schedule
21 BCD2010-4), Kissick was the only responsible bidder for the work, because the other
22 companies in town who do concrete work refused to bid the work on a fixed-price or
23 unit-priced basis. We then had to satisfy concerns from the Executive Oversight



perform in the area had been deferred, creating a team of people who could be reassigned immediately to the Iatan Unit 2 Project. Kiewit proposed to assemble a team to
evaluate the potential Balance of Plant work scope for the Iatan Unit 2 Project. Kiewit
asked that KCP&L and Burns & McDonnell provide resources for developing this
estimate.

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Q: What was your reaction to Kiewit's offer?

7 A: I told them that I would have to inform the Executive Oversight Committee of Kiewit's
8 offer and that I would get back to them.

9

Q: Did you inform the Executive Oversight Committee of Kiewit's interest?

A: Yes. On January 10, 2007, as part of our presentation to the Executive Oversight
 Committee, we provided the members with a summary of the then-current Balance of
 Plant contracting strategy, a description of the contacts with Kiewit regarding the Project
 including the offer to create an estimate and pros and cons of contracting with Kiewit.
 (Schedule BCD2010-5)

15 Q: At that time, what did you see as the advantages to proceeding with Kiewit's16 estimate?

- 17 A: The integration of the multi-prime specialty contractors under one umbrella would reduce
 18 KCP&L's coordination risk. As a result, one of the advantages to Kiewit's participation
 19 in the Iatan Unit 2 Project would be the risk-shifting to a large experienced international
 20 contractor with a depth of construction management resources.
- 21 Q: What did the Executive Oversight Committee decide on January 10, 2007?

A: The Executive Oversight Committee agreed to accept Kiewit's offer to prepare an
 estimate for the Balance of Plant work and authorized me to contact Kiewit and make
 arrangements for them to begin.

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Q: What happened next with respect to Kiewit's estimate preparation?

A: Kiewit met with our Project Team and Burns & McDonnell's lead engineers, and Burns
& McDonnell provided Kiewit with drawings, specifications and other documents that
Kiewit needed for performing its estimate. Kiewit, the Project Team, and Burns &
McDonnell engaged in ongoing dialogue to address questions that arose through midFebruary 2007.

10 **O**:

: Do you recall when Kiewit completed its Balance of Plant estimate?

11 A: Yes. Kiewit completed the estimate on April 12, 2007. I scheduled a special meeting of
12 the Executive Oversight Committee for the following week and on April 16, 2007,
13 Kiewit made a presentation to the Executive Oversight Committee members, members of
14 the Project Team, and Schiff.

15 Q: Do you recall the presentation that Kiewit made at that meeting with the Executive 16 Oversight Committee?

- A: Yes. Company witnesses William Downey and Daniel Meyer, who also were in attendance, testify regarding this meeting and I agree with their testimony. Kiewit's team was well prepared and was very knowledgeable about the risks that KCP&L was facing with the Iatan Unit 2 Project. Its proposal included the advantages of having Kiewit on the Project and details of its cost proposal.
- 22 Q: Was there any one aspect of Kiewit's presentation that you found most interesting?

1 A: The aspect of Kiewit's presentation that I found most interesting was their approach to 2 labor management. Kiewit's team spoke at length regarding their proven ability to 3 manage labor in the field. They walked through how they plan the work and assemble 4 "work packs" that are prepared in advance of craft going to the field. Kiewit presented a 5 concrete proposal for how it intended to staff the Project and how it would attract labor. 6 Kiewit also spoke of its proposal to "co-locate" with Burns & McDonnell to review the 7 engineering product as it was being released so that it could work with the engineers on 8 optimizing the plant's design for constructability purposes.

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Q: Why did you focus on these points?

A: Because in our analysis of the Balance of Plant work going forward, we had identified
labor management, labor availability, coordination of the work in the field, and
completion and integration of the final design as among the most significant risks to the
Iatan Unit 2 Project.

14 Q: What was the next step with Kiewit's proposal?

15 A: I recall that David Price joined KCP&L on May 1, 2007 as the Vice President of 16 Construction. Mr. Price was very interested in pursuing a proposal from Kiewit's 17 management on how to proceed. I recall that Mr. Price, Mr. Stephen Easley, the former 18 Senior Vice President of Operations, and Mr. Terry Bassham, our Chief Financial 19 Officer, engaged Kiewit's executives in some initial conversations regarding the next 20 steps. I believe it was at this initial meeting in which KCP&L's team proposed, and 21 Kiewit conceptually accepted, taking the risk for its labor productivity for its work. As 22 Company witness Daniel Meyer testifies, we then engaged in a months-long process of 23 vetting Kiewit's estimate.

Q: What was the result of the vetting of Kiewit's estimate?

A: Company witness Daniel Meyer testifies to the final outcome. In general, we were
satisfied that Kiewit had provided a good estimate of the construction costs necessary to
perform to the design at that time. There were some differences between Kiewit's
estimated man-hours and quantities and those developed by Burns & McDonnell that all
parties knew would not be fully reconciled until the production of final engineering
documents.

8

Q: Did Kiewit's estimate for the work change during the vetting process?

9 A: Yes. Kiewit's original estimate included engineered materials and commodity items that
10 KCP&L had already purchased or intended to purchase, so these were deleted from the
11 cost estimate. In addition, as discrepancies (either additions or deletions) were found in
12 the estimate during the vetting process, Kiewit adjusted its numbers accordingly.
13 However, it is important to note that the design basis for Kiewit's estimate was the design
14 as it existed as of the first quarter of 2007. Therefore, Kiewit's estimate was prepared on
15 the basis of approximately 20 percent complete design documents.

16 Q: Are you familiar with the amount of the final estimate from Kiewit?

- 17 A: Yes. Kiewit's final estimate was ** The for both Iatan Unit 1 and Unit 2.
 18 That was the number that was incorporated into Kiewit's contract.
- 19 Q: What was the portion of Kiewit's estimate that related to the latan Unit 2 Project?
- 20 A: I believe the Iatan Unit 2 portion was ******
- 21 Q: Do you believe the award of the contract to Kiewit was timely?

22 A: Yes.

23 Q: What is the basis for your opinion?

1	A:	First of all, we had previously mitigated the urgent Balance of Plant work scope with the
2		early contract awards for Kissick, Pullman, and site clearing. Second, at the time that we
3		entered into the Limited Notice to Proceed ("LNTP") with Kiewit in June 2007, we
4		released Kiewit to perform any work that was essential to keeping the Project moving
5		while we completed the negotiations. By the time that we completed the contract in
6		November 2007, Kiewit was able to hit the ground running on all other work in its
7		contract.
8	Q:	Do you believe that KCP&L has effectively managed Kiewit work on the latan
9		Unit 2 Project?
10	A:	Yes, I believe that we have effectively managed Kiewit's work.
11	Q:	Did KCP&L make the right decision to award Kiewit the latan Unit 2 Balance of
12		Plant work in 2007?
13	A:	Yes. It was the best possible decision for the Iatan Unit 2 Project at that time.
14	Q:	What is the basis for your opinion?
15	A:	As I testified earlier, the risks of proceeding with a multi-prime Balance of Plant
16		contracting strategy were becoming very apparent, and those risks carried significant
17		uncertainty. My greatest concerns regarding the multi-prime approach were our ability to
18		manage and coordinate this work, whether there would be adequate labor forces to
19		support construction, whether the specialty contractors in Kansas City would be too busy
20		with all of the work planned and proceeding in the area to competitively bid the latan
21		Unit 2 Project, and whether these smaller contractors had the level of sophistication
22		necessary to plan and execute such a large project. Kiewit's presence on the latan Unit 2
23		Project mitigated these and other risks that were known at that time.

Q: Do you believe that the shift in the strategy from multi-prime to Kiewit resulted in increased costs to the Iatan Unit 2 Project?

- A: In my opinion, I believe the cost of performing the work on a multi-prime basis may have
 significantly exceeded Kiewit's cost and the schedule would have been at risk throughout
 the Project.
- 6 Q: What is the basis for your opinion?

A: First, as Company witness Mr. Meyer testifies, the design for the Balance of Plant work
matured significantly from the time of Kiewit's estimate in February 2007 to November
2009. The design work was approximately 20-25 percent complete at the time of
Kiewit's estimate, and the quantities of work changed as the design matured. To the
extent that Kiewit's costs increased due to design maturity, these increases would have
been the same regardless of who was doing the work (*e.g.*, Kiewit or multiple small
contractors).

14 Second, the risks that I discussed related to managing the Balance of Plant work 15 on a multi-prime basis were very real concerns. I know the level of sophistication of the 16 contractors in this area from my many years at KCP&L and the associated outage and 17 other construction work that I participated in during that time. We used a number of the 18 best local contractors for the Hawthorn Unit 5 project. While we could have proceeded 19 down the same path for Iatan Unit 2, Kiewit's performance of the Balance of Plant work 20 mitigated the inherent risks to schedule, budget and safety that come with using multiple 21 specialty contractors in a multi-prime arrangement.

Third, I believe that we needed a contractor of Kiewit's reputation and substance
to deal with a very tight labor market. I was KCP&L's primary interface with the

1		building trades in Kansas City and was very attuned to the labor situation throughout the
2		Project. I knew that we would be competing with a number of other large industrial,
3		commercial and utility projects in the 2007 to 2010 time frame. In addition, the
4		rebuilding of the Gulf Coast in the aftermath of Hurricanes Katrina and Rita had further
5		thinned the ranks of mobile union labor. If in Kiewit's place, we had a number of small
6		contractors competing with each other for the same labor, it is likely that labor
7		productivity and availability would have been the single-most important issue on the
8		Iatan Unit 2 Project. Instead, as was reflected in our Quarterly Reports, these were risks
9		that were mitigated throughout the Project.
10		These and other reasons are documented in the Justification to Award to Kiewit
11		that is attached to Company witness Steven Jones' testimony as Schedule SJ2010-4, and
12		they provide the basis of my opinion.
13		PROJECT DEFINITION REPORT
14		
	Q:	What is a Project Definition Report ("PDR")?
15	Q: A:	What is a Project Definition Report ("PDR")? It is a document prepared by an owner's engineer to examine the broad outlines of scope
15 16		
		It is a document prepared by an owner's engineer to examine the broad outlines of scope
16	A:	It is a document prepared by an owner's engineer to examine the broad outlines of scope and viability for a potential future project.
16 17	A: Q:	It is a document prepared by an owner's engineer to examine the broad outlines of scope and viability for a potential future project. Was there a PDR prepared for Iatan Unit 2?
16 17 18	A: Q:	It is a document prepared by an owner's engineer to examine the broad outlines of scope and viability for a potential future project. Was there a PDR prepared for Iatan Unit 2? Yes. The original PDR was prepared by Burns & McDonnell in August 2004 and
16 17 18 19	A: Q:	It is a document prepared by an owner's engineer to examine the broad outlines of scope and viability for a potential future project. Was there a PDR prepared for Iatan Unit 2? Yes. The original PDR was prepared by Burns & McDonnell in August 2004 and provided to KCP&L's John Grimwade on September 9, 2004 (Schedule BCD2010-6).
16 17 18 19 20	A: Q:	It is a document prepared by an owner's engineer to examine the broad outlines of scope and viability for a potential future project. Was there a PDR prepared for Iatan Unit 2? Yes. The original PDR was prepared by Burns & McDonnell in August 2004 and provided to KCP&L's John Grimwade on September 9, 2004 (Schedule BCD2010-6). There were two supplements to the PDR that Burns & McDonnell prepared after I joined

KCP&L, discussed the possible expansion of the Iatan facility to include an 800 MW
(net) coal plant, and included evaluations regarding permitting, economics of major
technology components, integration of the project into KCP&L's Integrated Resource
Plan and it provided for internal budget appropriations. It included sections regarding
general design criteria, scope of work and general assumptions for technology,
identification of certain commercial terms Burns & McDonnell thought to be advisable,
project cost estimates and a high level schedule.

8 Q: How would you term the level of design in the original PDR?

- 9 A: A PDR or document of that type is a pre-cursor to even conceptual design work and is
 10 only highly representative of the broad outlines of the project.
- 11 Q: Did Burns & McDonnell identify risks to the potential cost of the Iatan Unit 2
 12 Project in the PDR?
- A:





1 **PDR**?

A: Company witness Daniel Meyer testifies that the cost estimate embedded in the PDR was
very preliminary, at best, and I agree with that testimony. The design was conceptual at
this time, and the concept in the PDR was for a plant that was substantially different than
the project KCP&L ultimately chose to build. Also, the proposed Project duration upon
which the estimate was based could not be met, because there was no longer 60 months
remaining to design, procure and construct the Project if the goal was to meet a
Provisional Acceptance in the summer of 2010. **

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11 Q: When did Burns & McDonnell issue an update to the PDR?

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A: There were two supplements to the PDR, the first of which was a siting study that Burns
& McDonnell completed after the initial PDR was completed. The second supplement
contains a full reassessment of the changes to the Iatan Unit 2 Project's definition as of
June 28, 2007.

16 Q: Why did Burns & McDonnell prepare this second supplement to the PDR?

A, It was at KCP&L's request. The Project had undergone significant change since the PDR
was created and those changes were embedded in the Control Budget Estimate that was
approved by the Board of Directors in December 2006. I thought it was necessary for the
PDR to be updated to match the scope and complexity of the project that KCP&L had
chosen to build. Mr. Easley and I spoke with Burns & McDonnell's project manager
about the need to update this information, and they agreed to provide it.

23 Q: What were some of the major changes in the scope of the latan Unit 2 Project from

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A:

August 2004 to June 2007?

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** The

3		changes included: (1) increased unit capacity from 800 MW to 850 MW; (2) increased
4		steam temperatures from 1050°F to 1080°F; (3) postponement of the schedule by nine
5		months; and (4) scope refinements including: a deaerator, storage tank and feedwater
6		booster pumps to enhance water control; modifications to the coal handling system to
7		comply with PSD permit; carbon injection system to control mercury; sizing of emissions
8		control equipment in concert with permit; added liner to solid waste landfill; combined
9		control room facility; upgrades to the transformer connection; change to chimney liner
10		materials; and other changes.
11	Q.	Did this document result in any changes to the Control Budget Estimate?
12	A.	No. Schedule BCD2010-7 merely records the process of updating the design basis for
13		Control Budget Estimate.
14		IN-SERVICE CRITERIA FOR IATAN UNIT 2
15	Q:	What did the 1025 S&A provide regarding in-service criteria for latan Unit 2?
16	A:	Paragraph G(3) of Appendix C of the 1025 S&A states "For purposes of determining
17		whether the new generation resources are in service, the parties should use the same
18		criteria as used by the Southwestern Power Pool for accreditation. Criteria for
19		determining whether the new emissions control equipment is in service shall be
20		developed by the parties." Both parts of this provision apply to Iatan Unit 2 because the
21		project includes both new generation and environmental control equipment.
22	Q:	Do any other agreements between the parties address in-service criteria for latan

1	A:	Yes. The Joint Report Regarding the Timing and Process for Kansas City Power & Light
2		Company's Final Rate Proceeding Under Its Five-Year Regulatory Plan filed with the
3		Commission on September 9, 2009 ("Joint Report") notes that "In the 246 Docket, in-
4		service criteria for the Iatan 1 environmental upgrades were developed. As the Iatan 2
5		environmental controls essentially mirror the Iatan 1 environmental upgrades, the parties
6		agree that the same criteria should be used to determine when the Unit 2 environmental
7		facilities are in-service."
8	Q:	Do those provisions from the 1025 S&A and the Joint Report satisfy the
9		requirement for the parties to develop in-service criteria for Iatan Unit 2?
10	A:	In part. The Company is in discussions with the KCC Staff to expand and refine the
11		criteria noted in those provisions.
12	Q:	When will the in-service criteria for Iatan Unit 2 be established?
13	A:	Once KCP&L and the KCC Staff come to agreement on appropriate in-service criteria for
14		Iatan Unit 2, we will circulate the criteria to the other 1025 S&A parties for review and
15		
		approval and discuss them with the Citizens' Utility Ratepayer Board. I expect that we
16		approval and discuss them with the Citizens' Utility Ratepayer Board. I expect that we will come to such agreement in the next few weeks.
16 17	Q:	

18 A: Yes, it does.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City) Power & Light Company to Modify Its Tariffs to) Continue the Implementation of Its Regulatory Plan)

Docket No. 10-KCPE-___-RTS

AFFIDAVIT OF BRENT C. DAVIS

STATE OF MISSOURI)) ss COUNTY OF JACKSON)

Brent C. Davis, being first duly sworn on his oath, states:

1. My name is Brent C. Davis. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Iatan Unit 1 Project Director.

pages, having been prepared in written form for introduction into evidence in the abovecaptioned 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.

Brent C. Davis

Subscribed and sworn before me this 17^{m} day of December, 2009.

1. col H. We Notary Public Feb. 42011 NOTARY SEAL

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

My commission expires:

PUBLIC VERSION

Certain Schedules Attached To This Testimony Contain Confidential Information And Have Been Removed.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

BRENT C. DAVIS

ON BEHALF OF KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MODIFY ITS TARIFFS TO CONTINUE THE IMPLEMENTATION OF ITS REGULATORY PLAN

DOCKET NO. 09-KCPE-___-RTS

- 1 Q: Please state your name and business address.
- 2 A: My name is Brent C. Davis. My business address is 1201 Walnut, Kansas City, Missouri
- **3** 64106.
- 4 Q: By whom and in what capacity are you employed?
- 5 A: I am employed by Kansas City Power & Light Company ("KCP&L" or the "Company")
- 6 as the Iatan Unit 1 Project Director.
- 7 Q: What are your responsibilities?

1	A:	My responsibilities include oversight of the construction and installation of certain air
2		quality control equipment on the existing coal-fired generating unit at the Iatan
3		Generating Station ("Iatan 1").
4	Q:	Please describe your education, experience and employment history.
5	A:	I received a Bachelor of Science degree in engineering management from the University
6		of Missouri at Rolla in 1980, followed by a Master in Business Administration from
7		Rockhurst University in 1999. I began working at KCP&L in 1981 as a maintenance
8		engineer at the Montrose Generating Station. In 1985 I left the Company for a short
9		period of time to accept a position at Dayco Manufacturing in Springfield, Missouri as
10		maintenance superintendent. I returned to KCP&L later that year. Since that time, I have
11		held various engineering and management positions at each of KCP&L's coal-fired
12		generating facilities, <i>i.e.</i> , the Montrose Generating Station, the LaCygne Generating
13		Station, the Iatan Generating Station, and the Hawthorn Generating Station. Immediately
14		prior to accepting my current position, I was plant manager at Hawthorn.
15	Q:	Have you previously testified in a proceeding at the Kansas Corporation
16		Commission ("Commission") or before any other utility regulatory agency?
17	A:	I have not previously testified before this Commission; however, I provided testimony to
18		the Missouri Public Service Commission ("MPSC") about construction activities at the
19		Iatan Generating Station during the proceedings concerning the acquisition of Aquila,
20		Inc. ("Aquila") by Great Plains Energy Incorporated (MPSC Case No. EM-2007-0374).
21	Q:	What is the purpose of your testimony?
22	A:	The purpose of my testimony is (i) to provide an overview of the latan 1 air quality
23		control ("AQC") projects, including a description of the oversight of the projects; (ii) to

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discuss the in-service criteria for the projects; (iii) to explain how the anticipated cost to
complete the projects compares to the initial control budget estimate; and (iv) to identify
the portion of the Iatan 1 / Iatan 2 common facilities that should be included in rates in
this case because they are necessary for the operation of Iatan 1.

- 5 Q: Please summarize your role with respect to the construction and installation of the
 6 Iatan 1 AQC projects.
- 7 A: I have been involved with the Iatan 1 AQC projects since June 2006. Initially, I was
 8 responsible for the overall Iatan construction project, including the Iatan 1 projects as
 9 well as the construction of Iatan 2. In November of 2007, I was asked to concentrate my
 10 efforts on the completion of the Iatan 1 AOC projects.

11 Overview of the Iatan AQC Projects and Summary of Oversight

12 Q: H

: Please describe the Iatan 1 AQC projects.

13 Company witness Carl Churchman describes the equipment in greater detail in his Direct A: 14 Testimony. Briefly, however, as part of the Stipulation and Agreement, which the 15 Commission approved in Docket No. 04-KCPE-1025-GIE ("Regulatory Plan 16 Stipulation"), KCP&L committed to add to Iatan 1 (i) a selective catalytic reduction 17 facility ("SCR"); (ii) a flue gas desulphurization unit ("Scrubber"); and (iii) a fabric filter system for the removal of particulates ("Baghouse") (jointly referred to as the "AQC 18 19 projects" or "AQC equipment"). The SCR reduces the amount of nitrous oxides emitted 20 into the atmosphere. The Scrubber, or absorber as it is sometimes called, reduces the 21 amount of sulfur dioxide emitted into the atmosphere. The Baghouse captures 22 particulates in the flue gas before it is released into the atmosphere.

1 Q: Who owns Iatan 1?

A: Iatan 1 is jointly owned by KCP&L, Aquila, and The Empire District Electric Company
("Empire"). KCP&L owns 70%. Aquila owns 18%. Empire owns 12%. The Company
is seeking to include in its rates as part of this case only its commensurate share of the
costs of the equipment. For clarity, later in my testimony when I discuss the cost of the
Iatan 1 AQC projects, I will be speaking in terms of the overall cost as opposed to the
Company's share of that cost.

8

Q: Who is responsible for constructing and installing the latan 1 AQC equipment?

9 A: KCP&L operates the unit and is ultimately responsible for constructing and installing the
10 Iatan 1 AQC equipment. However, the design, construction, and installation of the
equipment are highly specialized. Consequently, KCP&L contracted with a number of
parties for various aspects of the construction and installation activities. KCP&L used a
multiple prime contracting approach, meaning that KCP&L retained several primary
contractors to work on different aspects of the projects.

15

Q: Who are those entities and what are their roles?

16 A: The first I would mention is Burns & McDonnell ("B&M"). As KCP&L's engineer for 17 the project, B&M is responsible for designing the overall project, from foundations to the 18 various components of the AQC equipment. The next vendor is ALSTOM Power 19 Service ("ALSTOM"). ALSTOM is responsible for designing, procuring, and 20 constructing the primary components of the AQC equipment, that is, the SCR, Scrubber, 21 and Baghouse. KCP&L's contract with ALSTOM is an engineering, procurement, and 22 construction ("EPC") contract, which means that ALSTOM is responsible for 23 engineering the projects, procuring the labor and equipment necessary for the projects,

and constructing the projects. Kissick Construction Company ("Kissick") is responsible for constructing the foundations for the various components of the projects. Pullman Power ("Pullman") is another significant contractor. Pullman is responsible for erecting the flue chimney that will ultimately be utilized by both units, including the liners. Lastly, Automatic Systems Inc. is responsible for the limestone material handling system that will supply limestone to the reagent preparation system being supplied by ALSTOM.

7 The scope and complexity of the projects require a high degree of coordination 8 among the contractors. The foundations for the AQC equipment present a good example. 9 ALSTOM had to complete their design of the equipment before it could provide load and 10 location information to B&M for its use in engineering the foundations. B&M then 11 designed the foundations and passed the designs on to Kissick, who constructed them. 12 Kissick's work, in turn, had to be completed before the foundations could be turned over 13 to ALSTOM so that it could begin to construct the AQC equipment.

14 **Q**: Under the multiple prime contracting approach, was KCP&L responsible for 15 managing these contractors and coordinating their efforts?

16 **A**: Yes, it was. The complexity of managing the interface of these contractors was one of 17 the factors that lead KCP&L to execute a "balance of plant" contract with Kiewit Power 18 ("Kiewit"). Under that contract, which was executed in November of 2007, Kiewit is 19 responsible for the majority of the work on the latan 1 AOC projects that is not covered 20 by one of the contractors I described above.

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Q: What are the benefits of executing the balance of plant contract with Kiewit?

22 **A**: Absent such an agreement, KCP&L would have needed to bring seven or eight additional 23 contractors on site and manage their interface with the existing contractors. By executing

the Kiewit balance of plant contract, KCP&L was able to contract for the completion of 2 the project while adding only one contractor. This minimized any additional interface risk from having more contractors on site. The balance of plant contract also minimized 3 4 other potentially significant risks, such as labor cost and productivity. Instead of KCP&L 5 bearing that risk, as it likely would have had we continued the multiple prime contracting 6 approach, Kiewit took on much of that risk.

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7 **O**: Could you please describe the oversight to which the Iatan 1 AOC projects have 8 been subject?

9 The projects are subject to extensive oversight from both internal and external sources. A A: 10 project of this size and complexity requires the use of a sophisticated cost control system. 11 Developing and implementing such a system was also a condition of the Regulatory Plan 12 Stipulation. With the assistance of Schiff Hardin LLP ("Schiff"), KCP&L developed and 13 implemented a state-of-the-art cost control system. KCP&L also hired individuals with 14 extensive construction experience for its internal project management team. In addition to myself, there is Carl Churchman, Vice President of Construction, Russ Finkle and Paul 15 16 Waddell, the construction managers; Steve Jones, the procurement manager; Terry 17 Foster, the project controls manager; Mike Hermsen, the safety manager; Hugh Miller, 18 the start-up manager, and Roy Douglas, the quality control manager. Each of these 19 individuals has extensive experience on large-scale construction projects. The team is on 20 site at the Iatan Generating Station and manages day-to-day construction activities. Also 21 internal to the Company is the CEP Oversight Committee, comprised of Company 22 executives from different areas of the Company. The project team periodically presents 23 information to the CEP Oversight Committee concerning the status of the project and
challenges being addressed by the project team. The CEP Oversight Committee provides feedback and direction to the project team as necessary. KCP&L's internal audit department has also played an active role with respect to the construction of the Iatan 1 AQC projects.

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5 Q: You also mentioned external oversight. Could you also describe the external
oversight to which the construction of the AQC equipment at Iatan 1 is subject?

7 A: As I have noted, Schiff provides external oversight by providing an independent review of the status of the construction and installation of the Iatan 1 AQC equipment both in 8 9 terms of cost and schedule. Schiff is nationally renowned for its expertise in the 10 oversight and management of large-scale construction projects. The members of the 11 Schiff team have significant experience with power plant construction both in the United 12 States and abroad. As described in the Direct Testimony of Company witness Kenneth 13 M. Roberts, Schiff helped KCP&L develop and implement its cost control system. Schiff 14 also provides ongoing oversight for the projects and assists with ongoing negotiations 15 with contractors. Schiff provides information concerning its reviews to the project team 16 as well as the CEP Oversight Committee. Ernst and Young also provides oversight, 17 including a review of the Company's cost control system, safety, schedule, among other 18 processes they reviewed. The projects are also subject to review from the joint owners of 19 Iatan 1, *i.e.*, Aquila and Empire. There are periodic joint owner meetings to address 20 issues related to the projects, and Aquila and Empire have diligently exercised their right 21 to audit KCP&L's construction expenditures.

Lastly, the Commission's Staff also plays an oversight role. KCP&L provides
 quarterly reports to Staff concerning issues related to the projects. KCP&L then meets

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with Staff to discuss those reports. In addition, Staff has the ability to investigate issues related to KCP&L's implementation of the Regulatory Plan Stipulation.

3 In-Service Date and Criteria

4 Q: What are the in-service criteria for the SCR, Scrubber, and Baghouse at Iatan 1?

5 A: As part of the Regulatory Plan Stipulation, the signatory parties agreed to develop in-6 service criteria for the AQC equipment to be installed on KCP&L's existing coal-fired 7 generating units. In 2007, KCP&L installed an SCR on Iatan 1 of its LaCygne 8 Generating Station ("LaCygne 1"). KCP&L and Staff agreed on in-service criteria for 9 that facility. The LaCygne 1 SCR satisfied that criteria and was included in KCP&L's 10 rates as part of its 2007 rate case (Docket No. 07-KCPE-905-RTS). In accordance with 11 the Regulatory Plan Stipulation, KCP&L will work with Staff to develop in-service 12 criteria for the latan 1 AQC equipment.

13 Q: What is the basis for including the Iatan 1 SCR, Scrubber, and Baghouse in this 14 case?

A: The Regulatory Plan Stipulation provides that KCP&L may include in this rate case new
investment in plant that is anticipated to be in service within ten months of filing its case.
The Iatan 1 SCR, Scrubber and Baghouse comprise new investment in plant that is
anticipated to be in service within the timeframe contemplated in the Regulatory Plan
Stipulation. Consequently, the equipment is appropriate for inclusion in this case.

- 20 Changes in Cost and Schedule
- 21 Q: What is the currently anticipated cost of the Iatan 1 AQC projects?

A: As described above, construction of the AQC equipment has not yet been completed.
Consequently, the Company does not know at this time the precise cost of the equipment.

1 The exact dollar amount will have to be resolved later in this case once the project is 2 complete. I can say, however, that KCP&L currently estimates that the total cost of the 3 AQC equipment will not exceed \$484.2 million. While that figure is greater than the 4 initial control budget estimate for the projects developed in December 2006 when the 5 projects were approximately 20% to 25% engineered, the current estimate is entirely 6 consistent with the results of the cost reforecast that the Company completed in April 7 2008 and presented to the Staff as part of the Company's quarterly CEP updates. A 8 summary of the results of the reforecast is attached as Schedule BDC-1 (Confidential).

9 Q: How does the current estimated cost of completion compare to the control budget
10 estimate that was developed in December 2006?

A: The Company's initial control budget estimate for the Iatan 1 AQC projects was
\$376.8 million, which is \$107.4 million less than the current estimated cost of
completion.

14 Q: Please describe the differences between the results of the control budget estimate
15 and the reforecast cost, including the primary areas in which costs have increased.

A: Of the estimated \$107.4 million increase, \$86.4 million is attributable to an anticipated
increase in the base estimate of the project. The remaining \$21 million of the estimated
increase is reserved as a contingency for potential future use should the need arise. Given
the complexity and risks associated with projects such as the Iatan 1 AQC projects,
companies routinely include a contingency in their budgets to address costs that might
arise after the budget for the project has been finalized.

As the Company has previously explained to the Commission Staff and other
 interested stakeholders, there are four categories of costs that resulted in the base estimate

increase: (i) scheduling changes associated with design maturation; (ii) scope design
changes attributable to maturation of the projects; (iii) escalations in the price of labor
and supplies; and (iv) expenditures to optimize operation or construction of Iatan 1, *i.e.*,
to reduce the Unit's long-term operations and maintenance expenses. These four
categories of costs account for more than 97% of the anticipated increase in the base
estimate of the Iatan 1 AQC projects.

7

Q: Was the initial control budget estimate wrong or inadequate?

8 A: No, I would not say that. The initial control budget estimate was a good number based
9 upon the information that was available at the time it was developed.

Q: If the initial control budget estimate was not flawed, why did the Company
 reforecast the cost of the project?

As a preliminary matter, I want to clarify that to say the Company "reforecast" the cost of 12 A: 13 the projects earlier this year does not mean that the Company has not been actively 14 monitoring and responding to cost changes and challenges since it provided the initial 15 control budget estimate. To the contrary, the Company has continuously monitored and 16 updated cost estimates for the projects since it provided the initial control budget 17 estimate. This is a key element of the Company's cost control processes. Having said 18 that, beginning in late 2007, the Company began a comprehensive, bottom-up review of 19 the cost of the projects. This is the process that the Company completed in April of this 20 year and what is commonly referred to as "the reforecast." See Schedule BCD-1 21 (Confidential). There are a variety of reasons that led us to undertake that process. First, the latan 1 projects were approximately 90% engineered at that time. Second, KCP&L 22 23 had just executed the balance of plant contract with Kiewit that I described earlier in my

testimony. Third, the Company observed that the contingency portion of the budget for the projects was being depleted more rapidly than anticipated. Finally, the ongoing cost monitoring, reforecasting process the Company had employed, as typified by risk and opportunity tables, indicated that potentially significant cost pressures were on the horizon and the Company wanted to be in a position to address them proactively and holistically. It was a combination of all of these factors that led us to undertake what has become known as the reforecast.

8

Q: Please describe the reforecast process.

9 A: The reforecast was a comprehensive, bottom-up review of the cost and schedule
10 associated with completing the Iatan 1 AQC projects. The Company looked at what it
11 would cost to complete the projects, including an assessment of the potential for certain
12 subsequent events to adversely impact the cost and schedule of the projects.

13 Q: Does KCP&L have a cost control process in place concerning the construction of the 14 Iatan 1 AQC projects?

A: Yes, it does. As I described earlier in my testimony, a project of this size and complexity
requires a sophisticated cost control process. KCP&L developed and implemented a
sophisticated and robust cost control system in consultation with a variety of experts in
the field of large-scale construction projects. Mr. Roberts describes the cost control
process in some detail in his Direct Testimony in this case.

20 Q: What steps did KCP&L take to control the ultimate cost of the Iatan 1 AQC21 projects?

A: As a preliminary step, KCP&L entered into fixed-price contracts for a majority of the
Iatan 1 AQC projects. The ALSTOM EPC contract for the AQC equipment is a fixed-

1 price contract. It is the largest contract for the projects, accounting for more than sixty 2 percent of the control budget estimate. KCP&L also used a fixed-price contract for 3 several engineered equipment procurements, including the ash handling equipment, 4 electrical and controls equipment, and the economizer. Given the challenges the 5 construction industry has seen since those contracts were executed, the decision to pursue 6 fixed-price contracts was a particularly good one. Another type of contract KCP&L used 7 to control cost is a unit price, or quantity-based contract. The Kiewit balance of plant 8 contract, for example, is a quantity-based contract. Such a contract helps control cost by 9 pegging the cost of the project to the materials that comprise the project, which works to 10 shield the Company from risks associated with labor costs and productivity.

11 The cost control system that KCP&L developed and implemented for the latan 1 12 AQC projects tracks awarded costs and approved change orders to compute a total 13 commitment compared against the initial control budget estimate. Any subsequent 14 contract awards or change orders that are different (more or less) than the original control 15 budget estimate amount are withdrawn or added to contingency. Cost reports are updated 16 and analyzed monthly for trending data to identify potential cost exposure to the projects. 17 In addition, the output of the cost reforecast has been incorporated into this system to 18 reflect the new budget amount discussed earlier.

19 Q: With all of these cost control efforts in place, how do you explain the discrepancy
20 between the current estimated cost to complete the Iatan 1 AQC projects and the
21 initial control budget estimate?

A: Cost control systems, even one as sophisticated and robust as the one used by the
Company for the Iatan AQC projects, cannot guarantee that a project will not experience

cost pressures or even increases. Nothing can do that. The construction industry as a
whole, and in particular power plant-related construction, has experienced intense cost
pressures over the last few years. Global and domestic prices for general construction
materials and the specialized components for a project such as this have risen
dramatically. Operating in this environment, the Company's cost control processes have
worked well. Without those processes in place, the ultimate cost of the AQC projects
would have been much higher than it is.

8 Common Facilities

9 Q: What are "Common Facilities" and why are they an issue in this case?

10 A: Common Facilities are facilities that I and I and I atan 2 will ultimately share once I atan 2 11 goes into service. However, those facilities are necessary now for the operation of 12 Iatan 1 with the new AOC equipment. Because the facilities are essential for the 13 operation of Iatan 1, it is appropriate to include a portion of their cost in rates at the same 14 time the latan 1 AQC equipment goes into rates. However, because some portion of the 15 cost is more appropriately associated with Iatan 2, it would not be appropriate to include 16 their entire cost in rates at this time. The issue before the Commission in this case is to 17 determine what portion of Common Facilities should be included in the Company's rates 18 in this case because they are used and useful with respect to the operation of Iatan 1, and 19 what portion should be addressed in the subsequent rate case involving Iatan 2.

20

Q: What are some examples of Common Facilities?

A: The new flue gas chimney is probably the simplest example. The original Iatan 1
chimney could not be used with the new AQC equipment. Consequently, a new chimney
had to be built for Iatan 1. A chimney would also need to be constructed for Iatan 2. The

1 Company decided to build a single, shared concrete chimney with two separate liners to 2 be used by each unit because doing so is more efficient than building two separate 3 chimneys. With this consideration in mind, it is appropriate to include a portion of the 4 cost of the new chimney in rates associated with the latan 1 projects and to allocate a 5 portion to be in rates associated with Iatan 2. This is but one example. Other examples include the various systems necessary to support the AOC equipment on both units, 6 7 e.g., storage and handling facilities for limestone, limestone reagent preparation 8 equipment, scrubber sludge, and treatment facilities for the various waste products.

9 Q: Please explain the basis for KCP&L's proposed allocation of the cost of Common
10 Facilities between Iatan 1, which are included in this case, and the remainder, which
11 will be proposed to be included in the rate case associated with the completion of
12 Iatan 2.

A: The Company allocated the cost of the Common Facilities between Iatan 1 and Iatan 2
based on the generation capacity of the respective unites, *i.e.*, 670 MW for Iatan 1 and
850 for Iatan 2. Cost is also allocated, based on the different ownership structures of the
two units, that is, KCP&L's share is based on a weighted average of its ownership
interest in each unit, which is approximately 61%.

18 Q: What would such an allocation add to the Iatan 1 costs the Company seeks to
19 include in rates in this case?

A: The allocation of Common Facilities has been included in the Plant adjustment (Adj-21)
 reflected in Schedule JPW-2 attached to the Direct Testimony of Company witness John
 Weisensee. The precise amount will need to be addressed later in this case once the
 project is complete.

1Q:You mentioned earlier that the original Iatan 1 chimney could not be used with the2new AQC equipment. Has the original chimney been retired?

- 3 A: The chimney has not yet been physically removed. However, for the purposes of this4 case the Company has removed the net book value if the chimney from rate base.
- 5 Q: Does that conclude your testimony?
- 6 A: Yes, it does.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to Continue the Implementation of Its Regulatory Plan

Docket No. 09-KCPE-___-RTS

AFFIDAVIT OF BRENT C. DAVIS

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STATE OF MISSOURI

COUNTY OF JACKSON

Brent C. Davis, being first duly sworn on his oath, states:

) ss

1. My name is Brent C. Davis. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Project Director, Iatan 1.

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 f_{1} (5) 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.

Subscribed and sworn before me this 4 day of August 2008. My commission expires: STEPHANIE KAY MCCORKLE Notary Public - Notary Seal State of Missouri - County of Clar Commission Expires Jul. 28, 2009 Commission #05451858

SCHEDULE BCD-1

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BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

REBUTTAL TESTIMONY OF

BRENT C. DAVIS

ON BEHALF OF KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MODIFY ITS TARIFFS TO CONTINUE THE IMPLEMENTATION OF ITS REGULATORY PLAN

DOCKET NO. 09-KCPE-246-RTS

- 1 Q: Are you the same Brent C. Davis who provided Direct Testimony in this
- 2 proceeding?
- 3 A: Yes, I am.

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- 4 Q: What is the purpose of your Rebuttal Testimony?
- A: The purpose of my Rebuttal Testimony is to address criticisms made by Staff witness,
 Mr. Walter P. Drabinski, regarding KCP&L's management of the Iatan construction
 project. In my testimony, I (i) describe the changes to the schedule for the fall 2008
 outage at Iatan Unit 1 (the "Unit 1 Outage") and the reasons for those changes;
 (ii) describe the latent condition with the existing Iatan Unit 1 economizer casing that was

discovered during the Unit 1 Outage and its resulting impact; (iii) describe the issues with
 the Iatan Unit 1 turbine generator that have impacted Iatan Unit 1's return to service; and,
 (iv) provide a response to certain specific disallowances proposed by Vantage Consulting
 in its direct testimony.

5

THE UNIT 1 OUTAGE

6 Q: When did KCP&L bring on the start-up and commissioning manager for the latan 7 project?

8 A: KCP&L hired an experienced start-up and commissioning manager who started on the
9 Project in July 2007, which was approximately fourteen months before the Unit 1 outage
10 was scheduled to commence.

11 Q: Was there a benefit to filling this position early?

12 A: Yes. The addition of the start-up and commissioning manager at this time allowed the 13 project team the opportunity to identify and resolve potential outage start-up and 14 commissioning problems well in advance of the actual outage period. In addition, the 15 start-up manager was able to determine the precise scope needed in order to return Unit 1 16 to service, and that scope included certain common facilities that were originally planned 17 to be commissioned with latan Unit 2. Because this scope was identified early enough, 18 the Unit 1 Outage schedule could be changed to incorporate these additional scopes of 19 work. As a result, there were no additional costs to the execution of the planned Unit 1 20 Outage work that would not have been expended whether the work was being performed 21 during the outage or at a different time.

22 Q: What was the original schedule for the Unit 1 Outage?

23 A: Originally, the Unit 1 Outage was scheduled to begin on September 19, 2008 and last

1 56-days from the beginning of the outage (referred to as "breaker open") to the end of the 2 outage (referred to as "breaker close") milestones. However, KCP&L and the performing 3 contractors recognized that due to the complexity and certain additions to the Iatan Unit 1 4 project's scope, the originally planned outage duration would be too short and the 5 September 19, 2008 start date was too early to allow for successful completion of the 6 work.

7 Q: Did the Unit 1 Outage increase in complexity from the original plan?

8 A: Yes. As I previously testified in my Direct Testimony in this proceeding, the latan Unit 1 9 project increased in scope from what was originally planned. These scope additions 10 included: (1) addition of low NOx burners; (2) increase of economizer surface area: 11 (3) upgrades to the submerged flight conveyor; (4) change-out of the Digital Control 12 System ("DCS"); (5) rewind and maintenance of the turbine generator; (6) upgrades to 13 the coal yard; and (7) plant maintenance work. In all, this work comprised approximately 14 350,000 man-hours during the Unit 1 Outage in addition to the already planned 15 ALSTOM-related work on the Air Quaility Control ("AQC") System.

In addition, as I previously testified, KCP&L identified additional Common
Facilities that were necessary for the operation of the new AQC System equipment when
Iatan Unit 1 returned to service. Because the Common Facilities are essential for the
operation of Iatan Unit 1, the Unit 1 Outage schedule also had to be revised to reflect the
completion of the construction of these Common Facilities.

Q. Please describe the process and the considerations used for the change to the Unit 1 Outage schedule.

23 A: Representatives of KCP&L, ALSTOM Power, Inc. ("ALSTOM"), Kiewit Power

- 1 Construction Company ("Kiewit"), and Burns & McDonnell formed a "Tiger Team" and 2 engaged in a review of the latan Unit 1 project's remaining work activities and developed 3 a recommendation regarding changes to the Unit 1 Outage schedule. 4 **Q**: Were you a member of the Tiger Team? 5 A: I was not a member of the Tiger Team, although I did participate in the Tiger Team 6 meetings on various occasions. KCP&L's representatives to the Tiger Team reported to 7 me regarding the progress and status of the Tiger Team. 8 **O**: When did the Tiger Team meet? 9 A: The Tiger Team first met in mid-February 2008 and concluded its review of the latan 10 Unit 1 work with its written report dated March 19, 2008. 11 **O:** What were the general conclusions of the Tiger Team relative to the Unit 1 Outage 12 schedule? 13 A: It had become evident that the original Unit 1 Outage duration had to be extended due to 14 both the complexity and the volume of work that was added to the outage period. The 15 Tiger Team Report recommended that the Unit 1 Outage be extended to a duration of 73 16 days and begin on October 18, 2008, approximately one month later than the original 17 schedule. 18 Q: Was the Unit 1 Outage schedule subsequently revised to reflect the conclusions of 19 the Tiger Team? 20 Yes. As stated in the Third Quarter Report of 2008 to the Commission Staff, the latan A: 21 Unit 1 work was scheduled in accordance with the Revised Iatan Unit 1 Schedule which 22 was developed by KCP&L and the contractors, most notably ALSTOM and Kiewit, 23 during second quarter 2008. The Revised Iatan Unit 1 Schedule was fully implemented
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1 2 Q. Do you believe there were any engineering issues that delayed the project outside 3 the industry standard? 4 A. No. In fact, there were a number of times that KCP&L's project team and ALSTOM's 5 project team worked very well together to resolve issues when the schedule was at risk. 6 One such occasion was the design of the column support steel and foundation beef-up for 7 the existing Unit 1 structure. I recall that ALSTOM and KCP&L worked to complete the 8 necessary design in order to have the foundations in place in time for ALSTOM's 9 construction work to begin. In addition, on Iatan Unit 2, there was an issue regarding the 10 location of the primary air and forced draft fans. ALSTOM needed to supply information 11 to its fan supplier and required answers quickly from KCP&L regarding the location and 12 orientation of these fans. KCP&L and ALSTOM worked together on resolving these 13 issues at no cost to KCP&L. 14 **ECONOMIZER CASING CRACK**

15

Q: When did the Unit 1 Outage work conclude?

A: The Unit 1 Outage was scheduled to conclude on December 30, 2008. The planned
construction work was completed by February 2, 2009. However, as of this date, Iatan
Unit 1 has not returned to service due to problems with the start-up of the recently
modified GE turbine. Once the turbine is repaired, ALSTOM and KCP&L will be able to
resume start-up and commissioning activities required for KCP&L to meet Iatan Unit 1's
in-service criteria.

22 Q: Why did the Unit 1 Outage construction work finish later than planned?

23 A: Putting aside the current problems with the turbine generator, as stated in the Fourth

1 Quarter 2008 Strategic Infrastructure Investment Report ("4Q 2008 Report"), brittle 2 cracks in the economizer casing plate material appeared on November 7, 2008. These 3 cracks were discovered during demolition work to Iatan Unit 1's existing economizer 4 casing, which was required for the SCR flue tie-in and the economizer surface addition 5 projects. The first and most prominent of these cracks is referred to herein as the "Casing 6 Crack." This cracking was a latent condition in the Unit 1 economizer's 30-year old steel 7 casing which could not have been found until the insulation and lagging was removed 8 from the economizer's exterior to reveal these cracks.

9 Q: Describe KCP&L's response to the discovery of the economizer cracking.

10 A: KCP&L took quick action and performed a thorough root cause and extent of condition 11 analysis with the assistance of a team of external experts in metallurgy and structural 12 engineering. This team developed a plan to remediate the economizer's structure (the 13 "Economizer Remediation Plan"). The execution of this plan resulted in the mitigation of 14 potential life safety issues that these cracks could have caused, and also preserved the 15 Unit 1 Outage schedule.

16 Q: What impact did this event have on the Unit 1 Outage?

A: As KCP&L discussed with the Commission Staff during a meeting to review the third
quarter 2008, the current schedule indicated the likely breaker closure date for the Unit 1
Outage was trending between January 15 and January 21, 2009. At that time, the full
impact of the economizer was unknown.

As of the end of the fourth quarter, as reported in the 4Q 2008 Report, it appeared that the breaker closure milestone would be met between January 25 and January 30, 2009, depending on weather and the success of start-up. The actual breaker close date, as 1 stated above, was February 2, 2009 in part due to extremely cold weather which impacted 2 heat up of the boiler and the boiler chemical clean. The combined impact of the 3 Economizer Remediation Plan and the volume of work needed to be accomplished during 4 the Unit 1 Outage rendered the scheduled December 30, 2008 completion date 5 impossible. Nonetheless, just as with the Crane Incident, the quick action to investigate 6 and repair the economizer casing resulted in significantly mitigating the Unit 1 Outage 7 schedule. The overall delay due to the economizer cracking and the Recovery Plan was 8 32 days.

9 The technical team that investigated the economizer concluded that had KCP&L
10 not acted as quickly and prudently in its Economizer Remediation Plan, the Unit 1
11 Outage could have been extended by at least two to three months.

12 Q: Did KCP&L incur any costs due to the economizer Remediation Plan?

A: Yes. KCP&L incurred additional costs associated with the economizer surface area
contract with Babcock & Wilcox. These costs are currently unknown but will be charged
against the Supply Capital Budget. KCP&L also incurred costs associated with the CEP
Iatan Unit 1 project budget resulting from a claim from ALSTOM that was resolved in
early February 2009 in the amount of **

18 Q: Subsequent to the breaker close of Iatan Unit 1, did KCP&L encounter additional
difficulties returning Iatan Unit 1 to service?

- 20 A: Yes. KCP&L encountered a problem with the turbine generator during the start-up and
 21 commissioning activities.
- 22 Q: Describe the problem with the Iatan Unit 1 turbine generator.
- 23 A: On February 2, 2009, after the unit had been fired on coal, KCP&L Operations rolled the

1 turbine to 3600 rpm, synchronized to the grid, achieved 50 MW, and tripped on turbine 2 vibration on #4 bearing. On February 4, 2009, KCP&L Operations re-established oil and 3 coal fire, synchronized to the grid, achieved 100 MW, and tripped on vibration on #2 bearing. Immediately following the trip, a severe vibration event occurred resulting in 4 bearings #1 thru #4 exceeding 20 mils vibration. Upon returning to turning gear 5 6 operation, eccentricity was in the 9 to 10 mil range (normally 2 to 3 mils) and did not 7 improve. This value was excessive and precluded restarting the unit. The eccentricity 8 measures the bow in the high-pressure turbine rotor. This new high-pressure turbine 9 rotor was installed by General Electric during the Unit 1 Outage.

10

Q: What actions did KCP&L take to address this issue?

11 **A:** On February 5, 2009, KCP&L Operations performed various checks with the turbine 12 assembled to determine the condition of the high-pressure rotor. On February 6, 2009, 13 KCP&L Operations with assistance from General Electric determined the high-pressure 14 turbine would need to be disassembled and inspected, which General Electric began the 15 following day. On February 9, 2009, the high-pressure rotor was exposed and was 16 determined to be permanently bowed in the N-1 packing area near front of the turbine. 17 Considerable damage to the stationary components, including the shaft and blade 18 packing, was discovered. No damage was noted to blades or buckets. On February 10, 19 2009, General Electric removed the high-pressure rotor and shipped it to a General 20 Electric repair facility in Chicago, where it was received the following day. In the 21 meantime, the site crew continued checking turbine bearings #1 through #4 and checking 22 the condition of the intermediate pressure turbine.

23

Q:

At this time, when do you anticipate having Iatan Unit 1 in condition to return to

- 1 service?
- A: Based on the best available information at this time, it appears that the turbine generator
 will be back on turning gear by approximately March 24, 2009. If that should occur,
 ALSTOM could once again begin its start-up sequence by the beginning of April 2009,
 and if there are no other issues impacting the unit's return to service, KCP&L could meet
 the in-service criteria and reach Provisional Acceptance by the end of April 2009.
 However, these dates are subject to change as more is discovered relative to the root
 cause of the problem and its repair.
- 9

RISK & OPPORTUNITY ITEMS

10 Q: What are "Risk and Opportunity Analysis Sheets" and do these relate to cost
11 controls used for Iatan 1?

- A: Risk and Opportunity Analysis Sheets or "R&Os" are documents created by the latan
 project team that identify potential risks and opportunities to the project that could impact
 cost, schedule or both.
- 15 Q: What is the general purpose of the Risk and Opportunity Analysis Sheets?
- 16 A: The R&Os memorialize any potential impacts to the project's contingency.
- 17 Q: How were the R&Os created?

18 A: For each R&O item, the person preparing the Risk and Opportunity Analysis Sheet 19 identified the date on which the item was known, the potential cost implications, the 20 reason for the R&O, the category of the R&O, an assessed likelihood of occurrence and 21 whether the R&O would result in a change order. Each R&O was required to establish a 22 business purpose, and provide all documentation necessary for support of the item and 23 proper vetting. The project team identified such items as the project progressed and

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recorded them in individual R&O documents. There was one such document for each identified risk or opportunity that would impact the project's contingency.

3

Q: Who created the Risk and Opportunity Analysis Sheets?

4 A: The project's engineering managers, procurement team, contract administrations, project
5 controls, and other members of the project team created R&Os.

6 Q: How were the R&Os vetted and by whom?

7 A: The R&Os were vetted at the project level by project controls staff, procurement, and by 8 Schiff Hardin, LLP. The project controls staff reviewed the cost and schedule impacts. 9 After this initial vetting process, the Project's leadership team reviewed the R&Os. 10 Ultimately, all of the R&Os that existed prior to the 2008 cost reforecast were considered 11 when reviewing the appropriate changes to the control budget estimate and contingency. 12 The final assessment of the R&Os that impacted the Iatan Project's control budget was 13 presented to senior management when it approved the revised control budget in second 14 quarter 2008.

15 Q: Have you read and are you familiar with the Vantage Consulting report and
16 testimony filed in this case?

17 A: Yes.

18 Q: Are you aware that Vantage recommended that certain of the Iatan Unit 1 R&Os be
19 disallowed for this rate case?

20 A: Yes.

- 21 <u>R&O 94: Inefficiencies due to late site layout</u>
- 22 Q: Please describe R&O 94.
- 23 A: This item **





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1	A:	A Change Order for the value of this work was issued to Kissick in the amount of
2		**
3	Q:	Was this R&O and the associated change order the result of late engineering?
4	A:	No. The Change Order resulted from a change in the project schedule that required
5		completion of this work earlier than previously anticipated. The tanks had been
6		procured, though the method for providing a foundation to the tanks changed.
7	Q:	Did this change order add value to the latan Unit 1 project?
8	A:	Yes, because these foundations were needed for structures required for the start-up of
9		Iatan Unit 1.
10	R&O 185: Platforms and Ports for Ammonia Slip Tests	
11	Q:	Please describe R&O 185.
12	A:	Early reviews of ALSTOM's drawings for the latan Unit 1 SCR revealed inadequate
13		access was provided by ALSTOM to calibrate and test ports necessary to meet
14		operational requirements. Resolution of this issue resulted in substantial change order. A
15		similar problem was identified with Unit 2 and this R&O item **
16		
17		**. This is not an latan Unit 1 cost and thus should not be a disallowance to
18		Iatan Unit 1.
19	<u>R&O</u>	240: Coal Chute Tripper Floor Curb
20	Q:	Please describe R&O 240.
21	A:	This R&O item addresses increased costs associated with revisions to the tripper floor
22		curb. ASI changed its design requirements for the tripper floor curb after its initial
23		submittal to KCP&L. These changes were not clearly delineated on ASI's design re-

1 submittal. As a result, ALSTOM was not aware of ASI's changes and ALSTOM constructed the tripper floor curb per the initial submittal. Accordingly, the tripper floor 2 curb, as installed, will need to be revised to match the ASI requirements. 3 What are the costs associated with this R&O? 4 **Q**: KCP&L is currently reviewing ASI's proposed change order to rebuild these curbs issued 5 A: on January 18, 2009. The amount reserved by KCP&L for this R&O is ** 6 However, the budget for this item is unspent. ** 7 8 **. This is not an latan Unit 1 cost and thus should not be a disallowance to 9 10 Iatan Unit 1. 11 R&O 330: Accelerating Steel for Ash Pipe Rack Please describe R&O 330. 12 **Q:** This item reserves funds for the additional costs related to accelerating the delivery of the 13 A: ash pipe rack support steel. The expedited delivery of this equipment was necessary to 14 facilitate construction of the ash pipe rack to avoid congestion in the area between the 15 Iatan 1 boiler and the new Iatan Unit 1 AQC System equipment. To manage and 16 coordinate the work of the contractors in this area, KCP&L expedited the delivery of the 17 steel for this structure to April 2008, which was approximately 3 to 6 weeks earlier than 18 19 originally planned. What happened with the R&O subsequently? 20 0: KCP&L paid for this scope through two Change Orders: AF00664 and AF022 in the 21 A: 22 amount of ** **.

23 <u>R&O 360: JLG Incident</u>

1 Q: Please describe R&O 360.

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1 Settlement Agreement?

Vantage stated in its testimony that claims that were resolved in ALSTOM 2 A: No. Settlement Agreement were the result of late engineering, poor oversight, and delayed 3 action against ALSTOM when their productivity declined, and Vantage proposes that 4 50% of the settlement, or **** settlement****, be disallowed. As Company witnesses Mr. 5 Downey and Mr. Roberts have testified, and as I previously testified in my direct 6 testimony, KCP&L's senior management and project management had closely monitored 7 events on the project and utilized both Schiff and Ernst & Young in an oversight 8 capacity. The project controls and change management procedures in place for latan 1 9 allowed to observe and react on a timely basis to ALSTOM's performance problems on 10 Iatan 1. KCP&L notified ALSTOM of its delayed performance on multiple occasions 11 including correspondence regarding: (1) delayed fabrication of the SCR ductwork; (2) 12 delayed start of the fabric filter structural steel; (3) late completion of the Reagent 13 Preparation and Recycle Pump Buildings. Moreover, the basis for the ALSTOM 14 Settlement Agreement was ** 15 For the reasons discussed in my 16 testimony, I believe that the ALSTOM Settlement Agreement was justified and was not 17

18 attributable to reasons stated by Vantage.

19 Q: After the ALSTOM Settlement Agreement was executed, did ALSTOM's
 20 performance on Iatan 1 improve?

A: Yes. Not only did ALSTOM's performance improve but its transparency also improved.
 After the agreement was signed, ALSTOM devoted additional project management
 personnel, additional craft workers, additional equipment and additional project controls

personnel to assist the ongoing work in the field. In addition, ALSTOM took 1 responsibility and reported problems it had in the field, including rework and mis-2 fabricated materials and acknowledged that it was ALSTOM's responsibility to effect 3 repairs to those areas. The project team and Schiff have both concluded that ALSTOM 4 likely would have completed its Unit 1 Outage work within the first two weeks of 5 January 2009 had it not been for impacts caused by a latent condition found in the Unit 1 6 economizer, which resulted in the extension of the construction work from December 30, 7 2008 to February 2, 2009. 8

9 Q: Are there any other observations by Mr. Drabinski to which you would like to 10 respond?

A: Yes, I would like to respond to Mr. Drabinski's observations concerning the timing of the
execution of the KCP&L's contract with Burns & McDonnell and the finalization of the
Project Execution Plan document.

14 Q: When did Burns & McDonnell's services specific to the latan project, begin?

Burns & McDonnell prepared the Project Definition Report in August 2004 and provided 15 A: additional advice to us throughout 2005 in support of KCP&L's pursuit of the 16 stipulations. Burns & McDonnell's project specific work began immediately after Senior 17 Management decided to award the owner's engineering contract to them on November 18 23, 2005. Over the next thirteen months, Burns & McDonnell assisted in preparing 19 numerous requests for proposals and drafted the project's technical specifications for all 20 of the major procurements on the project. In addition, during this time, Burns & 21 McDonnell assisted KCP&L in additional functions typical of the owner's engineer, 22 including assistance with air permit limitations and environmental impact studies 23

1 Q: Are you aware of the contract under which Burns & McDonnell was working on

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Iatan prior to January 2007?

- 3 A: Yes. Up until that time, Burns & McDonnell was working under a general services
 agreement that was in place with the Company.
- 5 Q: What is your opinion of Burns & McDonnell's performance on Iatan prior to the 6 execution of the project-specific contract with KCP&L?
- I do not believe that Burns & McDonnell was impacted at all by not having the final 7 A: contract in place. When I came on the Iatan project in June 2006, Burns & McDonnell 8 was fully engaged in design work for the Balance of Plant procurement, was assisting our 9 negotiating team in finalizing the ALSTOM Contract and was developing technical 10 specifications for RFP's for engineered materials. Burns & McDonnell was also assisting 11 the KCP&L project team in developing the schedule and Control Budget Estimate for 12 Iatan. These and other services Burns & McDonnell was providing continued through 13 the remainder of 2006 without interruption. 14
- 15 Q: Did you notice any difference in Burns & McDonnell's performance after the Iatan
 project contract was executed?
- 17 A: None whatsoever.
- 18 Q: Was Burns & McDonnell responsive to the staffing needs of the latan project?
- 19 A: Yes, Burns & McDonnell was willing to bring in additional engineering resources to meet
 20 the project's needs. For example, Burns & McDonnell hired Bibb & Associates as a
 21 subconsultant and added other resources when possible. At that time, however, there was
 22 an industry-wide shortage of engineers, particularly in the structural and electrical
 23 disciplines.

Q: When was the Project Execution Plan adopted?

A: The Project Execution Plan was not adopted until approximately one year into the Iatan
project.

4 Q: Did the length of time it took for the Project Execution Plan to be formally adopted 5 have any impact on the Iatan project?

No, it did not because the first year of the latan project was made up largely of procuring 6 A: the major contracts for goods and services on the project. The individuals who were 7 pursuing those procurements were experienced in the construction industry and followed 8 accepted industry practices. The Project Execution Plan would not have altered the 9 procurements that occurred prior to its formal adoption. The processes and procedures 10 that were developed later and incorporated in the Project Execution Plan were more 11 specific to the actual performance of construction work in the field and therefore were not 12 necessary until that phase of the construction was in full motion. 13

14 Q: Does that conclude your testimony?

15 A: Yes, it does.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to Continue the Implementation of Its Regulatory Plan

Docket No. 09-KCPE-246-RTS

AFFIDAVIT OF BRENT DAVIS

STATE OF MISSOURI) \$\$ COUNTY OF JACKSON

Brent Davis, being first duly sworn on his oath, states:

My name is Brent Davis. I work in Kansas City, Missouri, and I am employed by 1. Kansas City Power & Light Company as the Iatan Unit 1 Project Director.

Rebutter Attached hereto and made a part hereof for all purposes is my Direct Testimony 2. on behalf of Kansas City Power & Light Company consisting of twenty three (23) pages and Schedule(s) ______, all of which having been prepared in written form for introduction into evidence in the above-captioned docket.

I have knowledge of the matters set forth therein. I hereby swear and affirm that 3. 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.

Notary Public - Notary Seal

State of Missouri - County My Commission Expires Jul. 28, 2009 Commission #05451858

of Clay

Subscribed and sworn before me this 20^{4} day of February 2009. My commission expires: STEPHANIE KAY MCCORKLE

SCHEDULE BCD2010-3 THROUGH SCHEDULE BCD2010-7 THESE DOCUMENTS CONTAIN CONFIDENTIAL INFORMATION NOT AVAILABLE TO THE PUBLIC ORIGINAL FILED UNDER SEAL