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Witness: Kenneth M. Roberts
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KCP&L Greater Missouri Operations Company
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-0355/ER-2010-0356

SUPPLEMENTAL REBUTTAL TESTIMONY

OF

KENNETH M. ROBERTS

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY
KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
December 2010

"[redacted]**" Designates "Highly Confidential" Information Has Been Removed.**
Also Certain Schedules Attached To This Testimony Designated "(HC)" Have Been Removed Pursuant To 4 CSR 240-2.135.

REBUTTAL TESTIMONY

OF

KENNETH M. ROBERTS

Case No. ER-2010-0355/ER-2010-0356

Q: Please state your name and business address.

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

Q: Are you the same Kenneth M. Roberts who pre-filed Direct Testimony and Rebuttal testimony to MPSC Staff in this matter?

A: Yes.

Q: What is the purpose of your rebuttal testimony?

A: My Rebuttal Testimony responds to certain aspects of Walter Drabinski's, Consultant for the Missouri Retailer's association, testimony. In particular, I respond to the following testimony:(1) Mr. Drabinski's inaccurate testimony concerning the applicable prudence standard for this case; (2) Mr. Drabinski's inaccurate and misleading testimony comparing the Iatan Unit 2 Project with other coal plants constructed in the U.S.; (3) Mr. Drabinski's inaccurate testimony comparing the Iatan Unit 2 Project with a specific coal plant, Trimble County 2, that was constructed recently in Kentucky; (4) Mr. Drabinski's testimony regarding KCP&L's management prudence; (5) Mr. Drabinski's testimony regarding KCP&L's commercial contracts; and (5) Mr. Drabinski's testimony regarding his recommended disallowances to the Commission.

Q: Please summarize your Rebuttal Testimony.

A: In rebuttal to Mr. Drabinski today, I testify regarding how KCP&L's senior and project

management made effective and timely decisions that guided the course of the Iatan Project to its successful completion. First, it is important to clearly state that the completion of the Iatan Project within 3 months of a target completion date set over five-and-one-half years ago and with a cost overrun of only 16% represents an enormous accomplishment. This is particularly true given that the Iatan Project was a very complex project performed during very challenging economic times when costs were escalating seemingly out of control and scarcity of everything from bulk commodities to engineered materials to experienced construction management personnel. For this project to complete in close reach of both budget and schedule goals with such enormous competition in the marketplace makes the Iatan Project one of the most successful projects of its kind in decades.

Mr. Drabinski, however, would have the Commission think otherwise, and leads the Commission on a wild goose chase through a series of unsubstantiated and completely irrelevant analyses. In his Direct Testimony in this case, which is largely similar to the pre-filed testimony he filed before the Kansas Corporation Commission ("KCC") in the 10-KCPE-415-RTS case regarding the prudence of Iatan Unit 2 (the "KCC 415 Docket"), Mr. Drabinski refers to the Iatan Project in the bleakest of terms. He wrongly claims that KCP&L's senior management was essentially asleep at the wheel, ignoring qualified advice, "never considering" contracting options that he believes would have been far more successful, and "forcing" a schedule on the project management team that it could not achieve. He claims that KCP&L engaged in weak contracts with its contractors, made side deals with one contractor to reduce that contractor's base contract price only to "make it up later" in change orders, delayed

implementation of its project controls, and allowed a "schedule crisis" to occur, and that the project management team was too weak, too small or unqualified to know how to right the ship. Mr. Drabinski asserts that the Iatan Project's major contractors failed to meet "standards" for productivity and that the owner's engineer Burns & McDonnell's "poor support" of civil engineering work caused a "negative impact" on follow-on construction activities. He also wrongly claims that KCP&L created a budget in January 2006 that should serve as the baseline for gauging its cost performance on the Iatan Project. Finally, he wrongly claims that the Iatan Project pales in comparison to other, similar plants built at the same time.

There are two common threads throughout Mr. Drabinski's testimony with each of the above statements: (1) Mr. Drabinski fails to identify a nexus between any of the alleged imprudent or improper actions by KCP&L that he boldly states occurred and a single dollar that he recommends the Commission disallow; and (2) Mr. Drabinski's support for each of these statements is highly suspect to non-existent, and often these statements are not generated by facts but Mr. Drabinski's personal "gut" feelings. Mr. Drabinski offers four separate analyses of the Iatan Project, three of which are nothing more than red herrings, provided by Mr. Drabinski to make his recommended disallowance look better. However, the end result is that the vast majority of Mr. Drabinski's testimony is made up of these red herrings that are either completely unrelated to his recommended disallowance of $231 million from Iatan Unit 2's costs, completely without any support or both.

In rebutting Mr. Drabinski's testimony concerning the two separate alternate analyses in which he compares other facilities' costs to the Iatan Project, I testify at

length regarding the flaws in such an analysis in general and Mr. Drabinski's flaws in particular. Mr. Drabinski constructs a case for comparing the Iatan Project's results with results achieved by other plants that is based on a foundation of unverified and suspect information pulled off of the internet. Moreover, the "facts" Mr. Drabinski uses to support these opinions are inherently unreliable. Company witness Dr. Kris Nielsen and I each testify at length to the difficulties Mr. Drabinski clearly had in confirming data he uses for this comparison.

From this baseline of imperfect information, Mr. Drabinski draws his conclusions that KCP&L's management acted imprudently by not mimicking other projects that he believes achieved a better outcome. Mr. Drabinski improperly uses 20/20 hindsight to draw his conclusions. Mr. Drabinski further presumes a different outcome would have occurred had KCP&L engaged in an engineer, procure, construct ("EPC') contact, even though the evidence shows that no such EPC option was available. The KCC in its Order in the KCC 415 Docket stated, *"KCPL did not have the option in 2005 of entering into an EPC contract for the balance of Plant work on Iatan at a 12% premium. Mr. Giles and Mr. Downey testified at length concerning the contracting strategy choices KCPL had available, and each highlighted how Mr. Drabinski ignored the actual circumstances KCPL encountered."* *See* KCC 415 Order at p. 26. The KCC 415 Order is attached to Company witness Daniel Meyer's Supplemental Rebuttal Testimony as DFM2010-28.

Mr. Drabinski also asserts in another of his red herring alternate analyses that KCP&L's overruns on the Iatan Unit 2 should be measured by a preliminary estimate that the Project Team developed in January 2006, or by an estimate prepared by Burns & McDonnell in a preliminary design study known as a Project Definition Report or PDR.

Company witness Mr. Daniel Meyer responds to this allegation in detail. Ultimately, Mr. Drabinski causes the reader of his testimony to spend an enormous amount of time trying to understand a completely irrelevant argument. As for Mr. Drabinski's actual disallowance recommendations, those too are both unsupported and filled with mistakes and inaccuracies, such as double counting of the same costs.

Although Mr. Drabinski identifies an appropriate prudence standard for his testimony in this case, he fails to utilize the standard he indentifies.. Mr. Drabinski's disallowance analysis, which is largely the same as the one that was rejected by the KCC, suffers from: (1) hindsight; (2) an injection of his personal choices; (3) ignoring evidence; (4) mistaken facts; and (5) using KCP&L's audit and consultants' reports as a substitute for his own independent analysis. In response to this series of Mr. Drabinski's sweeping generalities, I will show how KCP&L's management made prudent and timely decisions on myriad issues that – had they not been mitigated – could have derailed the Iatan Project. I will address how the contracting model that KCP&L utilized was effective and that KCP&L's management made a reasoned decision on utilizing a Hybrid EPC delivery model. I will also discuss how the contracts that KCP&L entered into were very effective at holding the contractors accountable for their work. One of the most fundamental mistakes in Mr. Drabinski's testimony is his discussion regarding KCP&L's decision regarding the EPC v. multi-prime delivery method. Here, virtually all of the flaws of Mr. Drabinski's approach are revealed: (1) he inserts his own opinion into the equation; (2) he ignores the actual evidence from the time and testimony of the people who were there; (3) he gets facts wrong, like thinking that there was as vendor ready to provide an EPC contract when there wasn't and (4) he employs hindsight to infer a

different result would have occurred. The KCC, in its Order in the KCC 415 Docket, agreed: "*[KCP&L's] decision to proceed with a multi-prime strategy can only be faulted by employing hindsight or assuming that KCPL had a choice that it did not have.*" (citations omitted). *See* DFM2010-28, KCC Order at p. 31.

Undisturbed by these shortcomings, Mr. Drabinski makes his $231 million disallowance recommendation based on what he calls a "holistic" approach, whereby he believes he can provide the general allegations of imprudence followed by a recitation of arbitrary disallowance amounts that are not tied to any specific imprudent action by KCP&L. This "holistic" approach, however, is not recognized by Missouri law. As I will discuss later, the case law in Missouri articulates a two-step process that must be utilized by the Commission in determining a disallowance against KCP&L. The Commission must find that (1) the utility acted imprudently; *and* (2) such imprudence resulted in harm to the utility's customers. *See Associated Natural Gas v. Public Service Comm'n of the State of Missouri* 34 954 S.W.2d 520, 529 (1997). In other words, Mr. Drabinski is required to first establish an imprudent decision or action on the part of KCP&L, and then he much establish a nexus between the alleged imprudent action by KCP&L and the amount he is seeking to disallow as "harm" to KCP&L's customers. Instead, Mr. Drabinski's proposed $231 million disallowance is based upon arbitrary percentages of total cost categories and lists of change orders with no explanation as to how KCP&L's actions resulted in these costs and that these costs were avoidable.

In summary, Mr. Drabinski offers four separate analyses of the Iatan Project, three of which are nothing more than red herrings, provided by Mr. Drabinski to make his recommended allowance look "reasonable" and conservative. However, the end result is

that the vast majority of Mr. Drabinski's testimony is either completely unrelated to his recommended disallowance of $231 million, or if it is somehow related, it is more likely than not unsupported by the evidence. In either case, Mr. Drabinski's testimony should be given no weight in the Commission's decision.

Mr. Drabinski's tried the same approach in Kansas and his opinions were summarily rejected by the KCC. The following is from KCC's Order at p.19::

> *The Commission has considered all of the evidence by all the witnesses on this factor and in the weighing process we are not persuaded by Staffs approach and gave it little weight. KCPL's rebuttal witness presented more convincing and compelling reasons to view Iatan 2 costs as comparable to other similar coal plants constructed during the time frame, and we so find.*

The KCC also stated:

Therefore, we more specifically find that:

a) Mr. Drabinski applied an erroneous standard for prudence review in part because of the holistic approach he used.

b) Mr. Drabinski finds imprudence as a consequence of the results attained rather than evaluating decisions and the decision making process, connecting the allegations, and then quantifying the impact.

c) Mr. Drabinski improperly employed hindsight rather than evaluating management decisions at the time.

d) Mr. Drabinski's use of internal audits to criticize KCPL's decisions ignore the fact that the process of conducting on-going internal audits during a complex construction project is considered part of the prudent management decision making process.

See DFM2010-28, KCC Order at p. 27. The evidence provided by KCP&L establishes that KCP&L's prudently managed the Iatan Project.

RESPONSE TO WALTER DRABINSKI

Q: Have you read and are you familiar with the Vantage Consulting report and testimony filed by Walter Drabinski in this case?

A: Yes. I have read the Direct Testimony of Walter P. Drabinski of Vantage Consulting ("Vantage").

THE APPLICABLE PRUDENCE STANDARD

Q: As an initial matter, do you believe that Mr. Drabinski has properly articulated the standard of prudence in Missouri?

A: Yes. To the extent that Mr. Drabinski states that prudence should be determined by analyzing the Company's actions and decisions based upon the circumstances present at the time the action or decision was taken. In other words, the prudence of the Company's actions and decisions cannot be based upon a hindsight review. However, I do not believe that Mr. Drabinski appropriately applied that standard to his analysis resulting in a proposed $231 million disallowance. In fact, his testimony, which is largely the same as the testimony he filed on behalf of the KCC Staff was rejected by the KCC as a "hindsight" analysis. *See* DFM2010-28, KCC Order at p. 15. (". . .Staff argued for a $231 million ($57.7 million Kansas jurisdictional) disallowance. In our view, this claim hinges on a hindsight analysis, which is clearly prohibited. . .").

Q: How does Mr. Drabinski attempt to prove imprudence in this case?

A: Mr. Drabinski attempts to establish imprudence in two ways, both of which are improper. First, Mr. Drabinski misuses reports from consultants and auditors and never connects these alleged risks to either additional Project costs or harm to KCP&L's customers. Second, he substitutes his own preferences and prejudices to criticize KCP&L's management decisions. KCP&L acted prudently by hiring individuals with specific construction expertise in order to timely identify issues to the project team and senior management so that those issues could be resolved or mitigated. Large, complex projects

such as the Iatan Project have issues almost daily; the advice that was provided allowed KCP&L to set-up processes for evaluating and mitigating daily challenges. However, looking at any given day on such a project under a microscope without context can yield a myopic view.

Project oversight involves both identifying risks and mitigation of those risks. Mr. Drabinski's use of project reports is flawed because he never focuses on the mitigation efforts taken by KCP&L's management. Mr. Drabinski simply takes statements and observations made by KCP&L's consultants and auditors in their reports out of context, without performing any analysis as to whether KCP&L acted upon the advice and whether the facts showed that KCP&L used that advice and the processes created to avoid additional and avoidable costs. Mr. Drabinski simply substitutes his own preferences and prejudices to criticize KCP&L's management decisions without regard to the circumstances surrounding those decisions. As an example, Mr. Drabinski concludes that KCP&L should have entered into a full-wrap EPC without regard as to whether such a contracting option was available to KCP&L. *See* Drabinski Direct Testimony at p. 43. Mr. Drabinski suggests that KCP&L should have started shopping for EPC contractors before it had received regulatory approval for the project in either Kansas or Missouri. However, he ignores the evidence presented by Company witnesses Downey and Giles that:1) it was presumptuous for KCP&L to begin the process (which costs money) of finding an EPC contractor before receiving regulatory approval in Kansas and Missouri; 2) Once regulatory approval was obtained, there was no viable EPC option available to KCP&L; and 3) KCP&L engaged in a thorough evaluation of this decision.

Q: Why is it important for the Commission to determine KCP&L's prudence on its decision-making process rather than on the outcome of its decisions?

A: KCP&L is charged, on behalf of the ratepayers, with making decisions that are reasonable under the circumstances. However, without clairvoyance, even a prudent decision-making process does not guarantee success. Evaluating the outcome through the lens of 20/20 hindsight would mean that KCP&L is being held to a standard it could not meet because KCP&L did not have the benefit of hindsight when its decisions were made. The Missouri Public Service Commission ("MPSC") articulated this concept in *Re Union Electric Company*, 66 PUR4th 202, 213-214 (Mo.P.S.C.1985): "In accepting a reasonable care standard, the commission does not adopt a standard of perfection. Perfection relies on hindsight. Under a reasonableness standard relevant factors to consider are the manner and timeliness in which problems were recognized and addressed. Perfection would require a trouble-free project." *Id.*

The simplest analogy is driving your car from home to work. If your objective is to arrive to work on time, you act prudently if you leave home on time, drive the speed limit, pay attention to the roads and the traffic, and obey all the driving laws. However, there are factors outside of your control that may hinder your ability to arrive to work on time. This includes traffic jams and other drivers that may cause you to get into an accident. You may honk your horn to alert other drivers that they are not obeying the laws or that they are impeding your progress, but you can only have so much influence in the course and direction of the other drivers. You could also seek the advice of a traffic reporter to avoid the traffic jam if you are not already in it. In any event, your prudence is based on the actions and decisions you took in determining the route to work, not

whether you get to work on time. Therefore, the proper questions to ask in a prudence analysis were articulated by the MPSC in the *Union Electric Case* are as follows: "Did [the Company] properly manage this complex project? Did [the Company] properly manage matters ***within*** its control?" *Id.* at 231 (emphasis added).

Even if the Commission finds that KCP&L did, in fact, act imprudently, its inquiry cannot end there. The Missouri Courts have adopted a two-step process with respect to determining the appropriate disallowance. In order to disallow a utility's recovery of costs from its ratepayers, a regulatory agency must find both that "(1) the utility acted imprudently[, and] (2) such imprudence resulted in harm to the utility's ratepayers." *See Associated Natural Gas v. Public Service Comm'n of the State of Missouri 34 954 S.W.2d 520, 529 (1997).* Not only does Mr. Drabinski fail to establish that the utility acted imprudently, but he also fails to establish any nexus between the alleged imprudent actions and costs that were incurred by the Project that could have been avoided but for KCP&L's imprudence (*i.e.* harm to the utility's customers).

PLANT COMPARISONS

Q: Did you review Mr. Drabinski's Direct Testimony with respect to his testimony on Plant Comparisons?

A: Yes.

Q: What are your general observations about these comparisons?

A: First, I would like to point out that Mr. Drabinski's plant comparison analysis with other plants generally or with Trimble County 2 specifically does not actually factor in to his proposed $231 million disallowance. Instead, he recommends that they be viewed as "bounding" analyses in order to somehow prove that his proposed disallowance is

reasonable. However, there are limited conclusions that can be reached by doing such an analysis. In his Direct Testimony Mr. Drabinski himself cautions that such plant cost comparisons are problematic because "there are many differences between plants that ultimately justify differences in costs." *See* Drabinski Direct Testimony at page 52, lines 21-22. Mr. Drabinski also cautions that "it is difficult to get timely and accurate information and therefore all numbers must be looked at with some reservation." *See* Drabinski Direct Testimony at p. 161 ll. 16-18. In other words, Mr. Drabinski acknowledges, and I agree, that this type of analysis is based on data that may not be entirely reliable. It is often difficult to determine whether publicly-available information is accurate or whether it is outdated, or incomplete or contrived. Company witness Kris Nielsen notes that, "new power plant costs are also often reported as 'overnight costs.' Overnight costs literally represent the cost to complete a construction project overnight. It usually includes the costs of engineering, procurement and construction costs and owner's costs, but is net of financing costs and does not account for inflation or escalation. This overnight cost is often used so as to allow for comparisons without needing to factor in financing and escalation for an attempt to normalize costs." *See* Nielsen Rebuttal Testimony at p. 295 ll. 6-11. Furthermore, the scope and applicable cost-drivers for such projects are highly variable. Mr. Drabinski's attempt to compare Iatan Unit 2 to Trimble County 2 highlights this difficulty. I will discuss this comparison a little later in my testimony.

Q: If you believe that these comparisons are difficult to make, why did you include a comparison in your testimony before the Kansas Corporation Commission?

A: Kansas requires that such a comparison be made under its prudence statute, K.S.A. 66-

1289(g). As I just testified, due to the fact that such comparisons are difficult to make, it is only possible, at best, to make a general comparison to determine if the plant costs fall reasonably within the range of per kW costs of plants being built at the same time. The "range" is from the highest per kW cost to the lowest. Merely taking an average of all of the costs as Mr. Drabinski did and stating that any project whose result was worse than that average is misleading because there are so many variables that it is impossible to "normalize" these costs so that apples-to-apples comparisons can be made. As Company witness Dr. Kris Nielsen stated in his Rebuttal Testimony, "[p]ublished information on plant cost often does not clearly distinguish which components are included in the estimate, or different analysts may use different definitions." *See* Nielsen Rebuttal Testimony at p. 290 ll. 18-20.

Factors that can significantly impact the cost of a project include, by way of example, the scope of the project (for example, whether the cost of "Common" facilities, or those used by more than one unit in a multi-unit plant site, is included in the subject project's costs); the cost of the labor in the area where the project is going to be built (union versus non-union labor and other regional cost differences that make the cost of labor in Kentucky much less expensive than the cost of labor in Missouri or New York), and the type of coal to be used, which can affect the sizing of particular equipment. Mr. Drabinski argues that his comparisons yield a precise dollar figure regarding the "average costs" of all such plants. He then uses that dollar figure to recommend or support a recommended disallowance amount. This analysis is inherently flawed.

Even under Mr. Drabinski's analysis, the per kW cost of Iatan Unit 2 falls within the range of per kW costs of the other plants cited by Mr. Drabinski. This range is

$1,104 per kW to $2,857. I note that Mr. Drabinski is using Iatan's projected cost as $2,338 per kW, but this is not correct. KCP&L's most recent cost reforecast of Iatan Unit 2's estimate at completion ("EAC") of $1,948 million would equate to a per kW cost of $2,292. Whether the per kW cost of Iatan Unit 2 is $2,338 or $2,292, it falls within the bounds of Mr. Drabsinski's analysis.

Q: Can you give some examples of how Mr. Drabinski's plant comparison data is misleading?

A: Yes. First of all, I note that Mr. Drabinski purports to "normalize" the costs across all of the plants on his list. However, this exercise is mostly guesswork and assumptions, and he only looks at a few of the many variables that exist. Furthermore, this "normalization" exercise is on top of an estimate that is already highly speculative to begin with. As an example, in the KCC 415 Docket, I argued that it was not fair to compare the costs of the Iatan Project to other projects that were not "union" projects. This is due not only to the higher hourly rate for union workers, but also because certain union rules could also add costs, such as crew size and the number of supervisors required. In order to account for these costs, Mr. Drabinski merely added 6% to the cost of "non-union" projects, without any analysis of the actual manhours impacted or the actual difference in rates. He simply uses two studies commissioned by KCP&L that were specific to the Missouri labor market and performed in 2004 and 2006. Mr. Drabinski admits that he does not have access to "labor statistics for power plant construction crafts" but then says, without an articulated basis, standard or other support, that his estimate is "conservative." *See* Drabinski Schedule WPD-06—*Plant Comparison Data and Analysis*. Additionally, Mr. Drabinski does not account for regional differences in labor costs. Company witness

Daniel Meyer testifies regarding the regional differences between Kentucky and Missouri, and I agree with that testimony. Typically, the hourly craft rate in Kentucky (where Trimble County 2 is located) is significantly lower than the rates in Missouri or other parts of the country.

In my Rebuttal Testimony, I testified regarding the U.S. Energy Administration ("EIA") recently issued its yearly paper entitled "Updated Capital Cost Estimates for Electricity Generation Plants" which I attached to my Rebuttal Testimony as Schedule KMR2010-14 and refer to as the "EIA Report." This study illustrates that there is a sizeable difference merely in the location of the two plants Mr. Drabinski attempts to compare. The EIA commissioned a study from R.W. Beck in which the base cost estimate for a single Advanced Pulverized Coal Facility ("APC") with a nominal capacity of 650 MW was $3,167/Kw. *See* Schedule KMR2010-14, Section 3-3. This report also includes a "Location Percent Variation" that accounts for cost differences in wage rates, productivity differences, cost of living and other economic considerations. *See* Schedule KMR2010-14, Section 3-5. When location of the plant is considered and all other factors are normalized, the EIA projects that new advanced pulverized coal unit built in the Kansas City area would cost $3,309/kw, or 4.4% higher than national average, while a plant built in Louisville is projected to cost $3,022/kw, or 4.5% below national average. *See* Schedule KMR2010-14, Section 3-6. If this comparison were to hold true between Iatan Unit 2 and Trimble County 2, the 9% difference in cost the EIA projects based entirely on the differences in location would amount to $175 million all by itself.

Second, in reviewing Mr. Drabinski's sources, it appears that the majority of his data simply comes from internet searches. This "data" is comprised of press releases that

may have a single reference to a project cost. As an example, I note that the reported cost for JK Spruce is from a news article dated February 6, 2009. Literally the only information provided as to the cost of the plant in this article is that "CPS Energy officials Tuesday celebrated the start of construction on their new $1 billion coal-fired plant at Calaveras Lake. . . ." First, I note that although the date on the document is February 6, 2009, this is actually a press release from March of 2006. I have attached a copy of the original release as Schedule KMR2010-17. As a result, this was the projected cost of the plant before construction had even started, and therefore, it would not include any cost variances that may have occurred during the course of the construction of the plants. This document also says nothing about the scope of the project or what is included in the project estimate. It is even unknown if this is the actual estimate or just some approximation of the project's costs for purposes of the press release. It is unknown if the Owner's indirect or financing costs are included or if this is just the price of the contractor contract. Our research failed to provide an updated cost projection for this plant.

Q: Are there any other issues you have with Mr. Drabinski's plant comparison analysis?

A: Yes. It is impossible to know for sure the true scope of these plants in order to make a true side-by-side comparison. One plant may have had to install a new chimney or cooling tower, while the other did not. For example, two of the plants that have the lowest per kW reported cost, Oak Grove Unit 1 and Unit 2 appear to have had some considerable cost advantages that do not make them fair comparisons to the Iatan Unit 2 Project. I have found an article that was published by POWER Magazine on August 1,

2010. *See* Schedule KMR2010-18. This article sheds some light on the cost and scope of these two plants and indicates that the true cost of the plant is probably different than is being reported. The article reports that these two projects actually first began in the 1970s and were started and stopped a number of times. However, the Owner was able to complete a fair amount of engineering, purchase and have delivered expensive, long-lead equipment, and actually begin construction on some of the various components. In fact, at the time that construction was first stopped in 1987, 20% of the construction on Unit 1 had been completed. Additionally, a fair amount of the infrastructure (transmission lines, a cooling reservoir with a completed intake structure) was already in place. While the project did spend some money to ensure that the design was updated to meet current codes, standards and regulations, as well as to rehabilitate old equipment and some of the installed construction, it does appear that the project saved a considerable amount of money based on its phased completion and had a significant cost advantage. These issues do not appear to have been taken into consideration in Mr. Drabinski's analysis of the costs of Iatan, which highlights the fact that little relevant information can gleaned from these comparisons. Mr. Drabinski argues that the plant comparisons should be used as "a boundary that supports the overall conclusion of imprudent costs." *See* Drabinski Direct Testimony at p. 213. However, the KCC found such an analysis to be meaningless. The KCC in the 415 Docket Order stated:

> *KCPL's rebuttal witness presented more convincing and compelling reasons to view Iatan 2 costs as comparable to other similar coal plants constructed during the time frame, and we so find. Furthermore, KCPL has cited to Drabinski's own adverse admission where he noted: "there are many differences between plants that ultimately justify differences in costs" and "it is difficult to get timely and accurate information and therefore all numbers must be looked at with some reservation." This reservation in our view undercuts the impact of Drabinski's analysis on*

> *this point, particularly in terms of its accuracy. An equivocal reservation makes a "bounding calculation" meaningless; it places a ball park figure within a ball park. Further, such reservation together with its impact on the witness' persuasiveness supports our ultimate finding on this point, which is that this factor does not indicate imprudence on the part of KCPL.*

(citations omitted). *See* DFM2010-28, KCC Order at p. 19. As Company Witness Dr. Nielsen points out, Mr. Drabinski's argument is further undercut by the fact that Mr. Drabinski's own analysis has changed significantly since he filed similar testimony in the KCC 415 Docket such that his "average" costs have changed by $241 per kW. *See* Nielsen Rebuttal Testimony at pp. 307-12. Additionally, the stated differential would decrease by another $50 per kW due to KCP&L's revised cost estimate.

I would also note that this Commission has rejected a similar industry comparison in its order issued in *Re: Kansas City Power and Light Company*, 75 P.UR.4th (1986) regarding the construction of the Wolf Creek Nuclear Plant ("Wolf Creek"). In that case, the parties conducted surveys of other plants that were built around the same time as Wolf Creek and presented evidence that based upon the various analyses, Wolf Creek's costs were either less than or more than the average plant costs in the samples. However, MPSC stated that "[a]lthough these industry comparisons are interesting, they are dependent on the data base chosen and provide little meaningful information with respect to an assessment of KCP&L's project management of the specific Wolf Creek construction project." *Id.* at p. 49.

Q: Do you agree with Mr. Drabinski that the Trimble County 2 plant construction costs represent a good comparison for purposes of evaluating whether the costs associated with Iatan Unit 2 were prudently incurred?

A: No. As stated above, comparisons of what was done on another project say very little about how KCP&L managed the Iatan Project. Mr. Drabinski argues that the Trimble County 2 Project and the Iatan Project are very similar and therefore, the MPSC should draw the conclusion that the differences in the project costs could only mean imprudence on the part of KCP&L's management of the Iatan Unit 2 Project. However, in almost the same breath, Mr. Drabinski recognizes some very significant differences between the two projects that could reasonably explain the cost differential.

First, the testimony from the Trimble County 2 case provided by Mr. Drabinski in WPD-7 states that the per kW costs of the Trimble County 2 project were "well below the current market estimate of $2,400-$3,000". *See* Schedule WPD-7, testimony of Paul W. Thompson at p. 7 at ll. 2-4. This statement shows not only that the market estimates cannot be reduce to a point number, but instead should be looked at as a fairly wide range. Additionally, this statement shows that the projected cost of Iatan Unit 2 is well within the applicable range. (WPD-7, testimony of Paul W. Thompson at p. 7 at ll. 2-4).

Second, some of the differences that Mr. Drabinski admits to in his testimony and attached Schedule WPD-7, include: 1) regional differences (Missouri vs. Kentucky); 2) Union vs. Open Shop; and 3) Trimble County 1 was built in the 1990s as a part of a multi-unit development. This is significant because all of the Common systems and structures needed for a second unit were built at this time, including material handling, chimney, and the tank farms.

In WPD-6, Mr. Drabinski includes an analysis that he says accounts for the differences in the labor costs and the scope of the common facilities. However, he has no actual data to support either the assumptions that he made in making these calculations or

the technical data that he relied upon. At best, this appears to be his best back of the napkin guess of what these costs could have been based upon various assumptions that may or may not be correct. Furthermore, because of the multitude of reasons for why the two plants would not cost precisely the same amount, the mere fact that there is a difference in cost does not mean that KCP&L acted imprudently in the management of Iatan Unit 2.

Q: Mr. Drabinski argues that the reason that Iatan Unit 2 and Trimble County differed so much in price was that Trimble County 2 was built under an EPC contract. Do you agree with that conclusion?

A: No. I do not believe that there is any useful conclusion that can be drawn with respect to Mr. Drabinski's comparison of the costs between Iatan Unit 2 and Trimble County 2. There are simply too many variables and unknowns for anyone to draw any specific conclusions. The KCC also rejected Mr. Drabinski's attempt at making a direct comparison between Iatan Unit 2 and Trimble County 2. I also note that Mr. Drabinski makes no effort to identify the cost differences that he believes are attributable to the projects' different contract methodologies. Instead, Mr. Drabinski chose to merely make a conclusory statement that is simply not supported by the facts.

Q: What was the contracting methodology used on the Trimble County Project?

A: Trimble County did utilize an EPC contractor. The contractor would not take risk on the price of any of the large equipment (turbine, boiler, etc.) until all of the equipment was purchased. (Schedule KMR2010-19 at pp. 159-63). Therefore, the original EPC contract only had "allowances" for this equipment which were then adjusted and fixed after the equipment was purchased. While Bechtel was able to purchase this equipment within the

original budget, it could have just as easily caused the budget to increase at a very early stage of the project. This is a prime example of why prudence cannot be reviewed in hindsight.

Q: How would you describe KCP&L's contracting approach for Iatan Unit 2?

A: KCP&L's contracting methodology is an "EPC hybrid" approach because it consisted of large EPC contracts to mitigate some of the risks posed by the multi-prime approach including having to coordinate a multitude of prime contractors. A large part of the Iatan Project was performed on a fixed-price EPC basis by ALSTOM, Pullman, SPX and ASI. ALSTOM supplied the air quality control system, the SCR and the boiler, Pullman provided the chimney, SPX provided the cooling tower and Automatic Systems, Inc. provided the coal and limestone material handling systems. The cost of these four contracts together is roughly fifty-three percent (53%) of the direct construction costs (which includes the costs for the design, procurement and construction of the permanent equipment but excludes KCP&L's indirect costs). Another contracting strategy employed by KCP&L to mitigate some of the risks of an EPC hybrid approach is that whenever possible, KCP&L entered into fixed-price contracts with its vendors.

Q: Does Mr. Drabinski's comparison of the two projects' delivery models have any value?

A: No, I don't believe it does. In articulating the opinion that KCP&L would have met with the same level of success as another project simply by changing the delivery method is a baseless conclusion. It also turns a blind eye to the actual options that were available to KCP&L at this time. Prudence is determined by evaluating the options available to the company at the time and its decision-making process for choosing an option, not whether

it ultimately was the best option based upon the results. The KCC, in its Order in the KCC 415 Docket, agreed: "*[KCP&L's] decision to proceed with a multi-prime strategy can only be faulted by employing hindsight or assuming that KCPL had a choice that it did not have.*" (citations omitted) Mr. Drabinski also ignores that Iatan Unit 2 was, in fact, an extremely successful project. *See* DFM2010-28 at p. 31.

Q: Are there other plants in Mr. Drabinski's plant comparison data that also did not utilize a full-wrap EPC contracting methodology?

A: Yes. As Mr. Drabinski points out, Weston 4 was also constructed using a multi-prime approach. Additionally I would note that that four plants, (including Iatan Unit 2) utilized a strategy of something less than a full-wrap EPC, i.e., an "EPC-hybrid" approach, wherein the utility enters into at least one or more EPC prime contract and takes on the risk of coordinating two or more contractors. At least one, and maybe more, of the projects that Mr. Drabinski references were not performed pursuant to a full-wrap EPC contract that were based upon a fixed-price.

Q: Which of the other projects in Mr. Drabinski's analysis utilized the EPC-Hybrid approach?

A: The Comanche, Longview Power, and John W. Turk, Jr. UPC plants each utilized hybrid EPC contracts, similar to that of Iatan Unit 2. This is significant because the utility in each of these instances retained the risk and responsibility of coordinating the contractors. On the Comanche project, Public Service Company of Colorado (PSCC) contracted directly with several contractors for large scopes of work, including Alstom (boiler); Babcock & Wilcox (air quality control system); Shaw, Stone & Webster (balance of plant); Kiewit Western (site development); Mitsubishi (turbine); Karenna

(chimney); and Roberts and Schaefer (coal handling system). Later, (and over Shaw's objection), PSCC removed scope from Shaw's Balance of Plant EPC contract presumably due to the fact Shaw was not performing, and awarded those scopes to other contractors. This included the boiler electrical work (awarded to Frauenshuh Power Development), the boiler mechanical piping (awarded to AZCO) and AQCS mechanical piping (awarded to B&W). *See* Schedule KMR2010-19, pp 59-62. PSCC has retained liability for coordinating nine major contractors. On the Longview Power project, Foster Wheeler is providing the boiler while the EPC on the remaining work is being performed by a consortium of Siemens Energy, Inc. and Aker Construction, Inc. (Schedule KMR2010-19 at p.117). Coordination of two major contractors has remained with Longview, similar to that of Iatan. Mr. Drabinski excluded the John W. Turk, Jr. UPC plant from his comparative plant analysis due to the fact that this project has been mired in a legal battle that has caused significant delays to construction. However, it is important to note that like Iatan Unit 2, Comanche and Longview, this plant also utilized a hybrid-EPC approach, establishing that several other owners see the EPC hybrid approach as an acceptable contracting methodology. On the J.W. Turk Project, the EPC contract with Shaw was for $700 million of the original project estimate of $1.3 billion (the current cost estimate for the project is $1.6 billion). The remaining work is to be completed outside of Shaw's contract. For example, B&W was awarded a $250 million contract directly with American Electric Power to furnish and erect the boiler and AQCS equipment. (Schedule KMR2010-19 at pp. 102-6).

Q: Based on your experience in this industry and your knowledge of the Iatan Unit 2 Project, would a full-wrap EPC contract have protected KCP&L from cost or

schedule risks?

A: I do not think an EPC contractor would have protected KCP&L from a cost and schedule perspective as advocated by Mr. Drabinski. Contrary to Mr. Drabinski's assumption, having a full-wrap EPC is not a guarantee of either cost or schedule certainty. As an initial matter, we do not know the structure of the EPC contracts on all of the other projects or how much risk the contractors actually agreed to take. Our research suggests that: 1) utilities that entered into full-wrap EPC's have still had to contend with schedule delays, budget increases and commercial disputes with the EPC contractor; 2) at least some of the EPC contracts were not fixed-price EPC contracts, leaving the utilities to carry varying levels of risk.

Q: Can you provide some examples of utilities who built large coal plants in the same time frame that had to carry risks under the EPC approach?

A: Yes. As I mentioned, in the Trimble County 2 project, the utility agreed to take the risk of the costs of the major equipment until it was actually bought by the EPC contractor. Therefore, the utility took on the risk that the costs for such equipment would not sharply rise in the time between the contractor's proposal and the purchase of the major equipment. *See* Schedule KMR2010-19 at pp. 159-63. The EPC contract between Luminant and Fluor for the Oak Grove project, on the other hand, utilizes a "target price" arrangement whereby the risks of cost overruns are shared between the owner and contractor, but, as a general rule under such contracts, the utility usually takes on much more of the risk than the contractor. (Schedule KMR2010-19 at pp. 405-18). Under a typical target price agreement, the contractor is reimbursed for all of its costs plus a fee for overhead and profit, subject to a sharing mechanism wherein the contractor shares in

the savings if the project costs are below a pre-established "target price" (which can be adjusted by change order), or shares in the costs by reducing or sacrificing its fee if the final project costs are above the target price. Significantly, target pricing often includes an absolute limit on the contractor's liability for project cost overruns, regardless of fault. That is, while the contractor may be willing to put its entire fee at risk, the owner will be responsible to reimburse the contractor for all cost overruns (even when such cost overruns are due to reasons within the contractor's control) once the at-risk portion of the contractor's fee has been expended on project costs. Simply put, contractors frequently "cap" their liability at or around the value of their fee; however, in an overrun situation that exceeds the cap, the owner will continue to pay the contractor's direct costs until the project is completed. Like all contracting models, target price models have risks and benefits. I believe that there are other utilities that were unable to secure fixed-price EPC pricing. For example, it has been reported that Prairie State's contract with Bechtel is an "EPCM" agreement (Engineer, Procure Construct and Manage). EPCM agreements are typically target price arrangements, and the Owner negotiates and executes contracts directly with each contractor and supplier. *See* Schedule KMR2010-20, Drabinski Response Data Request No. 2. As a result, the EPCM contractor does not have risk for any of the contractor's performance or overruns. In other words, the risks of an EPCM arrangement are very similar to the risks of a multi-prime arrangement. It is my understanding from my experience on other projects and discussions regarding the state of the industry with other experts and consultants that fixed price contracts were very hard to come by in the 2006-2008 time period. In his rebuttal testimony, Company witness Mr. Downey testifies that KCP&L was subject to these trends in 2005-2006.

This observation is supported by reports issued by various consultants and regulatory filings during this time period. *See* Schedule KMR2010-6. Even Mr. Drabinski, in his own research, found much of the same commentary. *See* 2007 Mayer Brown article titled "Worlds Apart: EPC and EPCM Contracts: Risk Issues and Allocation" attached as Schedule KMR2010-20. This article was provided to us by Mr. Drabinski in his response to Data Request No. 2. This article states:

> This change of emphasis away from lump-sum turnkey perhaps reflects the bargaining position of many EPC contractors in today's market and, to some extent, the increasing size and complexity of the projects being tendered internationally . . . Equally, with so few major EPC contractors with the know how, resource and experience to undertake such projects, funders have had to open their minds to other procurement routes (and greater risks) in the face of rising lump sum EPC prices. . .

Schedule KMR2010-20 at p. 83.

Q: Can you identify any projects on which the costs increased significantly despite the EPC approach?

A: Yes. Even looking just at the limited universe of projects identified by Mr. Drabinski, our research revealed that the projects at Cliffside, Elm Road Generating Station and Prairie State Energy Campus each experienced significant cost increases from their initial estimates despite utilizing the EPC approach.

Q: Please explain the cost increases for the Cliffside Project.

A: The Duke Energy Cliffside project was originally planned as two units. In early 2006, Duke's estimate for two plants was approximately $2 billion. However, by the fall of 2006, Duke announced that the total project cost had increased by approximately 47 percent, or $1 billion. Thereafter, the North Carolina Utilities Commission refused to grant a permit for two units. Duke then announced that the cost of the remaining single unit would be about $1.53 billion, not including Allowance for Funds Used for

Construction ("AFUDC"). In late May 2007, the cost of building the single Cliffside unit had increased by yet another 20 percent. As a result, the estimated cost of the one unit that Duke is building at Cliffside had grown to $1.8 billion, exclusive of financing costs. In total, the costs of the Cliffside project have grown by 80%.

Q: What type of cost increases were experienced with respect to the Elm Road Generating Station?

A: It is my understanding that the EPC contractor, Bechtel, issued a change order request to Wisconsin Energy for the Elm Road Generating Station project seeking $515 million and schedule relief of seven months for Unit 1 and four months for Unit 2. Bechtel's claim was based on weather delays, "labor issues" and changes to the design and scope made by the project manager. Ultimately, Wisconsin Energy settled for $72 million plus schedule relief to Bechtel. Significantly, Bechtel's claim makes it clear that Bechtel believed that the utility was liable for additional labor costs and/or productivity notwithstanding the EPC contract model. *See* Schedule KMR2010-19 at p. 84.

Q: What types of cost increases did the Prairie State Energy Campus experience?

A: In 2005, public estimates of the Prairie State Energy Campus project were $2 billion. In 2006, the Campus was scaled up from two 750 MW plants to two 800 MW plants with an increased price tag of $2.5 billion. In 2007, Bechtel signed on as the EPC contractor at a price of $2.9 billion. As of July 2010, the project's costs were estimated at approximately $4.4 billion. *See* Schedule KMR2010-19 at pp. 150-53. Just recently, it was announced that Prairie State has renegotiated its EPC contract with Bechtel for a fixed price contract in the amount of $4 Billion. As a result, the EPC contract has

increased by 38% since its execution, and the Project's costs have increased by 100% since the beginning of the project.

Q: Have you compared the final cost of Iatan Unit 2 to the final cost of other facilities constructed within a reasonable time before or after construction of Iatan Unit 2?

A. Yes. I have performed a similar comparison to the one performed by Mr. Drabisnki for purposes of establishing a relevant "range" for per kW costs of similar plants. In total, I have evaluated the actual or estimated costs of over 50 coal-fired new-build projects in the United States.

Q. In establishing the relevant range, what factors do you believe makes certain projects comparable to Iatan?

A. The first factor I believe is relevant in selecting the reference plants is the location and type of plant. All reference projects should be U.S. coal-fired plants because other forms of generation have different cost structures and non-U.S. built plants will not be subject to the costs associated with compliance to the same environmental standards. I also think the general size of the projects is important. All of the plants that I believe are comparable to Iatan Unit 2 have capacity of 600 MW or greater. Plants of this size will share a similar level of technical complexity, and thus are most likely to have similar engineering, procurement and construction durations. Another important consideration is whether the construction projects utilized union labor. The construction costs of projects using non-union labor tend to be significantly lower than those that are required to utilize union labor. Additionally, I looked only at plants that were or are going to be completed in 2009-2012. I believe the relevant time period for comparable U.S. coal-fired plants would encompass those projects that also made their major equipment or construction

procurements during a similar time frame which was characterized by rising prices for raw materials, engineered components and human resources at a time when the construction of new U.S. coal plants was occurring in large numbers for the first time in decades. Finally, only plants that were in at least an "advanced development" stage (versus simply "announced") should be considered because these projects will tend to have better developed project definitions and cost estimates. It should also be noted that the Iatan Unit 2 project carries much more of the costs associated with the common equipment than Iatan Unit 1. The percentage of common equipment cost allocation makes comparisons to other multi-unit plants more difficult because those plants may either carry the common costs solely on only one unit or split the costs equally between two units.

Q: Based on your analysis, what conclusions did you reach?

A: Although my analysis yielded slightly different numbers than Mr. Drabinski's, the applicable range of all such plants is about the same--$1,474 per kW to $2,877 per kW. As a result, the conclusion is the same whether you use Mr. Drabinski's analysis or mine: the costs of the Iatan Unit 2 Project are well within the range of similar plants that were or are being constructed in the relevant time period.

Q: In your review of data regarding comparative plants, how many of the projects utilized an EPC approach and how many utilized multi-prime or EPC hybrid approach?

A: Not all of the projects used an EPC approach. Four projects that meet the criteria I listed above as comparable to Iatan were performed on a multi-prime or multi-prime hybrid basis (Weston 4, Comanche, Iatan and Longview Power). It is interesting to note that

two plants that have lower per kW costs than Iatan Unit 2 were both performed on a multi-prime/EPC hybrid basis.

Q: Can you summarize these plants' schedule performance?

A: Yes. Several of the other projects I reviewed have experienced some sort of schedule slippage off of their originally targeted completion dates. The chart below summarizes my findings:

Project	Original Target Completion Date	Actual/Current Completion Date	Amount of Delay
Comanche	Nov 2009	June 30, 2010	7 months
Cliffside	2011	June 1012	6+ months
Weston 4	June 1, 2008	June 30, 2008	1 month
Plum Point	Spring 2010	August 2010	3-5 months
Elm Road 1	Sept 29, 2009	Feb 2, 2010	4 months
Elm Road 2	Sept 29, 2010	November 29, 2010	2 months
Sandy Creek	February 2012	July 2012	5 months
JK Spruce	August 2009	June 2010	11 months
JW Turk	Mid-2011	October 2012	14 months

(Schedule KMR2010-19, pp. 1-5, 6-11, 19, 56-81, 82, 92-97, 98-101, 102-109, 154-8, 183-93.) All of the above-projects are in Mr. Drabinski's plant comparisons. This means that nine of the sixteen plants in his comparison experienced some sort of delay. As a result, I would argue that delays to these types of large, complex projects are common, and simply because a delay occurs, it is not the result of imprudence by the utility. The two-and-a-half month delay experienced by the Iatan Project is well within the industry norm for projects of this size and complexity, and certainly does not indicate, in and of itself, imprudent management of the Project by KCP&L.

Q: You discussed the EIA Report earlier in conjunction with Mr. Drabinski's Trimble County 2 comparison. Are there any other useful information in the EIA Report?

A: Yes. In this year's addition of the EIA Report, the EIA notes that the "overnight capital cost estimates for coal and nuclear power plants are 25 to 37 percent above" those in the prior year's outlook. As I previously stated, the EIA Report projects that new advanced pulverized coal unit built in the Kansas City area would cost $3,309/kw. *See* Schedule KMR2010-14, Section 3-6. This certainly compares favorably with the current projected cost of Iatan Unit 2 is $2,297/kw. This data shows that KCP&L made a sound decision to enter the market when it did and not be subjected to the ever-increasing prices of such projects. It also reflects favorably upon Iatan Unit 2's costs and generally supports that Iatan Unit 2 was a very cost-effective option for adding baseload power to KCP&L's fleet.

Q: What other conclusions can you draw from this EIA study?

A: The EIA study shows how volatile year-to-year cost projections can be and underscores how drawing strict comparisons of costs, as Mr. Drabinski attempts, are probably not reliable.

KEY MANAGEMENT DECISIONS 2005-2007

Q: In your view, did KCP&L's Senior Management act prudently when faced with key decisions on the Iatan Project?

A: Yes. Mr. Drabinski makes the statement that "a significant part of our analysis addresses poor management decisions made during the period of 2005 through the middle of 2007." *See* Drabinski Direct Testimony at p. 37 ll. 8-9. In other words, Mr. Drabinski pinpoints this period as the time that KCP&L's management made imprudent decisions that ultimately caused the costs of the Project to increase occurred. I disagree and believe that KCP&L Senior Management acted prudently during the early planning period of the

Iatan Project when it was faced with some difficult decisions.

Q: Are you familiar with the responses that the KCC Staff and Mr. Drabinski provided to KCP&L's Data Request No. 125 ("Staff Response to DR No. 125), which is attached to Company witness Brent Davis' Rebuttal Testimony as Schedule BCD2010-17?

A: Yes. KCP&L issued Data Request 125 to Mr. Drabinski in the KCC 415 Docket. In his Direct Testimony Mr. Drabinski alleges that the "poor management decisions" that led to "cost overruns" and "schedule issues" occurred in 2005 through the middle of 2007. *See* Drabinski Direct Testimony at p. 37. Data Request No. 125 requests Drabinski to identify every "poor management decision" from 2005 through the middle of 2007, and he listed seventeen separate decisions. My response below is limited to Subparts 1, 2, 3, 4, 12, 13,14, 16, and 17 of Mr. Drabinski's response. Company witness Brent Davis responds to the other subparts in his Rebuttal Testimony.

Q: Subparts 1, 2 and 3 of Drabinski's Response to DR No. 125 essentially deal with the timely implementation of professional advice. Do you agree with Mr. Drabinski's assertions?

A: No, I do not. In Subpart 1, Mr. Drabinski alleges that KCP&L did not respond in a timely manner to Burns & McDonnell's recommendation in the 2004 PDR. Mr. Drabinski does not specify exactly what recommendation it was to which KCP&L failed to timely respond. He simply points to the entire PDR document that is attached as Schedule WPD-1. In his testimony, Mr. Drabinski testifies that the primary recommendations from the 2004 PDR are as follows: 1) KCP&L evaluate the contingency included in the project costs and its impact on mitigating some of the risks

and adjust the contingency as necessary to reflect its appetite for such risks; 2) KCP&L should progress as quickly as possible on the Project; and 3) KCP&L should develop a project organizational plan and contracting strategy for engineering, procurement and construction. *See* Drabinski Direct Testimony at pp. 189-190. With respect to the first recommendation, KCP&L did evaluate its contingency as a part of the Control Budget Estimate. Until the Control Budget Estimate was set in December 2006, it was not necessary to finalize the contingency amount for the project. Additionally, even if KCP&L had failed to do so, it is difficult to understand how this action would have caused the Project to cost more. Second, as testified by Company witness Brent Davis, KCP&L did decide on both a project organizational plan and a contracting strategy for the project. KCP&L carefully considered each of these decisions, which were timely made so that there was no cost impact to the project. Finally, Burns & McDonnell's recommendation that "KCP&L proceed immediately in execution of the Project" simply was not feasible. Similarly, Mr. Drabinski alleges in Subpart 2 of his response to DR No. 125 that KCP&L should have moved forward with substantial planning or organization negotiations in early 2005, and by not doing so, they were forced into a multi-prime approach. As testified by Company witnesses Chris Giles and William Downey, KCP&L could not proceed with the project until it had received community buy-in, agreement from its partners, and regulatory approval for the Comprehensive Energy Plan ("CEP"). I would also say that the multi-prime approach, or "EPC hybrid" approach utilized by KCP&L was a perfectly acceptable way to manage Iatan Unit 2.

Q: Mr. Drabinski's believes that KCP&L took on an unreasonable risk and made an imprudent decision in deciding to use an EPC hybrid contracting strategy. Why

was the EPC hybrid approach an acceptable contracting methodology?

A: In his testimony, Mr. Drabinski seems to imply that any contracting methodology other than a full-wrap, fixed price EPC approach that shifts all of the risk to the contractor is imprudent. Based upon my experience, many different contracting models have been utilized successfully on other large construction projects. As I previously indicated, at the time KCP&L made the decision not to enter into a full-wrap EPC, KCP&L sought advice and input from Schiff, Burns & McDonnell, and Black & Veatch. KCP&L understood and carefully weighed the risks and benefits of a multi-prime approach, various hybrid-EPC approaches, and a full-wrap EPC approach. In fact, Mr. Drabinski acknowledges that KCP&L "with assistance and suggestions from B&McD and Schiff Hardin, (Exhibit WPD-13) considered alternate strategies for the contracting of the Iatan project, ultimately recommending the Multi-Prime method to Senior Management." *See* Drabinski Direct Testimony at p. 55-56. Given the circumstances at the time, KCP&L made the reasonable and prudent decision not to delay the project in an attempt to engage a full-wrap EPC contractor. Furthermore, utilizing an EPC contract is not a guarantee that the project will either be on-time or that the costs of the project will not increase. The EPC methodology, even with a fixed-price, carries risks as well.

Q: Please describe some of the risks of fixed-price EPC contracts.

A: When KCP&L asked us to provide some guidance regarding the contracting model for Iatan Unit 2 in September 2005, we identified the following risks to an EPC contract:

- **[redacted]

[redacted]

[redacted]

- [redacted]

[redacted]

- [redacted]

[redacted]**

See WPD-13 Schiff Presentation at p. 6-8. Both the multi-prime and the EPC contract methodologies had risks and benefits, of which KCP&L was aware. Both are legitimate contracting methodologies for the Iatan Unit 2 project, and both have been proven to be successful.

Q: Do you have an example of the multi-prime approach being used successfully on a new-build coal-fired plant?

A: Yes. As noted, the Weston 4 project utilized a complete multi-prime approach. This plant was included in Mr. Drabinski's plant comparison analysis, and he mistakenly described it as a project that utilized the EPC approach. Many of the Weston 4 contractors are similar to those used by KCP&L, including: Toshiba International Corp., who supplied the steam turbine; Flowserve Pump Division for the boiler feed pump, condensate pump and CW pump; Thermal Engineering International, with respect to the condenser and feedwater heaters; Kansas City Deaerator, Co. for the deaerator; Aquatech International Co. for the demineralization equipment; and Hyundai Heavy Industries LTD. for power/auxiliary transformers. *See* Schedule KMR2010-19 at pp. 183-93. In all, the Weston 4 plant had 107 major contracts for the construction work, the largest of which was $179 million for the construction of the boiler.

Q: Why do you believe Weston 4 was able to hold its costs to $1,474 per kW?

A: Weston 4's costs may be attributable, in large part, to the fact that the majority of the Weston 4 project was contracted for in the 2003-2004 time period, well before the significant increase in the costs of power plant construction due to scarcity and demand. Company witness Mr. Downey testifies regarding KCP&L's market surveys which found how risk adverse the limited number of qualified contractors had become by the time

KCP&L was reviewing its options for the Iatan Project. A document prepared by Black & Veatch on May 11, 2006 shows that at the time KCP&L was contracting for its major equipment and construction work for Iatan Unit 2, it was competing with 22 other coal plants that were planning to be completed in 2010 and 2011. *See* Schedule KMR2010-19 at pp. 200, 216, 219. On the other hand, only 8 plants other than Weston 4 were projected to be complete in 2008 and 2009. A good example of the escalation of pricing is the amount paid by Weston 4 for its boiler and AQCS procurement and construction contracts. According to Babcock & Wilcox ("B&W") its original contract was only for $190 million for this work. *See* Schedule KMR2010-19 at pp. 194-96. Contrast this with the $713 million contract KCP&L signed with ALSTOM. Even accounting for the difference in MW (525 MW for Weston 4 versus 850 MW for Iatan Unit 2) and deducting the Iatan Unit 1 portion from the ALSTOM contract, the escalation on this work is significant. The number of plants that were being built also had an impact on available labor and labor productivity, which also drives up plant costs. Additionally, it appears that some rather large scope items were not included in the Weston 4 project, including, but not limited to the cost of the chimney, which, for whatever reason was not included in the Weston 4 plant costs; a landfill; and a much smaller scope for the material handling system which only had a budget of $12 million (versus $58 million in the Control Budget Estimate for Iatan Unit 2).

Q: Was KCP&L aware of the Weston 4 project at the time it selected its contracting strategy?

A: Yes. Black & Veatch, the engineer for the Weston 4 project, included a significant amount of information regarding the Weston 4 plant in its bid presentation materials to

KCP&L in November 2005. *See* Schedule KMR2010-19 at pp. 224-371. These materials included an extensive discussion of the risks and benefits of a multi-prime versus EPC approach, and the best contracting methodology to mitigate those risks. *See* Schedule KMR2010-19, pp. 294-310. In its presentation to KCP&L on November 8, 2005, Black & Veatch identified Weston 4 as a reference project for Iatan Unit 2 and introduced two of the leads from Weston 4 to discuss its success. The factors identified in the Black and Veatch materials are many of the same factors that KCP&L reviewed in making its decision to proceed on a hybrid EPC basis. Specifically, KCP&L considered the following when selecting its contracting model:

- The state of the EPC market indicated that the cost of EPC contracts was generally 8-10% higher than multi-prime contracts;
- A project the size of Iatan Unit 2 likely requires 6-9 months of time to write the full EPC specification, another 4-8 months of bid time, and 3-6 months of evaluation, negotiation and award time. This meant that the full-wrap EPC approach would delay the project for as much as a year or more;
- The firms who were both available and qualified to perform the entire scope of work on a project the size of Iatan Unit 2 were all very busy, which meant that they could increase their prices and reject projects that required the contractor take on too much risk, especially for labor productivity and availability. In other words, the price of EPC contracts was increasing, but EPC contracts were not providing much more protection from risk than multi-prime arrangements.

KCP&L also considered the fact that a multi-prime arrangement gave KCP&L the ability to accomplish each of the following:

- Retain design control of the plant in order to maintain quality of the equipment and flexibility to change project scope/direction to better life-cycle performance;
- Achieve a lowest life-cycle cost, not just lowest capital cost;
- Provide significant owner/operator input during design phase;
- Maintain control over the work as EPC contractors can effectively "stop work" or hinder design or execution changes;
- Spread the risk of a contractor default over multiple entities;
- Avoid the usual EPC mark-up of 20% by contracting directly for engineered equipment and other materials;
- Ensure labor availability of highest risk craft (boilermakers) via contractual transfer of this risk to ALSTOM; and
- Increase opportunities for more local minority and women-owned businesses to participate in the project.

KCP&L also believed that a multi-prime strategy gave the owner more control in engaging contractors who have dedicated workforces to effectively increase the labor pool and mitigate the significant risks associated with labor availability and productivity.

Q: Do you believe KCP&L's decision not to enter into a full-wrap EPC for Iatan Unit 2 was imprudent?

A: No. As I previously indicated, at the time KCP&L made the decision not to enter into a full-wrap EPC, KCP&L sought advice and input from Schiff, Burns & McDonnell, and

Black & Veatch. KCP&L understood and carefully weighed the risks and benefits of a multi-prime approach, various hybrid-EPC approaches, and a full-wrap EPC approach. As I previously stated, Mr. Drabinski acknowledges that KCP&L "with assistance and suggestions from B&McD and Schiff Hardin, (Schedule WPD-13) considered alternate strategies for the contracting of the Iatan project, ultimately recommending the Multi-Prime method to senior Management." *See* Drabinski Direct Testimony at pp. 55-56. Given the circumstances at the time, KCP&L made the reasonable and prudent decision not to engage a full-wrap EPC contractor.

Q: Does Mr. Drabinski account for any of the benefits that KCP&L may have enjoyed as a result of a multi-prime approach?

A: No. For example, Mr. Drabinski does not off-set the mark-up KCP&L would likely have paid the EPC contractor for the almost $200 million in engineered equipment that KCP&L purchased directly. Mr. Drabinski also does not calculate the premium that an EPC contractor probably would have charged for taking on the risk of labor and its subcontractor performance. Company witness Robert Bell testified in his Rebuttal Testimony that this premium would have been on top of KCP&L's Control Budget Estimate of $1,685 million.

Q: What was the KCC's finding regarding whether KCP&L acted imprudently in selecting its contracting strategy?

A: The KCC, in its Order found that an EPC contract was not a viable option for KCP&L. Specifically, the KCC stated:

> *We also considered Staff witness Drabinski's entire testimony, the testimony of KCPL, and all the evidence and testimony from the hearing. Based on this review we find that:*

1. KCPL did not have the option in 2005 of entering into an EPC contract for the balance of Plant work on Iatan at a 12% premium. Mr. Giles and Mr. Downey testified at length concerning the contracting strategy choices KCPL had available, and each highlighted how Mr. Drabinski ignored the actual circumstances KCPL encountered.8o Even Drabinski admitted that it was Staff counsel, and not he who stated an EPC contractor was available.81 Moreover, we find Mr. Downey's testimony under cross-examination by Staff Counsel persuasive on this point and give it great weight:

[Mr. Smith [KCC Staff]]: *Do you recall the statement that one EPC contractor in particular said that they would do it for 12 to 15% premium based on market conditions?*

[Mr. Downey]: *Yes, and that-yes, I did.*

[Mr. Smith [KCC Staff]]: *Okay, so why did KCPL decide to go with an owner managed project?*

[Mr. Downey]: *Well, I think that, that conversation sounds nice and I would refer to it as sales talk in the early phases of pulsing the market. When we really pressed people with regard to their willingness to do an EPC and the associated thing is at a fixed price with a schedule, we didn't have any takers at all and particularly Black & Veatch who we really thought was a hope for an EPC full wrap when we really got down to it, they said, well, you have to sole source with us. We can't give you a price estimate for at least a year and we certainly can't guarantee a fixed price and we can't guarantee a schedule and it's probably gonna be maybe not 2010 but maybe 2011 or 2012. So, yeah, there was a lot of sales talk in the beginning, but when you got right down and start talking to these people, the terms and conditions changed dramatically and we saw no viable response from any of those contractors.*

See DFM2010-28, KCC Order at p. 26-27.

I note that Mr. Drabinski's testimony on this issue is unchanged from what he filed in the KCC 415 Docket.

Q: Mr. Drabinski makes an argument that if KCP&L had decided to engage an EPC contractor under a full-wrap EPC approach the project would have completed at the end of 2010. Do you agree with this argument?

A: Mr. Drabinski's argument is one that he made in the KCC 415 Docket and his point here was that KCP&L could have completed the Iatan Unit 2 Project by the end of 2010, which was the projected completion date as of mid 2010 when he wrote his testimony for the KCC. However, he has not modified his conclusions to include actual events. KCP&L met its in-service criteria in August 2010 which was earlier than the fourth quarter projection. I do not agree that the Iatan Unit 2 Project could have been completed by the end of 2010 under a full-wrap EPC, much less by August 2010. To support his argument, Mr. Drabinski relies on a presentation that is marked as a preliminary "draft," and it is unclear as to what information was actually incorporated into the final presentation. Based on the information that was available at the time, the earliest date an EPC could have been completed would have been late 2011 or early 2012. My conclusion is supported by Black and Veatch in its 2005 bid presentation. *See* Schedule KMR2010-19 at pp. 224-371. For the reasons discussed by Company witness Chris Giles, at that time, the projected power demand for KCP&L and its partners meant that a full-wrap EPC was ultimately not a viable option. *See* Chris Giles Rebuttal Testimony at pp. 29-32 and 55-57. Moreover, the events surrounding the Prairie State project show that Mr. Drabinski's conclusion that an EPC contracting method would have met the same dates are highly speculative at best.

Q: What about Prairie State leads you to that conclusion?

A: Prairie State has closely tracked Iatan Unit 2 in its development cycle. The EPCM Letter of Intent with Bechtel was signed in November 2006. *See* KMR2010-19 at p. 401. Based on the materials from both Black & Veatch and Burns & McDonnell that were presented to KCP&L's management in November 2005, this would have been the approximate date for KCP&L to enter into a competitively bid EPC contract. Prairie State had its ground breaking in October 2007, just two months after Iatan Unit 2. However, Prairie State's planned completion date for its first unit--Unit 1 is June 2011. *See* Schedule KMR2010-19 at p. 141. Prairie State's planned period of construction was virtually the same as Iatan Unit 2, 46 months. *See* Schedule KMR2010-19 at p. 403-404. Given this example and the advice from both Black & Veatch and Burns & McDonnell in November 2005, it is hard to believe that KCP&L could have contracted with an entity such as Bechtel any faster or completed construction any sooner.

Q: On pages 46-47 of his Testimony, Mr. Drabinski argues that Burns & McDonnell had a conflict of interest with respect to recommending the multi-prime and cites an email sent by you to KCP&L. What was the purpose of your email?

A: The purpose of my email, which is attached to Mr. Drabinski's testimony at WPD-12, was to alert KCP&L **[redacted]** However, this is why KCP&L sought input from several different sources as well as conducted its own research on the issue. KCP&L did not rely solely on the information

provided by Burns & McDonnell but considered it as one part of its overall evaluation. While Mr. Drabinski raises this allegation, it is hard to see how this had any impact on the project or on the project's costs.

Q: Mr. Drabinski states that the input regarding the contractor model, "from both Schiff Hardin and B&McD is suspect since both firms had much to lose if an EPC was selected." (*See* Drabinski testimony at p. 39) How do you respond?

A: I am very disappointed that Mr. Drabinski would make such a statement, particularly when has no proof. I think he was wrong to impugn the professional dignity and the quality of the advice we provided KCP&L without the slightest evidence.

Q: Did Schiff Hardin stand to make more money if the Iatan Project was multi-prime than had it been an EPC?

A: It is impossible for me to predict what our role would have been under a different contracting methodology. As an example, although ALSTOM's contract is a fixed-price EPC contract, we have spent a large percentage of our resources on the Project dealing with ALSTOM-related issues. Plus, that was KCP&L's decision to make, not ours, and I believe a fair reading of the materials we presented to KCP&L's management show that we laid out a number of different options from which KCP&L ultimately chose the Hybrid EPC model. I believe that Burns & McDonnell's materials regarding the choices available were also balanced in the same manner.

Q: Even if he was wrong with respect to Schiff, isn't it accurate that Burns & McDonnell had much to lose if KCP&L had chosen to proceed on an EPC basis?

A: Again, it is impossible to truly say, and doing so would require 20/20 hindsight and speculation. In the meeting in which it made its initial presentation in early November

2005 to KCP&L's management, Burns & McDonnell told KCP&L that it would support KCP&L's decision regarding the Iatan Project's delivery method, that its goal was to be selected KCP&L's owner's engineer. Burns & McDonnell's CEO repeated that same message at the November 23, 2005 meeting. I believe Burns & McDonnell was sincere, as were we, in providing advice to KCP&L's management regarding their options for proceeding.

Q: Mr. Drabinski also makes an argument that KCP&L's planned construction schedule for Iatan 2 was compressed. Do you agree?

A: No. Iatan Unit 2's planned construction schedule compared favorably in duration to other similar plants. Mr. Drabinski stated in his direct testimony that, "**[redacted]**" *See* Drabinski Direct Testimony at p. 65, ll. 6-7. As an initial point, Mr. Drabinski testifies on p. 49 of his Direct Testimony that "actual constructions" (sic) began in January 2006, which is wrong. Construction on-site actually began in August 2006. Mr. Drabinski is wrong regarding Iatan Unit 2's planned construction schedule, which was 46 months (August 2006 to June 2010), not the 54 months he asserts. Putting aside Mr. Drabinski's errors, his opinion that Iatan Unit 2's planned schedule was **[redacted]** was also without merit. In the plants that we surveyed, we found that the length of construction was fairly uniform within a range of six months, with construction planned for between 44 to 50 months. As an example, three of the most successful projects, Trimble County, Weston 4 and Walter Scott each had planned construction durations of 44, 45 and 48 months respectively. *See* Schedule

KMR2010-19 at p. 403-04. Second, Given these facts, Iatan Unit 2's planned schedule of 46 months was certainly well within the reasonable range of other, similar plants.

Q: Did Mr. Drabinski quantify additional costs caused by any alleged delays prior to the start of construction caused increased costs?

A: No. As an example, looking at the Vantage Schedule Analysis and the line entitled, **[redacted]** ** *See* Drabinski Direct Testimony at p. 77. I believe that Mr. Drabinski draws an erroneous conclusion with respect to this item because the work was done timely to meet the key deadlines. Mr. Drabinski is also incorrect in stating that there were added engineering costs to complete the boiler foundation design. I am not certain what Mr. Drabinski means when he states that there was a "late start" to engineering. While, as Brent Davis testifies, there was concern about these foundations because they were so critical to the Project, I don't believe that Burns & McDonnell started late, nor did they incur any additional costs beyond what was expected. Also, Mr. Drabinski does not attempt to quantify the amount KCP&L allegedly paid Burns & McDonnell to make up for this "late" design.

Q: If the design time on the Project was delayed at any point and that delay caused Burns & McDonnell to incur additional hours to meet a compressed schedule, would it be possible through the Project's documents to find whether KCP&L incurred additional costs?

A: Yes. Engineers work on an hourly basis, so accelerating engineering does not cost more, provided that the engineering firm has the available manpower to perform the work. The only additional costs that would be incurred is if Burns & McDonnell charged a higher

rate for overtime or premium-time costs. Burns & McDonnell's costs are only marginally higher from working more or irregular hours. Schiff has reviewed Burns & McDonnell's invoices for 2006 and 2007 and the total amount of overtime charged by Burns & McDonnell during this period of time was **[redacted]**. The fact of the matter is that Mr. Drabinski makes all sorts of allegations regarding additional costs to the project but never actually tries to calculate them.

Q: Returning to Mr. Drabinski's alleged poor management decisions, what was Mr. Drabinski's allegation in Subpart 3 of Mr. Drabinski's responses to DR No. 125?

A. Mr. Drabinski alleges that "KCP&L did not address the recommendations made by Schiff Hardin in its February 2005 presentation to the BOD which stressed the need to move quickly on selection of an Owner Engineer and decisions on the Boiler and Turbine Suppliers."

Q: Do you agree that KCP&L failed to address the recommendations made by Schiff Hardin in its February 2005 presentation?

A: No. First of all, Schiff Hardin never made a February 2005 presentation to KCP&L. Schiff Hardin was not engaged by KCP&L as of February 2005 and was not contacted by KCP&L regarding its possible engagement until August 2005. As a result, Schiff did not make any recommendations to KCP&L regarding the Iatan Unit 2 Project as of February 2005. Mr. Giles discusses the February 2005 Board meeting in his Rebuttal Testimony.

I do believe that KCP&L's Senior Management did consider and timely implement the advice tendered by Schiff once we had been retained. The best way to explain this is to look at the actual advice Schiff gave to KCP&L at this time and see whether KCP&L followed that advice.

As Company witnesses Mr. Giles and Mr. Downey testify, on November 23, 2005, Schiff made a presentation to KCP&L's Senior Management. The PowerPoint presentation that we prepared for and discussed in that meeting is attached as Schedule KMR2010-21. Mr. Drabinski attaches one page of this twenty-six page presentation as Schedule WPD-17, and he discusses that single page, which is the reference to the dates from the February Board presentation made by KCP&L management.

Q: ** [redacted] ** **What was the purpose of doing so?**

A: After we were engaged by KCP&L in August 2005, we identified the document KCP&L's management prepared for this February 1, 2005 meeting. ** [redacted]

[redacted]** Mr. Drabinski's apparent and sole focus was to find a document that showed KCP&L had not moved forward in early 2005 and he tries to use that fact against KCP&L. It should be noted that Mr. Drabinski does not cite to the actual language in the February 2005 Board presentation materials **[redacted]

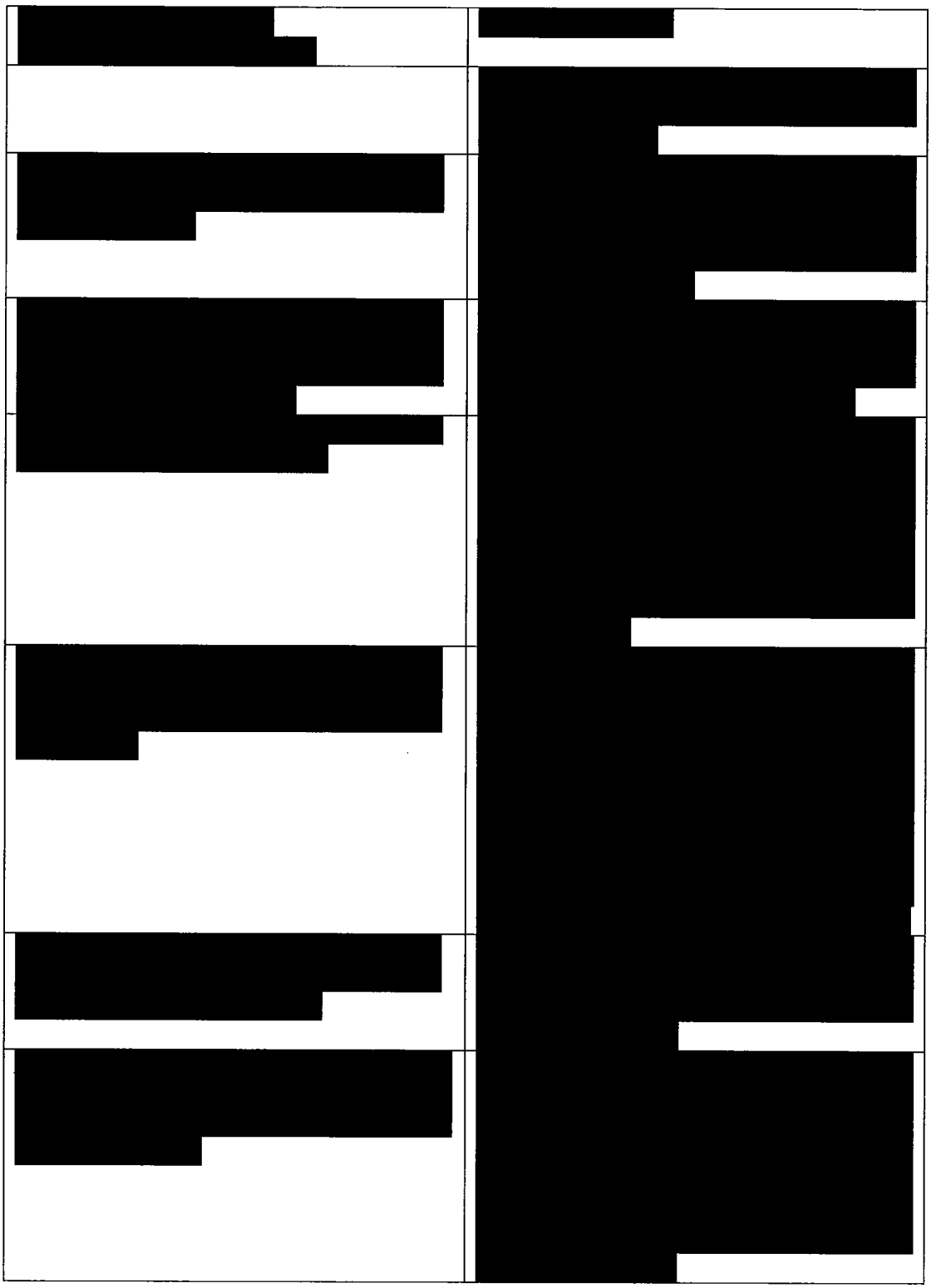
[redacted]** *See* Schedule KMR2010-21. Therefore, Schiff, in its November 23, 2005 presentation, merely used the dates in the February 2005 board meeting as indicative dates of milestones on the project as of that time.

Q: What was the advice that Schiff provided to KCP&L's Senior Management on November 23, 2005?

A: The following is a recitation of the advice Schiff provided in that meeting, alongside the actions that KCP&L took during the course of the Project:

**

[redacted]



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(Schedule KMR2010-21, Slide 17).

Q: Returning to Mr. Drabinski's allegations that KCP&L's Management didn't listen to key advice. When did KCP&L ultimately decide to engage Burns & McDonnell?

A: As noted, KCP&L made the decision to engage Burns & McDonnell immediately after the November 23, 2005 meeting.

Q: Was there any delay to the schedule for the balance of plant work based upon the timing of KCP&L's owner's engineer decision?

A: There was no delay to construction, which did not start until the summer of 2006. To the extent that there was any impact, it was to engineering. The only additional costs to the Project for this delay would have been in overtime costs charged by Burns & McDonnell. As I have previously testified, the total amount of overtime charged by Burns & McDonnell in 2006 and 2007 is **[redacted]**.

Q: Why wasn't there any delay to construction?

A: As noted in the above chart of Schiff's Recommendations, Company witness Brent Davis testifies that Burns & McDonnell was able to mitigate these delays by ensuring that it met milestone dates for completing the design for certain key packages. Also, in his Direct Testimony, Company witness Mr. Downey testifies regarding how KCP&L chose to advance certain critical BOP scopes of work that had been identified by Burns & McDonnell and Schiff as critical to maintaining schedule. KCP&L was able to engineer, procure and ensure timely delivery of all of the major equipment, therefore eliminating a significant risk of a multi-prime project. During the early phases of the Project, the critical path was through the boiler foundations and erection of the structural steel. With

respect to Burns & McDonnell's critical path engineering activities, Burns & McDonnell completed the design of the boiler foundation so that the boiler foundation could be completed and ALSTOM's boiler steel erection could begin on time. *See* Drabinski Direct Testimony at p 77. Additionally, as Mr. Drabinski indicates, Burns & McDonnell also completed engineering on the Turbine Pedestal Foundation so that the turbine pedestal foundation could be constructed and turned over to Kiewit with no delay. *See* Drabinski Direct Testimony at p. 78.

Q: Do you believe that KCP&L's decision regarding the Turbine and Boiler suppliers was timely?

A: Yes. I did not believe it was possible for KCP&L to get into a contract with a boiler supplier prior to May of 2006. In fact, KCP&L was able to award the boiler contract to ALSTOM in April of 2006 and for ** [redacted] ** less than what Burns & McDonnell had projected. Additionally, KCP&L had issued a notice to proceed to ALSTOM in February 2006 to begin engineering on the foundation loads to ensure that the final foundation loads were ready no later than July 28, 2006. As stated above, the extra month ** [redacted] ** had no impact on Burns & McDonnell's timely completion of the boiler foundation design. This fact is noted by Mr. Drabinski on page 77 of his Direct Testimony. Furthermore, KCP&L awarded the turbine contract on time (*See* Drabinski Direct Testimony at p. 78) to Toshiba and delivery of the turbine was made on time to support a June 1, 2010 project completion date. Company witness Chris Giles testifies regarding the procurement of the major equipment in order to eliminate known risks and maintain the schedule. *See* Chris Giles Rebuttal Testimony at 45-46.

Q: With respect to subpart 4 of Mr. Drabinski's Response to DR No. 125, Mr. Drabinski alleges, "KCP&L did not recognize the magnitude of effort required to effectively manage a large, complex multi-prime project and the need to implement control systems and a detailed schedule as early as possible. Early projects of Construction Management staff were a fraction of the level required. (This conclusion is supported by much of Drabinski direct testimony.)" Do you agree with the response to Subpart 4?

A: No. Company witness Brent Davis testifies in his Rebuttal Testimony regarding the timely development of the Project's schedule and processes, and staffing of the Project Team needed to manage the work. I agree with that testimony. In particular, I take exception to Mr. Drabinski's assertion that Project Controls systems were not timely developed for the Iatan Unit 2 Project.

Q: A section of Mr. Drabinski's Direct Testimony that further identifies his opinions regarding the project team's readiness is found on p. 50, where he testifies, "[redacted]**" (Drabinski Direct Testimony at p. 66 ln. 4-5) Do you agree with that testimony?**

A: No. In my Direct Testimony in this case, I stated that "KCP&L implemented the various governance considerations, management procedures, and cost control protocols (including Project Controls) based upon the Comprehensive Energy Plan Construction Projects Construction Cost Control System ("Cost Control System"). The Cost Control System is attached to Company witness Steve Jones' testimony as Schedule SJ2010-1." (Roberts Direct Testimony at p. 6, ll. 18-22) I also describe the Project Controls that

KCP&L put into place. (Roberts Direct Testimony at p. 7-9) I believe that KCP&L had an excellent set of tools available to it as early as practicable. KCP&L's witnesses including Mr. Meyer, Mr. Archibald, Mr. Giles, Mr. Davis and I each discuss in detail in our Rebuttal Testimony how these tools have allowed KCP&L to meet its obligations under the Stipulation to "identify and explain" cost variances on the Iatan Project.

I note that KCP&L requested that Mr. Drabinski substantiate his testimony referenced above via KCP&L Data Request No. 50. Mr. Drabinski's response to this Data Request includes a nine page summary of all of the key systems, processes and procedures that were put into place by KCP&L in a timely manner. (Schedule KMR2010-23). Mr. Drabinski's Response to Data Request No. 50 also states, "with the publication of the Project Execution Plan (PEP) in June 2007, and in response to the 2007 Ernst & Young audit report, KCP&L began a major effort to improve cost controls to major construction projects." *See* Schedule KMR2010-23. However, neither this response nor Mr. Drabinski's testimony refers to what this "major effort" consisted of. It is worth noting that as of June 2007, this Project was still in its embryonic stage, particularly from a cost management perspective, as the CBE had been in place only since December 2006. Company witness Mr. Davis testifies that at this time, the Project was receiving approximately 10 change order requests per month, and that it required minimal effort from the Project's Leadership Team to vet these few change orders. Even Mr. Drabinski's Response states, on page 7 of 9, "While construction invoice processing is still largely a manual process (using excel spreadsheets), the procedures in place are adequate." Mr. Drabinski's Response to Data Request No. 50 also states, "KCP&L's internal control and processing procedures related to its cost control program are

documented in 'Internal Control and Process Documentation' dated September 30, 2007." *See* Schedule KMR2010-23. This document merely aggregates the already created processes and controls that were in place at that time.

In addition, with regard to the Project's alleged late schedule development, Mr. Drabinski's response cites two reports from Schiff, one from April 24, 2006 and a second from August 7, 2006. In our report of April 24, 2006, Schiff states ** [redacted] ** *See* Schedule KMR2010-24. In our next report, dated May 8, 2006, Schiff reported that: "** [redacted] ** Company witness Mr. Jones testifies to the development of this procurement schedule in his Direct Testimony.

Mr. Drabinski's Response to Data Request No. 50 also references Schiff's report from August 7, 2006 in attempting to show that Project Controls had not been timely implemented. However, in this report, ** [redacted]

[redacted]**

See Schedule KMR2010-19, emphasis added.

[redacted] Company witness Brent Davis testifies as to the details of the schedule's development. From Schiff's perspective, the Level 3 Project Schedule was developed timely and commensurate with industry-best practices.

Q: Mr. Drabinski also testifies that, "[redacted]**" (Drabinski Direct Testimony at p. 66) Do you agree with that testimony?**

A: No, **[redacted]**, though it is difficult to discern precisely what this testimony means. When KCP&L requested clarification from Mr. Drabinski through Data Request No. 234 regarding when, in his view, these systems were "needed," Mr. Drabinski

responded that, "The project controls systems referred to in the testimony should have been purchased or developed and in place prior to major procurement, engineering and construction activities were underway." *See* KMR2010-26, KCC Staff/Drabinski Response to Data Request No. 234. If Mr. Drabinski means that all project controls should be in place before literally any activity occurs on a project, I heartedly disagree.

Q: On what basis do you disagree?

A: First, as I have stated, the Project's contracts have the requirements necessary to establish the schedule and cost controls as the contractors come on board. The contractors need to work with each other and the owner to refine the schedule in the most efficient manner. That is a process that occurs on all complex projects such as Iatan Unit 2. Second, from the start of the procurement phase, KCP&L did have controls in place to plan the work and track costs. KCP&L utilized the strategic schedule that Burns & McDonnell and Schiff jointly developed in the late fourth quarter of 2005, and Burns & McDonnell was tracking its own work on developing engineering technical specifications and needed for the procurement process. Company witness Jones testifies regarding the further refinement of the procurement effort with the T-45 schedule. *See* Jones Direct Testimony at p. 10-11. Company witness Meyer also refers to the how Burns & McDonnell also was developing and further updating the Project's estimate throughout 2006, leading to the establishment of the Control Budget in December 2006. *See* Meyer Direct Testimony pp. 6-14. As I previously testified, KCP&L also established the guidelines for tracking the contractors' cost and schedule progress with the Cost Control System that as put into place in July 2006, a month before the ALSTOM contract was executed. *See* Roberts Direct Testimony at pp. 7-8. Throughout this early development period, Schiff was

providing information to KCP&L's Senior Management, informing them of the progress and tracking against the strategic schedule. I believe that all of these measures were very successful and allowed the project to procure nearly $1 billion of work and establish a series of controls that allowed for timely and accurate data throughout the Project.

Additionally, it is not practical or wise to have all systems for controlling the work until you have the major contracts let and the project organized. **[redacted]** It is also not practical to think that the owner can impose the schedule itself on the contractor, as Mr. Drabinski implies when he states that the schedule should have been operative earlier. An owner should not dictate to the contractor how it plans to perform the work, and developing and vetting the schedule takes input from the contractor after its team is on board.

Q: Mr. Drabinski lists three specific examples of Project Controls systems [redacted] Do you agree that these three deliverables were late?

A: No. I believe Brent Davis has adequately addressed the development of Skire and the Level 3 Project Schedule. The Iatan Project Controls Plan Mr. Drabinski cites as being "late" is another case where the actual processes had been utilized for well over a year prior to being aggregated into this document in August 2007.

Q: Based on your experience, do you know of any essential Project Controls processes that were not developed in a timely manner for the Iatan Unit 2 Project?

A: No. Notwithstanding Mr. Drabinski's Response to KCP&L's Data Request No. 125, I note also that despite multiple data requests from KCP&L, Mr. Drabinski was unable to cite any further examples.

Q: With respect to subpart 13 of Mr. Drabinski's Response to DR No. 125, Mr. Drabinski alleges, "[redacted]** " Do you agree with the response to Subpart 13?**

A: No. Simply because E&Y identified certain risks with respect to Burns & McDonnell in 2007, does not mean those risks had an actual impact to the Project. Significantly, nowhere in his testimony does Mr. Drabinski demonstrate any causal connection between those risks and any particular impact. Under the prudence standard, the question is whether those risks were timely identified and whether KCP&L acted prudently in mitigating those risks. **[redacted]** William Downey discusses the audit process and the reporting of the audit findings to Senior Management and Brent Davis discusses how the project team timely resolved the audit findings. The purpose of the E&Y audit program was to help the project team identify areas of risk so

that these issues could be mitigated. I think it is an important point that the audit reports only identify issues that have a risk of causing an impact to the project, not actual impacts. Mr. Drabinski simply regurgitates the audit report's findings without determining if these issues were ever corrected or mitigated or whether they, in fact, impacted the project itself.

Q: Were the issues that were identified in the Burns & McDonnell-related Audit report raised in a timely way so that KCP&L could address those issues?

A: Yes. In mid-2007, ** [redacted] ** Kiewit had just begun its balance of plant work. ** [redacted] ** As such, the report was well timed.

Although Mr. Drabinski argues that a "** [redacted] **, this is not the case. *See* Drabinski Direct Testimony at p. 149, ll.2-4. As of the first quarter of 2007, overall design on Unit 2 was only 30-35% complete. Up to that time, Burns & McDonnell's primary functions had been as the Owner's Engineer on Unit 1, designing the foundations for the Project, and assisting KCP&L's procurement activities. Additionally, KCP&L was able to complete all of the foundations for ALSTOM and the balance of plant work on schedule. This includes engineering to support construction of both the boiler foundation and the turbine pedestal foundation, both of which Mr. Drabinski agrees were completed on time. *See* Drabinski Direct Testimony at p. 77-78. As a result, the risks raised in the E&Y audit report were timely.

Q: Mr. Drabinski also points to the project team's monthly reports **[redacted]. What is your opinion of this testimony?**

A. Mr. Drabinski has summarized the project's monthly reports in Exhibit WPD-18. As Mr. Davis discusses in his Rebuttal Testimony, the issues that Mr. Drabinski describes his summary are normal project issues that were identified and subsequently managed by Project participants. Notably, it appears Mr. Drabinski's summary is comprised of statements made in the monthly reports that are taken out of context. However, even though Mr. Drabinski tries to use these statements against KCP&L, WPD-18 does not identify imprudence on the part of KCP&L, nor does it evidence analysis of whether any of the issues that the KCP&L project team self-reported had an actual cost impact to the project. **[redacted]

- [redacted]
- [redacted]

[redacted]

- [redacted]

[redacted]

- [redacted]

[redacted]

- [redacted]

[redacted]**

Q: Did Schiff have concerns **[redacted] on the project?**

A: **[redacted]**

Q: Do you believe that executing the Burns & McDonnell contract in February of 2007 rather than earlier had any impact on the project?

A: No. KCP&L authorized Burns & McDonnell to proceed with the engineering work necessary to advance the critical path work as of November 2005. This included engineering to support major procurements such as the chimney, Turbine and AQCS and design of the boiler foundations. As Mr. Drabinski acknowledges, Burns & McDonnell performed its services under a General Services Agreement ("GSA") it had in place with KCP&L while the parties were negotiating the contract. *See* Drabinski Direct Testimony at p. 149. This is not an unusual arrangement, as contracts for these large, complex projects take many months to negotiate and finalize. The GSA enables Burns & McDonnell to begin performing its services while requiring Burns & McDonnell to perform its professional services in accordance with the legal standard of due care. The timing of the contract's execution raised by Mr. Drabinski on several occasions, appears

to be a general criticism and, once again, was not tied by Mr. Drabinski to any specific additional cost to the project. Mr. Drabinski's Response to KCP&L's Data Request No. 140 admits that Mr. Drabinski did not attempt to draw such a nexus. (Schedule KMR2010-27)

Q: Was it imprudent for KCP&L to agree to a time and materials contract with Burns & McDonnell?

A: No. Based upon my experience, most engineering services contracts are time and materials contracts. Because the owner's engineer provides professional services and its role on the project is often determined by the attitude, cooperation and interaction of the contractors working the project (the more difficult the contractor, the larger the role of the engineer), it is difficult at best, if not impossible to accurately estimate the cost of the engineer's services.

Q: In his testimony, does Mr. Drabinski identify specific dollar amounts or claims by contractors **[redacted]?**

A: No, he does not identify any with respect to Unit 2. The only one he identifies is the **[redacted]** that is applicable to Unit 1 only. Mr. Drabinski's recommendation with respect to the Unit 1 ALSTOM settlement agreement is to simply disallow fifty percent (50%) of the **[redacted]** He does not give any basis for this recommendation.

Q: Mr. Drabinski states at one point in his testimony that "[redacted]**

[redacted]**" *See* **Drabinski Testimony at p. 149, ll. 13-15. Do you agree with this statement?**

A: No. Burns & McDonnell never had responsibility for providing critical foundation loading calculations to ALSTOM. ALSTOM is the EPC contractor for its scope of work, meaning that it provided everything with the exception of the foundations. It was ALSTOM who was required to provide foundation loading calculations to Burns & McDonnell so that Burns & McDonnell could design the foundations.

Q: With respect to subpart 14 of Mr. Drabinski's Response to DR No. 125, Mr. Drabinski alleges that "[redacted]**" Do you agree with the response to Subpart 13?**

A. No. Mr. Drabinski also asserts that KCP&L's contracts did not contain detail regarding resolving cost and schedule problems, productivity, management levels of contractors and other key project control functions. I disagree with these statements for two primary reasons. First, all of the major contracts, including the Kiewit Contract include extensive project controls provisions that contractually obligate the contractor to provide KCP&L with schedule and productivity information on a regular basis that would enable KCP&L to effectively evaluate and resolve contractor claims for lost productivity. For illustration purposes, a copy of the Project Controls sections of the ALSTOM and Kiewit contracts are attached to my testimony as Schedule KMR2010-28. Second, each of the major contracts contain detailed change order resolution provisions, including provisions that specifically address change order requests for delay and, in the case of Kiewit, a provision that addresses change orders for lost productivity.

As to my first point, KCP&L's contracts with major contractors such as ALSTOM and Kiewit contain extensive project controls provisions. **[redacted]** (ALSTOM Contract, § 8.5.2) (emphasis added). Other data such as the contractor's schedule performance index (SPI) and cost performance index (CPI) are also required **[redacted]**, both of which provide valuable insights into the contractor's level of productivity on an ongoing basis throughout the project. **[redacted]**

For these reasons, Mr. Drabinski's assertion that "[a]lmost all of the contracts simply called for the contractor to provide proposed costs that would then be negotiated" is unfair and misleading. Mr. Drabinski suggests that the contractor may submit any cost it pleases, without limitation, and that KCP&L will simply discuss those costs with the

contractor without any basis for evaluating or denying them if appropriate to do so. Because of the project controls in the contracts and the enforcement of these controls, what Mr. Drabinski describes did not occur on Iatan Unit 2.

**[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**

Q: How do the dispute and change order resolution provisions in the KCP&L contracts with ALSTOM and Kiewit, for example, compare to industry form contracts?

A: Several industry groups have drafted "form" contracts that are widely used in the construction industry. These groups include the American Institute of Architects ("AIA"), the Engineers Joint Contract Documents Committee ("EJCDC"), and the Associated General Contractors of America ("AGC"). I have attached copies of these form contracts to my testimony for reference. (Schedule KMR2010-29(A) – (D)). These industry groups have developed these contracts with input from focus groups and committees, incorporating lessons learned over many years. The change order resolution provisions in the KCP&L contracts with Kiewit and ALSTOM are generally equal to or better than those in industry standard form contracts.

For example, like the KCP&L contracts, the Standard General Conditions of the Construction Contract prepared by the EJCDC ("EJCDC Contract") provide that the contractor is not entitled to a cost or schedule adjustment for contractor-caused delays. With respect to non-contractor caused delays, the EJCDC Contract provides that the contractor is entitled to an "equitable adjustment in the Contract Price or the Contract Times, or both" and that all such claims shall be decided by the engineer. **[redacted]

[redacted]

[redacted]

[redacted]** Moreover, the

EJCDC Contract is silent on how to resolve claims for lost productivity and does not provide any guidance for calculating amounts owed for delay or lost productivity.

The ConsensusDOCS Standard Form of Agreement between Contractor and Subcontractor ("Consensus Contract") provide even less detail and direction than the KCP&L contracts or the EJCDC Contract as to how to resolve change orders or claims. Like the EJCDC Contract, the Consensus Contract is silent on how to resolve claims for lost productivity and does not provide guidance for calculating amounts owed for delay or lost productivity.

In fact, a process for resolving claims for delay or lost productivity cannot even be found in the detailed provisions of the AIA A201-2007 General Conditions of the Contract for Construction drafted by the AIA ("A201"). Although the A201 contains a mutual waiver of consequential damages, which includes a waiver "for loss of management or employee productivity or of the services of such persons," (Schedule KMR2010-29(B) A201 § 15.1.6) a waiver of claims for lost productivity is often negotiated out of the contracts and the project owner loses the benefit of this protection. In such an event, the A201 provides no direction as to how the parties should resolve claims for lost productivity. Indeed, with respect to claims for lost productivity or delay, the A201 does not identify the types of costs that may be recovered, the types of documentation that must be submitted in support of such claims, or the method for calculating the amount owed by the project owner.

Significantly, neither the EJCDC Contract, the Consensus Contract nor the A201 make any mention of project controls or require the detailed, consistent reporting required under the KCP&L contracts. **[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**

Q: With respect to subpart 16 of Mr. Drabinski's Response to DR No. 125, Mr. Drabinski alleges, "[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**" Do you agree with the response to Subpart 16?**

A: No. As testified by Company witness Brent Davis, this error was found prior to the establishment of the CBE budget, and before any significant design engineering of the turbine building had taken place. Therefore no re-engineering had to occur. **[redacted]

[redacted]** *See* November 1, 2006 Schiff Report attached as Schedule KMR2010-30 at pages 10-14. As a result, this issue did not constitute a "cost overrun" to the Project. I note in his Missouri testimony, Mr. Drabinski now claims that the addition of the deaerator to the Iatan Unit 2 Project's scope may have further caused the "unintended consequence" of design changes to the turbine generator building, and that the price tag in his mind is **[redacted]

[redacted]** to the Iatan Unit 2 Project's costs. *See*

Drabinski Direct Testimony at p. 33. Company witness Mr. Meyer responds to this allegation, noting that these changes were hardly unintended and the design maturation was properly added to the Project's costs. However, this does highlight another issue. One of Drabinski's major criticisms of KCP&L is the increase in the cost of the project from the 2004 PDR to the 2006 CBE. **[redacted]**

Q: Do you agree with Mr. Drabinski's conclusion that KCP&L should be responsible for the "underestimation" of the 2004 PDR?

A: No. Company witnesses Chris Giles, Brent Davis and Dan Meyer all testify as to the myriad reasons why the PDR is not a fair measure of comparison of the final costs of Iatan Unit 2. In addition to the change in size, scope of the project and changes in the applicable market conditions, a significant portion of the increase in costs was due to design maturation. In summary of that testimony, the PDR and the other estimates that preceded the Iatan Project's Control Budget Estimate were not mature enough to be the basis of cost comparisons or budget tracking.

Q: Finally, with respect to subpart 17 of Mr. Drabinski's Response to DR No. 125, Mr. Drabinski alleges, "[redacted]** Did Schiff's reports ever agree with this statement?**

A: No. This is a prime example of Mr. Drabinski's tactic of taking "risks" identified in the Audit Reports and the Schiff Reports and stating that simply because we were reporting

our concerns it automatically translates into a delay that impacts cost to the Project. **[redacted]**

SCHEDULE IMPACTS

Q: Are you familiar with Mr. Drabinski's testimony regarding the alleged impacts to the Iatan Unit 2 Project from schedule delays, schedule compression and productivity?

A: Yes. Mr. Drabinski has two sections that appear to be related that discuss his views on the Iatan Unit 2 Project's schedule. On page 75 of his Direct Testimony, Mr. Drabinski testifies, "Our analysis concludes that there were a number of significant adverse impacts resulting from mismanagement during 2006 and early 2007." In support of this opinion, Mr. Drabinski includes a chart on pages 77-81 of his testimony that identifies his assessment of delays on the Project, which I will refer to as the "Vantage Schedule Analysis." Without further analysis, Mr. Drabinski later concludes that with respect to schedule compression, congestion, and resequencing, "[a]ll of these problems occurred at Iatan due to unreasonably low productivity that failed to meet standards set by KCP&L, its owner engineer and its consultants for the project." *See* Drabinski Direct Testimony at p. 118, lines 15-17.

Q: What is your general impression of the Vantage Schedule Analysis?

A: As Company witness Daniel Meyer testifies, the Vantage Schedule Analysis does not follow an accepted or acceptable format for measuring project delays, schedule impacts or productivity losses, and I agree with that testimony. The Vantage Schedule Analysis is not a schedule analysis per se but a recitation of Mr. Drabinski's assessment of whether individual schedule activities were completed "on schedule" or were "late." As such, the Vantage Schedule Analysis is not a proper delay analysis as accepted in the industry because Mr. Drabinski makes no attempt to examine whether the Project's critical path was interrupted and by how much. In further support of my and Mr. Meyer's opinions, I offer a series of industry articles that identify the proper and industry-accepted format for a schedule analysis. *See* Schedule KMR2010-31.

In addition, as with much of the analysis in Mr. Drabinski's direct testimony, the Vantage Schedule Analysis contains incorrect information, statements taken out of context and conclusions not supported by the facts. This is particularly egregious in developing a schedule analysis, because a proper depiction of a construction project's delays depends on an accurate recitation of the facts and circumstances of an alleged delay. Such a depiction must first take into account whether a delay to an activity is on the critical path, and then the delay needs accurate factual substantiation and context. As an example, if an activity in a schedule is not on the critical path and has three months of schedule float or slack, if that same activity finishes two and a half months late, it is unlikely that this would be considered a delay. However, if in explaining this you ignore that there was float on the activity, devoid of such context, one could conclude that the two and half day delay had an actual impact.

In addition, Mr. Drabinski makes no attempt to tie any of the alleged delays in the Vantage Schedule Analysis with any of the disallowances he recommends. Mr. Drabinski makes general statements regarding the consequences of delays, inefficiencies, trade stacking and schedule compression, makes a series of general allegations that such things occurred on the Iatan Unit 2 Project and never ties these general statements to specific increases in the Project's costs. I will further address this below.

Finally, for unexplained reasons, the Vantage Schedule Analysis uses a schedule that purportedly was dated November 10, 2006 for purposes of his comparison instead of the Baseline Schedule, or even the Project's strategic schedule from February 2006. Using a schedule that was printed on a seemingly random date could be misleading. Moreover, KCP&L could not find a schedule that it produced that bears this date. There is a Level 1 schedule dated December 1, 2006 that appears to have the same information that is in the Vantage Schedule Analysis. It should also be noted that Mr. Drabinski chose to examine the Project's schedule from a point when the Level 3 Project Schedule was still in its embryonic stage and the CBE had not yet been approved. In addition, the December 1, 2006 Strategic Schedule clearly identifies the Project's anticipated critical path and the areas with extra time. Mr. Davis testifies as to the development of the Level 3 Project Schedule. The Baseline Schedule that was approved by KCP&L on April 9, 2007 was different from the October 12, 2006 Level 1 Schedule that Mr. Drabinski uses for his comparison.

Q: Has Schiff performed a schedule analysis that compares the "as-planned" schedule with the "as-built" schedule on Iatan Unit 2?

A: Yes. I have attached it as Schedule KMR2010-32.

Q: Can you please explain your analysis?

A: Yes. There are several important pieces of information you can glean from the chart at Schedule KMR2010-32. This chart is a summary of over 15,000 distinct activities and events that occurred on the Iatan Unit 2 Project. The line at the very top establishes the 46 month construction schedule. The first activity was contractor mobilization to the site in August of 2006 and the start of site preparation, with a target in-service date of June 1, 2010. The boiler schedule path began work in early November 2006 with the beginning of the boiler foundation's excavation. The actual in-service was on August 26, 2010, or a delay of 86 days.

The next series of flags and arrows show the Iatan Unit 2 Project's important dates and durations. Critical dates are designated by red flags. The "critical dates" are those that are on the critical path. The "as-planned" schedule" that was used is based upon the April 2007 baselined schedule for the project. The blue flags indicate the as-planned dates, while the yellow flags and the yellow flags are the actual as-built dates. In most instances, the as-built dates were achieved fairly close to the as-planned dates.

There are also two lines that run through the chart—one is a red line that indicates the "Engineering Design Drawing Status", and the other blue and yellow doted line is the "Construction Status". Loosely translated, the "Engineering Design Drawing Status" will give you an approximation of the percentage complete of engineering, and the Construction Status will indicate the percentage complete of construction. Comparing these two lines, it shows that engineering progressed several months ahead of construction. This is a good indication that engineering did not overlap or appear to push construction activities.

Q: Do you agree with Mr. Drabinski that the Vantage Schedule Analysis identifies delays caused by mismanagement during 2006 and 2007?

A: No. The Vantage Schedule Analysis fails in multiple ways to accurately depict the Iatan Unit 2 Project's schedule. Mr. Drabinski alleges that the Project's schedule was impacted in 2006 and 2007 and cites as the following as the alleged impacts from mismanagement:

- "The delayed start of engineering and the procurement of major equipment and services have negatively impacted the overall project schedule by 2 to 4 months."
- "**[redacted]**"
- "**[redacted]**"
- "In late 2009, KCP&L stated that to maintain the then current in-service date of 7/29/10, KCP&L may need to reduce the quality of the startup process, which may negatively impact the quality of the overall project. (Note: this has now been recognized as a major risk and the start-up schedule has been redefined and the schedule has changed again.)"

See Drabinski Direct Testimony at p. 75-76.

However, as I will discuss, Mr. Drabinski does not explain how the above points even tie with those events he attempts to highlight in the Vantage Schedule Analysis on

pages 77 – 81. Because of these and other inaccuracies I will discuss below in more detail, I do not believe that the Vantage Schedule Analysis should be given any regard by the Commission.

Q: Could you identify an inaccuracy in the Vantage Schedule Analysis that you believe is important?

A: Yes. As noted, Mr. Drabinski claims that "the delayed start of engineering and procurement" caused a "2 to 4 month delay" and "**[redacted]**" *See* Drabinski Direct Testimony at p. 75, ll. 14-15. **[redacted]** *See* Drabinski Direct Testimony at p. 77.

Q: Why is Mr. Drabinski's analysis inaccurate?

A: In analyzing this one activity, Mr. Drabinski does not take into account whether the activity had float. The January 16, 2007 finish date was actually the so-called "early finish" date and does not account for the three months of float this activity had in the detailed schedule. Most important is the fact the design was completed to facilitate what was the critical path, the pouring of the boiler foundations, which were completed and turned-over to ALSTOM on August 14, 2007.

Q: **[redacted]**

[redacted]

A: **[redacted]**

[redacted]

[redacted]

[redacted]** To do so, KCP&L needed to obtain ALSTOM's load information, which includes the weight, size, location and character of the components of the boiler so that Burns & McDonnell could engineer an appropriate design and Kissick could construct it. **[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]** And, when KCP&L met the date, we noted that it was a significant accomplishment. It was one of a number of issues that we highlighted as critical that the Project ultimately accomplished or overcame.

Q: Does the Vantage Schedule Analysis attempt to quantify Mr. Drabinski's testimony that "[redacted]** *See* Drabinski Direct Testimony at p. 75.**

A: No. The Vantage Schedule Analysis does not portray impacts to the critical path, without which, Mr. Drabinski's attempts to assign delays that have no actual impact to the project. In addition, as Mr. Meyer testifies, Mr. Drabinski's assertion that "**[redacted]** is factually incorrect in a number of ways. *See* Drabinski Direct Testimony at p. 75.

Q: How does Mr. Drabinski utilize the Vantage Schedule Analysis to support his allegations regarding the contractors' productivity?

A: There is no clear connection in Mr. Drabinski's testimony between the two.

Q: Would you expect there to be?

A: For Mr. Drabinski to support the claims he makes relative to both the alleged schedule impacts and the contractors' productivity, yes.

Q: Turning to Mr. Drabinski's productivity analysis, on pages 116 to 118 of his Direct Testimony, Mr. Drabinski lists certain "ramifications" of low productivity on a construction project and applies those to the Iatan Unit 2 Project. Are you familiar with that testimony?

A: Yes. Mr. Drabinski indentifies schedule compression, congestion and re-sequencing of work as consequences of poor productivity. In theoretical terms, those are known potential consequences on a construction project from poor productivity and other causes of schedule delays. However, where I take exception to Mr. Drabinski is when he states that, "All of these problems occurred at Iatan due to unreasonably low productivity that failed to meet standards set by KCP&L, its owner engineer and its consultants for the project." *See* Drabinski Direct Testimony at p. 118.

Q: On what basis do you disagree with Mr. Drabinski's point?

A: As an initial point, I am not sure what Mr. Drabinski means with respect to "unreasonably low" productivity. He claims that the reasonableness is based upon "standards" set by KCP&L, its owner engineer and its consultants, but does not indicate how a comparison to these "standards" equates to "unreasonable." It is common practice on construction projects is to evaluate and account for those factors that influence productivity and attempt to establish a project-specific "handicap." Mr. Drabinski never does this – he never articulates what the Project's handicap was, let alone what it should have been – instead, hiding behind a general statements of standards set by the project participants but does not ever articulate what that is.

Putting that aside, while Mr. Drabinski constructs a case that the Project's major contractors, ALSTOM and Kiewit, suffered from poor productivity, in making that

judgment he fails to: (1) show the effect that poor productivity had on the Project's schedule that was not expected; (2) **[redacted]**; and (3) quantify the alleged impacts. **[redacted]** While Mr. Drabinski makes general allegations in this regard, he fails to provide the proper proof necessary to show that there were impacts to the Project's schedule or cost.

Q: Mr. Drabinski states several times throughout his testimony that the contractors or KCP&L's management did not meet certain "standards." What is your understanding about what Mr. Drabinski means by "standards?"

A: In Mr. Drabinski's testimony that he filed in the KCC 415 Docket, he refers to "industry standards" in these places. It appears that he has now changed these references to the standards set by the project participants such as Burns & McDonnell and KCP&L's construction management team. In other words, Mr. Drabinski has moved away from an industry standard and basically argued that anything less than perfection is imprudent.

Q: What do you mean by "perfection?"

A: The project participants will set up schedules and budgets for a project that are "targets" or goals for the project. Mr. Drabinski seems to believe that if the project failed to meet those targets, then KCP&L was imprudent. Drabinski's "standard" is unreasonable and does not comport with the applicable law. In order to determine if KCP&L acted reasonably, KCP&L should be measured against industry standards and what other utilities would do under the same or similar circumstances.

Q: How would you define the term "Industry Standard?"

A: We asked Mr. Drabinski this question in Data Request No. 2. In his response, Mr. Drabinski states, the term 'industry standard' means generally accepted requirements followed within the area or specialty in question. *See* Schedule KMR2010-20. Generally, I agree with this definition. Dr. Nielsen also generally refers to industry standards in his rebuttal testimony in the context of industry treatise on specific subjects, such as GAO accounting rules. Industry standards also incorporate an understanding of industry "best practices" where no such treatise exists.

Q: Can there be such a thing as an expected loss of productivity on a construction project?

A: Yes. As I just discussed, contractors evaluate a Project's "handicap" for productivity. Not all work on a complex project such as Iatan Unit 2 can be performed in the same manner. Contractors plan their work with acknowledgement that there are peaks and troughs within the course of every project, and there will be some periods or types of work that will be less efficient than others because it is inherently so. **[redacted]**

Q: Why is that?

A: Because in the Turbine Generator Building, Kiewit would not have to coordinate with other contractors to complete its work, while in the boiler and AQCS, Kiewit's work would have to be carefully sequenced with ALSTOM's. **[redacted]**

Q: What is Mr. Drabinski's position with respect to contractor performance on the Iatan Project?

A: Mr. Drabinski argues that "[a]ll costs associated with unreasonable project inefficiencies should be excluded as imprudently incurred because such costs are due to actions that fell below the standards set by B&McD in its initial budget estimates and KCP&L's CM desire." *See* Drabinski Direct Testimony at p. 116. In essence, Mr. Drabinski is arguing that costs associated with schedule delays are imprudent simply because the contractor was unable to perform in accordance with standards set in a the initial budget estimates or KCP&L's wishes. The "actions" that he is discussing are the contractor's productivity—a factor that is primarily outside of KCP&L's control. Drabinski's argument provides no

basis for understanding how KCP&L's actions influenced contractor productivity, and merely stating that KCP&L's expectations at the Project's outset were disappointed by the contractors' performance does not constitute imprudence on KCP&L's part. .

Our analysis is that the Iatan Project was scheduled and sequenced in a reasonable manner, one that followed both the guidelines within the industry and the collective knowledge of the team that prepared the schedule.. KCP&L's project controls systems alerted KCP&L to problems with productivity early, so KCP&L could proactively work with the contractors to improve productivity and get the schedule back on track. KCP&L's actions included, but were not limited to:

- **[redacted]
- [redacted]**
- Daily project management meetings with the contractors to focus on specific schedule issues;
- Weekly material meetings in which KCP&L sought assurance from the contractors that all materials necessary for field work were in place;
- Re-sequencing of insulation to support start-up activities;
- **[redacted]
- [redacted]**

- Providing additional lay-down yards during the course of the project to facilitate pre-fabrication of the materials; and
- **[redacted]**
- Under the Kiewit Unit 2 Contract KCP&L allowed Kiewit to re-sequence its schedule to move from a system-based to an area-based schedule, allowing Kiewit to install bulk quantities **[redacted]**

Q: Can you identify how much of Kiewit's work on the Iatan Unit 2 Project was expected to be **[redacted]?**

A: **[redacted]** Once the schedule between ALSTOM and Kiewit was integrated and the CTO dates were established for Kiewit to finalize its electrical work plan, **[redacted]**

Q: Mr. Drabinski alleges that, "[redacted]**" (Drabinski Direct Testimony at p. 75) Do you agree with that testimony?**

A: No. As I previously testified, **[redacted]**

Q: **[redacted]**

A: Yes. For the reasons stated, **[redacted]**

Q: In your experience, have you ever seen contractors paid for inefficiencies they encounter where such was expected by the owner?

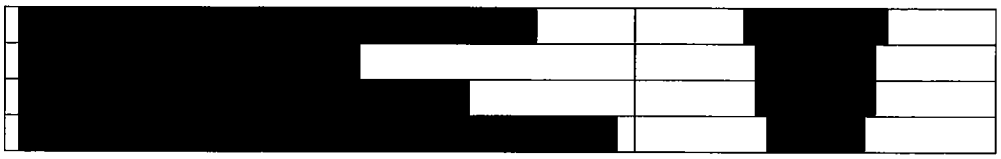
A: Yes. It is very common in the construction industry to factor into a project's manhours such productivity factors. As an example, Schiff has performed oversight on construction and outage work on a number of nuclear power plants, where the workers who are performing inside of containment have to encounter a number of inefficiencies. In those circumstances, the owner has to agree to compensate the contractor for the time it takes for workers to dress and undress in protective suits, take breaks to reduce potential radioactive doses and work in confined spaces. The contractors who perform the work typically identify the "wrench hours" in which the workers are actually working and the expected non-productive hours for doing all those things required to work in such an environment.

Q: You also testified that Mr. Drabinski failed to take into account **[redacted]**

A: On page 117, Mr. Drabinski attempts to quantify the man-hours **[redacted]** though the data he uses is from December 2009 and February 2010.

**[redacted]

[redacted]



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Contrary to Mr. Drabinski's assertions in his testimony, **[redacted]

[redacted]

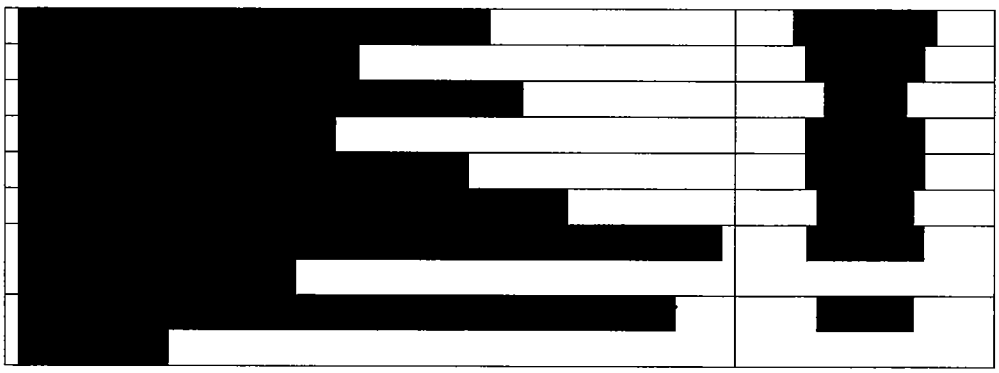
[redacted]** However, ALSTOM also recognized when it was behind schedule the need to add manpower to recover its delayed progress. The records from the Project show that KCP&L's management held ALSTOM accountable to performing, and ALSTOM committed significant resources to do so.

Q: Mr. Drabinski testifies on page 116 that Kiewit "had a contract that provided them with reimbursement for their inefficiency." Do you agree with that statement?

A: No. Mr. Drabinski is incorrect. With respect to Kiewit, the calculation is somewhat different. **[redacted]

[redacted]

[redacted]



** Of that loss, as I previously testified, KCP&L agreed to compensate Kiewit for ** [redacted] ** When those hours are netted out, Kiewit has taken responsibility ** [redacted] ** on Iatan Unit 2.

Q: Your last point relative to Mr. Drabinski's testimony on productivity losses is his failure to draw a nexus between these schedule-related analyses and the disallowances he recommends. What is the basis for your conclusion?

A: Nowhere in Mr. Drabinski's testimony does he attempt to connect this essential causal link. In the sections of his testimony related to his damage calculations, Mr. Drabinski does not make reference to any of these facts.

DRABINSKI'S PROPOSED DISALLOWANCE AMOUNTS

Q: Have you reviewed Mr. Drabinski's proposed disallowances?

A: Yes, I have.

Q: Do you agree with Mr. Drabinski's analysis regarding the proposed disallowances?

A: No, I do not. As I have noted throughout, Mr. Drabinski does not establish that KCP&L acted imprudently. Even if one were to give him the full benefit of the doubt regarding prudence, Mr. Drabinski never connects the alleged imprudent actions and the amounts he designates for disallowance. Mr. Drabinski does not explain why he designated certain POs or change orders as disallowances and disregarded others, nor does he identify how any one of the alleged imprudent actions he cites was the cause of unavoidable cost increases to the Iatan Project. In some instances no analysis was done at all. Rather than itemizing the disallowances, Mr. Drabinski simply takes an

unsubstantiated swath by percentage of the overall cost. Second, I disagree with Mr. Drabinski's methodology of identifying "imprudent actions" on the part of KCP&L. Most of his evidence establishing KCP&L's imprudent actions is a regurgitation of the Schiff Reports, the E&Y audit reports and the STS report. In fact, approximately 46 pages, or 25% of his report is either quoting from or summarizing these reports.

REBUTTAL TO MR. DRABINSKI'S ALSTOM DISALLOWANCE RECOMMENDATION

Q: What is your opinion regarding Mr. Drabinski's proposed disallowance for change orders associated with the ALSTOM contract?

A: Mr. Drabinski's proposed disallowance is unrealistic because it assumes that a fixed-price EPC contract would or should never have change orders. This is simply not true. Mr. Drabinski simply took the increase in cost of the entire ALSTOM contract, subtracted the additional costs due to interest, taxes and the **[redacted]** that was resolved during the Unit 1 rate case, and then decided that all of the remaining change order costs should be a disallowance to KCP&L. Despite all of Mr. Drabinski's testimony behind KCP&L's alleged imprudent actions with respect to the management of ALSTOM, the stated reason behind Mr. Drabinski's disallowance is simply Mr. Drabinski's opinion that **[redacted]** *See* Drabinski Direct Testimony at pp. 147-48. As a result, Mr. Drabinski argues that there should not have been any change orders. Mr. Drabinski is holding KCP&L to an unreasonable and impossible standard, and it certainly does not reflect the "industry standards." I have never heard of a reasonably-priced

lump-sum EPC contract for a project of this size and complexity that did not involve change orders. When preparing its bid, the EPC contractor makes certain assumptions and builds those assumptions into its price. These include the scope of its work, certain design elements, and even pricing specific to a particular type of material or subcontractor. During the bidding phase, the owner and the contractor attempt to identify and discuss all assumptions made by the contractor in its bid; however, issues always arise during the course of construction.

Q: Why is it unreasonable for an owner to expect that the contractor will not issue changes on a fixed price contract?

A: Based upon my experience, no contractor would knowingly bid on a job that does not allow it flexibility to manage subsequent changes. Typical and legitimate change order requests on fixed-price contracts include, among others, the following: 1) additional amounts for changes in scope or to the express requirements in the Technical Specifications that were issued by the owner as a part of the Request for Proposal ("RFP") and incorporated into the contract; 2) hidden or changed site conditions from what was assumed in the contractor's contract; 3) a directive by the owner to change the contractor's assumed construction means and methods; 4) directives by the owner for the contractor to change material and/or subcontractors that formed the basis of the contractor's fixed price; 5) force majeure events that are beyond the control of the contractor or the owner (including delays caused by weather); and 6) additional costs for delays not due to the fault of the contractor.

Q: The ALSTOM contract required ALSTOM to design, procure and construct the AQCS and boiler. Why is it unreasonable to assume that any and all costs associated with those two systems should be ALSTOM's responsibility?

A: The scope of ALSTOM's work is tied to the technical specifications that are attached to ALSTOM's contract. This is a document that is 1,874 pages long. It would be impossible to write this document so that disputes regarding ALSTOM's scope and responsibility under these specifications did not arise at some point during the project. Additionally, there were some scopes of work that were not included in the technical specifications and neither ALSTOM nor KCP&L contemplated that ALSTOM would be performing that scope of work. It was not imprudent or unreasonable for certain scopes of work to have been excluded from ALSTOM's contract.

Q: Mr. Drabinski recommends for disallowance **[redacted] Do you agree with Mr. Drabinski that this was an imprudent agreement on the part of KCP&L?**

A: No, for the all of the reasons I stated in by Rebuttal Testimony, which are applicable to Mr. Drabinski's disallowance recommendation as well.

Q: **[redacted]**

A: **[redacted]

[redacted]

[redacted]**

Q: **[redacted]

[redacted]

[redacted]

[redacted]**

A: **[redacted]

[redacted]

[redacted]

- [redacted]

- [redacted]

[redacted]**

REBUTTAL TO MR. DRABINKSI'S KIEWIT DISALLOWANCE RECOMMENDATION

Q: Please describe Mr. Drabinski's recommended disallowance associated with the Kiewit Contract.

A: As an initial matter, I think it is important to point out that Mr. Drabinski states that "KCP&L's decision to shift from a Multi-Prime strategy to a fixed price contract with time and material adders based upon Unit Prices, was the most effective and least cost approach to support the BOP Work." *See* Drabinski Direct Testimony at p. 155. In other words, Mr. Drabinski agrees with KCP&L's decision to hire Kiewit in 2007. Mr. Drabinski's recommended disallowance is focused on one source: the cost increases associated with the Kiewit Unit 2 Contract Amendment.

Q: Do you agree that the costs associated with the Kiewit Unit 2 Contract Amendment should be disallowed by the Commission?

A: No. While the Kiewit Unit 2 Contract Amendment did add costs to the Kiewit contract price, these costs were not increased due to any imprudent action on the part of KCP&L. When the Kiewit contract was initially entered into, both parties knew and acknowledged that design was only 20-25% complete at that time and changes to the contract would occur.

Additionally, KCP&L received several benefits through its negotiations with Kiewit over the Contract Amendment.

Q: Please describe the benefits KCP&L received as a result of the Kiewit Unit 2 Contract Amendment?

A: KCP&L received several benefits under the Kiewit Unit 2 Contract Amendment. **[redacted]

- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]**

Q: Do you believe that the Kiewit Contract Amendment has resulted in savings to KCP&L that would not have been available under Kiewit's Original Base Contract?

A: Yes. **[redacted]

[redacted]** *See* Schedule KMR2010-35.

**Q: **[redacted]

[redacted]** **Do you agree that Kiewit's delays and schedule issues were caused by imprudent management by KCP&L?**

A: No. Company witness Brent Davis discusses KCP&L's overall prudent management of the Kiewit contract in his testimony. In arguing that Kiewit's delays and schedule issues were caused by imprudent management by KCP&L, Mr. Drabinski again primarily relies

on his argument that KCP&L took an unreasonable risk by executing the project on an EPC-hybrid, multi-prime basis. As I have previously testified, Mr. Drabinski is overlooking the fact that KCP&L may not have been able to find a contractor that would perform the work on a fixed-price basis, or if it had, that KCP&L would have paid a significant premium. Any costs paid by KCP&L for schedule compression, congestion or re-sequencing should be subtracted from this expected premium. Despite Mr. Drabinski's contention, Kiewit did not have a contract that reimbursed Kiewit for inefficiencies caused by Kiewit. **[redacted]** This means that while KCP&L paid Kiewit for impacts caused by ALSTOM, Kiewit took responsibility for its own schedule and productivity issues pursuant to the requirements in its original Contract.

Q: What other criticisms of ALSTOM and Kiewit does Mr. Drabinski discuss in his testimony?

A: Mr. Drabinski argues that ALSTOM and Kiewit have had major problems that were not resolved to "acceptable industry standard" and caused schedule issues. However, the "key factors" he lists do not support his conclusion.

- **[redacted]** However, CPI has no bearing on schedule issues. CPI is an indicator of cost only and does not illustrate how ALSTOM is actually progressing on the schedule. SPI is a more important measure of ALSTOM's work on the schedule because it indicates how many

hours ALSTOM was able to earn versus its planned hours. According to Mr. Drabinski's own data reported on Page 91 of his testimony, **[redacted]**

- Mr. Drabinski criticizes ALSTOM's 8:1 craft-to-staff ratio but does not cite any data or industry publications that indicate that such a ratio is "below industry standard." The fact that KCP&L recognized that ALSTOM needed to improve its craft-to-staff ratio and proactively worked with ALSTOM to improve it shows prudent management on KCP&L's part. Although ALSTOM's 8:1 craft-to-staff ratio is higher than Kiewit's level of 6:1, it is not unreasonable.

Q: Does that conclude your testimony?

A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to Continue the Implementation of Its Regulatory Plan	)))	Docket No. ER-2010-0355
In the Matter of the Application of KCP&L Greater Missouri Operations Company to Modify Its Electric Tariffs to Effectuate a Rate Increase	)))	Docket No. ER-2010-0356

AFFIDAVIT OF KENNETH M. ROBERTS

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

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

1. My name is Kenneth M. Roberts. I am a partner with the firm of Schiff Hardin LLP. Kansas City Power & Light Company engaged the services of Schiff Hardin LLP to provide certain services in connection with the company Comprehensive Energy Plan construction projects.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal Testimony on behalf of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company consisting of one hundred two (102) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

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

Kenneth M. Roberts

Subscribed and sworn before me this 13th day of December, 2010.

Joanne M. Smith
Notary Public

My commission expires: 7-23-12

OFFICIAL SEAL
JOANNE M. SMITH
Notary Public - State of Illinois
My Commission Expires Jul 23, 2012