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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

SURREBUTTAL TESTIMONY

OF

ARTHUR W. RICE, PE

Great Plains Energy, Incorporated

KCP&L GREATER MISSOURI OPERATIONS COMPANY

FILE NO. ER-2010-0356

Jefferson City, Missouri
January, 2011

Staff Exhibit No. GMO-239
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FILE NO. ER-2010-0356

Q. Please state your name and business address?

A. My name is Arthur W. Rice and my business address is Missouri Public Service Commission, P.O. Box 360, Jefferson City, MO 65102.

Q. What is your position with the Staff ("Staff") of the Missouri Public Service Commission ("Commission")?

A. I am a Utility Regulatory Engineer I in the Engineering and Management Services Department of the Utility Services Division.

Q. Are you the same Arthur W. Rice that previously filed testimony in this proceeding?

A. Yes, I am. I filed testimony on November 17, 2010 contributing to Staff's Cost of Service ("COS") Report and rebuttal testimony on December 15, 2011. I also filed testimony in the Kansas City Power & Light Company ("KCPL" or "Company") rate case, File No. ER-2010-0355. In File No. ER-2010-0355 I contributed to Staff's COS Report filed on November 10, 2010, I filed rebuttal testimony on December 8, 2010, and I filed surrebuttal testimony on January 5, 2011

Corrections to Rebuttal Testimony of Arthur Rice

Q. Do you have corrections or omissions to your rebuttal testimony?

A. Yes. For MPS, the sum total of reserve amortizations to correct for over or under accrued reserves shown at the bottom of Schedule AR-MPS-1 as negative $760,000 should be corrected to read a negative $2,732,000.

PURPOSE AND SUMMARY

Q. What is the purpose of this testimony?

A. KCP&L Greater Missouri Operations ("GMO") submitted a depreciation study conducted by John Spanos, however in the direct testimony of John P. Weisensee at pages 48 and page 50, GMO requests continuation of the existing depreciation rates, except for Mr. Spanos' request for Iatan 2, and Mr. Spanos' request to switch to Amortization Accounting for selected General Plant accounts. Nonetheless, Mr. Spanos has submitted rebuttal testimony to Staff's recommendations generally alleging the superiority of his study. I will address issues raised in Mr. Spanos' rebuttal testimony, specifically:

Whole Life versus Remaining Life Depreciation Rates

Applicability of the Life Span Approach To GMO's Generation Fleets

Iatan 2 Life Span

Net Salvage and Over Accrual of Reserves For MPS and L&P

General Plant Account Balances and Depreciation Treatment

Q. Have you compared the depreciation rates proposals by GMO and Staff?

A. Yes. I present this comparison as attached schedules ARs-MPS-1, ARs-L&P-1, and ARs-ECORP-1.

Q. Have you compared the overall depreciation expense requested by GMO to the depreciation expense recommended by Staff?

A. Yes. Staff used plant balances from the Staff EMS runs (January 3, 2011 update) to compare GMO's request to the Staff-recommended depreciation expense. For overall GMO, the Company request results in a higher annual depreciation expense than the Staff recommendation by $9,489,163. Of this total amount, $4,956,871 is from MPS and $4,532,292 from L&P. A breakdown of these results for MPS, and L&P, including ("ECORP") are shown in attached Schedules ARs-MPS-4, ARs-L&P-4.

Whole Life versus Remaining Life Depreciation Rates

Q. What is Staff's response to Mr. Spanos' statement on page 12, line 15 that "[t]he whole life method has no checks for full recovery, over-recovery, or under-recovery." ?

A. Mr. Spanos' statement is an oversimplification. It is true that the whole life method requires periodic manual intervention to balance recovery. Staff recognizes that the whole life method does not automatically correct for over or under recovery. Staff's manual approach is to review the theoretical calculated reserves versus the book reserves, make an informed judgment as to why the over or under reserve condition exists, and recommends appropriate action.

Q. What actions can be taken to correct an over or under recovered reserve in the context of a whole life study?

A. In the implementation of its study in a given case, Staff may recommend to the Commission a transfer of reserves from over accrued accounts to under accrued accounts, a fixed specific reserve amortization, the use of a remaining life rate, or that an over or under accrual should remain in place due to expected future events.

Q. Does use of remaining life introduce undesirable effects?

A. Yes. A remaining life rate is applied against the plant balance and will result in an unintended change in the reserve correction every time an addition or retirement occurs. This effect will produce unintended results in an account containing older equipment that has a remaining life that is less than the 3 to 5 year depreciation review cycle. The distorted rate may be applied to the replacement equipment.

Q. Is Staff recommending a transfer of reserves in this case?

A. No.

Q. Is Staff recommending remaining life rates be used in this case?

A. No.

Q. Is Staff recommending fixed amortizations to correct for individual account and overall plant over or under accrual of reserves?

A. Yes. For MPS and L&P, the specific amortization recommendation for each account is shown on the attached Schedules ARs-MPS-1 and ARs-L&P-1.[1] Schedules ARs-MPS-1, and ARs-L&P-1 show, for each plant account, the recommended whole life depreciation rate, the reserve amortization, and an effective depreciation rate as a result of applying the reserve amortization. Staff accounting plant balances for December 31, 2010 were used to evaluate the effective rate. These Staff plant balances include the Iatan 2 plant assigned to MPS (53 MW) and L&P (100 MW).

Q. Does Staff view the use of a whole life rate with fixed amortizations to correct for reserve imbalances as superior to the use of remaining life rates?

A. Yes. Staff recommends the use of whole life depreciation rates with fixed amortization for the following reasons:

[1] Surrebuttal Schedules ARs-MPS-1 and ARs-L&P-1 are modified direct testimony schedules AR-MPS-1 and AR-L&P-1 to show Iatan 2, and a correction to the total reserve amortization for MPS.

1. Whole Life rates show the current consumption of capital and provide a direct comparison for review with prior rate case or other company depreciation rates, where remaining life rates do not,
2. Whole life rates provide a more consistent depreciation accrual in accounts where large changes in balances may occur due to unforeseen (at the time of a rate case) additions or retirements, where remaining life rates do not,
3. Amortization assigned in conjunction with whole life rates allow setting a fixed time to apply the amortization, where remaining life rates use a separately calculated "remaining life" time period for each account, and
4. A fixed amortization is a correction applied against the current reserve imbalance, where a remaining life rate is applied against the plant balance and will result in an unintended change in the correction every time an addition or retirement occurs.

Applicability of the Life Span Approach To GMO's Generation Fleets

Q. What assumptions are inherent to Mr. Spanos' life span approach??

A. The assumptions inherent in Mr. Spanos' life span model are listed in his rebuttal testimony starting at page 2, line 18:

> During the life of **a** power plant, interim **additions**, replacements, and retirements occur regularly. At the time of final retirement of **a** power plant, **all** of the structures and equipment are retired, regardless of whether they were part of the original installation or were added as recently as a year or two prior to the plants retirement.
> *(emphasis added)*

Q. Are these assumptions consistent with the actual consumption of plant in service at GMO production facilities?

A. No. These assumptions are not applicable to GMO's actual consumption of plant for several reasons. First, regarding Mr. Spanos' reference to "**a** plant," most of the power plant units at GMO are situated at a facility with multiple units. Mr. Spanos has recommended different retirement dates for individual units within facilities that contain multiple units with common facilities. Thus, it is inappropriate to evaluate single plants apart from the infrastructure they share with additional plants at the same facility.

Second, regarding the reference to "**all** of the structures and equipment". GMO's history shows retirement of individual steam production units in a facility without retiring all of the original equipment. Thus, it is inappropriate to assume retirements will occur in a pattern going forward that is inconsistent with GMO's actual retirement history.

Q. Can you provide an example of retirement where all equipment was not removed from service concurrently with the retirement of a production unit?

A. Yes. The 81 year old Grand Avenue Station facility still produces steam heat as a regulated utility company– albeit under different ownership, where steam heat is provided using the structures, boilers, coal handling equipment, and miscellaneous auxiliary equipment originally in service as a KCPL steam electrical production plant. For Hawthorn 1, 2, 3, and 4, retired in 1984, the coal handling yards, ash handling and site general infrastructure continue to be used. The original Hawthorn 4 steam turbine with associated condensate, cooling water, steam piping, vacuum system, generator, and other electrical auxiliaries are incorporated into a combustion turbine combined cycle unit at its original location and continue as plant in service. At Ralph Green, the original structure built in 1918 and used by predecessor Green Light and Power Company to house steam production equipment continues to be used as a warehouse and lay-down area for maintenance and construction projects by GMO. For the Ralph Green steam

production units 1 and 2 retired in 1982, the original auxiliary building and facilities used for offices, maintenance shop and auxiliary equipment is still in use to support the combustion turbine installed at that site. The office space is used as a control room for a combustion turbine now at that site. The original maintenance shop and shop equipment are still in use. And the auxiliary spaces are used to house and support the operation of a sophisticated water purification and storage system that provides purified water for injection to the combustion turbine air intake for NOX control and increased power rating of the unit. In general, some of the site infrastructure, (roads, landscaping, security fencing, sewers, storm water drainage, and often the original plant structures and auxiliary buildings), continue to be used and useful at all of the facilities where steam production equipment has been retired.

Q. What is significant about the word "**additions**" in Mr. Spanos' above statement?

A. Mr. Spanos statement assumes that the eventual retirement of additions made after the original installation, (as well as the retirement of equipment added only a year or two prior to retirement), will only be properly represented if a life span model is used. Staff disagrees. The mass asset depreciation modeling that Staff used does account for additions and recently installed replacements. Staff modeled the retirement history of the entire fleet, this includes all of the past plant history available for units both still in operation and for units which have been removed from service. The retirement of short-lived replacement equipment is captured by Staff's inclusion of final retirements recorded for prior production plant units when they were taken out of service. Staff used mass asset modeling that includes retirements occurring over the full life cycle of plant units. For KCPL and GMO, the history contains approximately 34 steam production units, 18 of which have been retired. Staff obtained from the Company final retirement history for approximately 13 of these shut down individual units. Short-lived

equipment retirements, represented as a fraction of original cost, are recognized as short lived vintages in the mass asset depreciation model used by Staff. Actual historical data is used by Staff to represent final retirements, as opposed to Mr. Spanos' life span model which strips out all final retirement history from the data to be analyzed, replaces the historical data with an estimated retirement date, and forcing the model to retire all plant in service at that date.

Q. Mr. Spanos includes in his rebuttal testimony a portion of text from page 141 of a manual titled Public Utility Depreciation Practices, published in 1996 by the National Association of Regulatory Utility Commissions ("NARUC"), which states "The following classes of utility property may be most appropriately studied under th[e lifespan] method, taking into consideration the availability of plant accounting data, and particularly the number units of property involved: buildings, electric power plants". Does Staff agree with the interpretation Mr. Spanos has placed on this text?

A. No. Staff interprets this reference to life span as an alternative method due to the word "may" contained in the text. With respect to the "availability of plant accounting data, and particularly the number of units of property involved;" Staff has found final retirement data available and useful, and Staff included in its respective depreciation studies for KCPL and GMO the final retirement data provided by the Company for 13 retired steam production units . The results obtained from using this retirement data as three separate groups of units for KCPL, MPS, and L&P produced relatively consistent results across all three companies.

Q. Does all of the above discussion of life span treatment apply to GMO's fleet of combustion turbine production units?

A. No. With respect to the use of a final retirement history, KCPL and GMO have no combustion turbine units which have been removed from service.

Q. Is Staff's deprecation modeling for GMO using mass asset accounting for combustion turbines consistent with the recent Commission order in Union Electric Company d/b/a AmerenUE Case No. ER-2009-0036?

A. Yes.

Q. Why does Staff recommend the use of mass asset depreciation modeling for the fleet of combustion turbines if the retirement history does not contain retirements from where a combustion turbine unit has been shut down with the retirement and disposal associated assets?

A. Staff has sufficient evidence to indicate the combustion units will not be shut down as a whole unit with all associated support assets at one date anytime in the foreseeable future. Combustion turbines for production are generally installed and operated in multiple units, mostly at facilities containing other associated and similar industrial equipment. Combustion turbines are also installed as individual units at remote substations to provide emergency power or additional power only when the overall load conditions are stressing transmission. It is not reasonable to estimate a life span for these individual emergency power substation units that are operated more often to just test their operability as opposed to actually providing power. Because these remote units are not going to wear out anytime soon, it is not appropriate to treat them as dying accounts. For both the multiple and single unit installations, GMO replaces individual components and systems at these facilities to keep the individual units updated. Pieces and facility systems are periodically replaced, not the units as a whole. Thus all retirements are recorded as interim retirements and are represented in the mass asset depreciation study.

Q. What evidence does Staff have to support the use of mass asset living account treatment of combustion turbine fleet production equipment?

A. As discussed in the Staff's report and in rebuttal, GMO's practice is to treat its fleet of combustion turbines as a whole living account, as opposed to as multiple segregated dying accounts.

Q. On page 6 of Mr. Spanos testimony he describes addition and retirement activity over a power plants life. How do Staff's and Mr. Spanos' depreciation models differ?

A. Mr. Spanos uses a model where after 40 or 50 years it becomes uneconomic to continue to make improvements. Staff observes the Company's practice with respect to turbine generator production facilities is to replace sections of the installation as economic opportunities are revealed. This keeps the whole plant, units and facility, operating with a combination of newer and older systems as a combination of best economics. This a rolling replacement spread out over many years, not a wholesale shutdown and retirement of whole production units.

Iatan 2 Life Span

Q. Starting at page 17 of Mr. Spanos' rebuttal testimony, Mr. Spanos requests use of a life span depreciation method and an estimated life of 50 years for Iatan 2. Do you agree with Mr. Spanos' proposal?

A. No. Mr. Spanos has based his request for Iatan 2 on an inappropriately short projected life span. Mr. Spanos' rational in initially specifying this short life span is to increase depreciation expense in the early years of the plant's life. Mr. Spanos' explanation is that a shorter initial life estimate used for a new plant will increase the initial depreciation expense and tend to smooth this expense over the total life of a plant that may suffer a requirement for a major modification or early retirement. Staff does not support that additional cost should be placed on current users for demands and requirements added in future years by future users.

Current users already pay rates for expected future replacement of worn components and routine modifications in the form of interim retirements and cost of removal.

Q. Does Staff agree with Mr. Spano's example in which he alleges the equitability of charging current users higher depreciation expense?

A. No. To illustrate the flaws in his example, consider the following example that illustrates how Staff actually calculates depreciation expense. A 50 year expected life yields a simple 2% depreciation rate as used in Mr. Spanos' example. But we know worn parts and routine modifications occur causing interim retirements, and the depreciation study takes these into account. For KCPL and GMO these interim retirements for steam plant equipment would add approximately another 0.7% to this rate. Collections for future cost of removal of steam plant adds another 0.3% for the major accounts. Adding all three components of the depreciation rate results in the current rate payers paying a 3% rate, this is 150% of the straight 2% simple rate Mr. Spanos uses through his example. To ask the current rate payers to pay even more by shortening the expected life span 10 years to cover additional demands that might be made by future rate payers is not reasonable.

Q. Is GMO's depreciation request for Iatan 2 consistent with its request for Iatan 1?

A. No. It is inconsistent with life span recommended by Mr. Spanos for Iatan 1. Mr. Spanos recommends a 50 years life span for Iatan 2 while recommending a 60 years life span for Iatan 1.

Q. If the Commission chooses to treat Iatan 2 using a life span method of analysis as advocated by Mr. Spanos, does Staff recommend modifications to Mr. Spanos' study to provide a better estimated prediction of the proper rate of return of shareholder capital?

A. Yes. If the Commission adopts Mr. Spanos' request to treat Iatan 2 as separate from other GMO steam production equipment using life span treatment for deriving depreciation rates, Staff recommends that the Commission extend the life span Mr. Spanos proposes from a 50 year to a 60 year life span. Staff recommends a 60 year life estimate consistent with life estimates for coal fired steam production plants in Missouri. Staff bases its 60 year life estimate on observations of the estimated lives of other regulated utility coal fired steam production plants currently in service in Missouri. Attached Schedule ARs-Sur-3 is a table showing an average expected life of 64 years for 24 steam production units currently in service in Missouri. The 60 year estimate recommended by Staff life for Iatan 2 is reasonable in comparison to the 64 year average for other Missouri plants, and is also consistent with the recent decision by the Kansas Corporation Commission ("the Kansas Commission") for Iatan 2.

Net Salvage and Over Accrual of Reserves For MPS and L&P

Q. Does Staff agree with Mr. John Weisensee's recommendation to keep the existing ordered depreciation rates for all accounts other than Iatan 2 and selected general accounts?

A. No. Staff recommends generally updating the depreciation rates for plant accounts to reflect the depreciation study conducted by Staff, which used Company-provided historical retirement data through December 31, 2008. Attached tables ARs-MPS-1, ARs-L&P-1, and ARs-ECORP-1 compare the Company proposal to the Staff recommended depreciation.

Q. What justifies changing from the current ordered depreciation rates?

A. Several factors point towards updating the bulk of the depreciation rates in this case.[2]

1. The overall plant depreciation reserve for MPS and L&P are over accrued. Total accumulated depreciation reserve is estimated to have accrued $167,000,000 more than the appropriate reserve balance, $93,500,000 for MPS and $73,500,000 for L&P, as shown in Schedules ARs-MPS-2 and ARs-L&P-2 attached to this testimony. As of December 31, 2008, MPS and L&P combined book reserve was approximately $908,000,000 with a calculated theoretical reserve of $742,000,000. This theoretical $742,000,000 includes reserves for future retirements and future cost of removal.
2. Recent retirement records of cost of removal have resulted in significant changes in the net salvage (cost of removal) recommendations versus the net salvage used to establish the current ordered depreciation rates.
3. Changes in plant operations have resulted in changes in retirement patterns over time. Examples of this can be seen in the Schedule ARs-L&P-1 to this rebuttal testimony. Staff's current whole life depreciation rate recommendations in this rate case for combustion turbine prime movers and generators (accounts 343 and 344) are approximately 50% lower than current ordered rates due to longer expected lives. And for account 312.02 (Boiler Plant AQC) the recommended rate has increased by approximately 50% due to retirements of pollution control equipment that no longer meets regulatory requirements.

[2] Staff does not recommend updating the rates for the General Plant Accounts. These are the accounts for which GMO has requested amortization treatment. This is discussed more fully in Staff's Report, rebuttal testimony, and in this testimony, below.

Q. How does Staff recommend correction of the over-accrual problem?

A. Staff's recommendation for each account consists of two parts, a depreciation rate and a reserve amortization. The depreciation rate shown is a whole life rate that represents the current rate of capital consumption. The amortization is a fixed amount intended to correct for over- or under-accrued reserves in each account over the remaining expected life of the current investment in each account. A specific amortization period is not specified. It is intended that book reserves versus theoretical reserves and the amortization amounts will be reviewed during the next depreciation study and any changes to the amortization as well as any changes to the depreciation rate would be recommended within a future rate case. In summary, combination of the two parts produces an effective depreciation rate that is the equivalent of a remaining life depreciation rate for the current plant balance and continues until the next rate case review of depreciation.

Q. How does Staff recommend addressing the Cost of Removal discrepancies?

A. The recent depreciation study updated depreciation rates includes an updated net salvage (cost of removal) component. These updates should be reflected in the ordered rates for recording collections of future cost of removal. This is also relevant to General Accepted Accounting Principles ("GAAP") accounting to satisfy the Securities and Exchange Commission requirements to disclose non-legal regulatory assets and liabilities.

Q. How does Staff recommend acknowledging changes in plant operations?

A. In general, the Staff recommended depreciation rates should be ordered to replace the prior ordered rates due to changes in plant operations that have resulted in changes in retirement patterns over time. It is best regulatory practice to update the depreciation expense rate at the account level to reflect observed changes in retirement patterns.

General Plant Account Balances and Depreciation Treatment

Q. As a justification for Staff's recommendation to continue with current rates for some General Plant accounts, Mr. Spanos states, starting at page 14 of his GMO rebuttal testimony: "The only explanation I can offer is that Staff overlooked the retirement of assets associated with office consolidations and relocations, which has consequently produced unrealistic rates. Not using the recent retirement data and applying outdated rates seems to be inappropriate in order to avoid recommending General Plant amortization which would not have this issue." Does Staff agree with this statement?

A. No. Staff has not overlooked the retirements related to office consolidations and relocations. GMO has not demonstrated the benefit to ratepayers of those retirements related to relocations, nor which retirements are more appropriately booked to synergies resulting from the acquisition of Aquila, Inc. ("Aquila") by Great Plains.

Q. Why does Staff oppose GMO's request to switch to an Amortization method of depreciation accounting and booking the resultant retirements to plant and reserves to fit the amortization period chosen?

A. Staff has several reasons, they are:

1. The Company claims additional retirements need to be recorded to books for some of these General Plant accounts, but has not provided an inventory of plant in service to show what needs to be retired from the books. Staff believes the retirement history in its current form does not reasonably represent the actual consumption of plant, and is thus not reliable to estimate the depreciation rate assignments for these accounts. Without a reasonable retirement history record, there is insufficient evidence to support the amortization periods the Company has chosen.

2. Staff believes retirements have been taken in some of these accounts which resulted from the Aquila acquisition that should be recorded to synergies accomplished due to the acquisition, and not to depreciation expense through early retirements in these accounts.

3. Staff does not agree with the Company request to increase depreciation expense with an amortization for unrecovered plant when other accounts are over-accrued. For MPS and L&P, Staff recommends a balancing of reserves by transferring excess depreciation reserves from Transmission Plant to cover any deficiency in General Plant reserves. For ECORP, Staff suspects a significant portion of any alleged unrecovered plant are chargeable as synergies to the Aquila acquisition.

Q. Does Staff agree that GMO should be allowed an increase depreciation expense to recover a claimed deficiency in reserves in the General Plant accounts?

A. No. GMO has an overall excess accumulated depreciation reserve on the order of $167,000,000 for MPS and L&P. Requesting additional funds in rates for an alleged $28,016,296 due to the book retirement of property in some of the General Plant accounts which are alleged to have been removed from service in years past is not reasonable.

Q. Why does Staff recommend staying with the current depreciation rates if Staff believes the current rates do not reflect the actual consumption of current plant in service?

A. The current rates do reflect what is recorded on the books. A low depreciation rate for an inflated plant balance produces approximately the same depreciation accrual (expense) as an increased rate on a reduced plant balance.

Q. Should Iatan 2 steam production accounts be segregated from the remainder of the GMO fleet for depreciation purposes?

A. No. While Staff's depreciation recommendation in the KCPL rate case, File No. ER-2010-0355 recommends the segregation of Iatan for matters related to accumulated additional amortizations collected pursuant to KCPL's Experimental Regulatory Plan, that issue is not relevant to GMO's rate case.

What should the Commission Order

Q. What are Staff's recommended deprecation rates for GMO?

A. The Staff recommended depreciation rates (a whole life rate coupled with an amortization for each account) is shown on Schedules ARs-MPS-1, ARs-L&P-1 and ARs-ECORP-1 filed with this rebuttal testimony.

Q What does the Commission need to order in this case to implement Staff's depreciation recommendation?

a. That GMO utilize the deprecation rates and reserve amortizations contained in schedule ARs-MPS-1, ARs-L&P-1 and ARs-ECORP-1. These rates are premised on:
   i. Treatment GMO's steam generation fleet as a living account, with mass asset, whole life depreciation rates
   ii. The depreciation rates for General Plant account numbers 391, 393, 394, 395, 397 and 398 remain the same as ordered in Case No. ER-2005-0329.
   iii. Treatment of GMO's combustion turbine generation fleet as a living account, with mass asset, whole life depreciation rates, which include an allowance for interim and final retirements.

b. That GMO be ordered to:
   i. Conduct an inventory of the property in General account numbers 391, 393, 394, 395, 397, and 398 and retire equipment from the books that is found to be not used and useful within six (6) months of the date of the Report and Order for this case,
   ii. Provide a list to Staff of all items retired from these accounts, transfers into or out of these accounts, starting at the date of the acquisition by Great Plains Energy through December 31 2010, showing a description of the item retired, the date of retirement, the date the item was placed in service, and the amount of the original cost. For items found to have been retired early due to the acquisition, conduct a reconciliation to the reserve accounts such

that the un-depreciated portion of the retirement that was taken is added back into the respective reserve account. Provide this information to Staff within six (6) months from the date of the Report and Order for this case,

iii. Work with Staff to determine the amount, if any, of reserves is to be transferred from the Transmission Plant Reserve accounts to the General Plant reserves accounts to cover any unrecovered General Plant. This transfer of reserves, if any, is to be completed within nine (9) months of the date of the Report and Order for this case.

Q. Does this end your surrebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of KCP&L Greater Missouri Operations Company for Approval to Make Certain Changes in its Charges for Electric Service	))))	File No. ER-2010-0356

AFFIDAVIT OF ARTHUR W. RICE, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Arthur W. Rice, PE, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Surrebuttal Testimony in question and answer form, consisting of 18 pages to be presented in the above case; that the answers in the foregoing Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Arthur W. Rice PE
Arthur W. Rice, PE

Subscribed and sworn to before me this 12th day of January, 2011.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

D. Suzie Mankin
Notary Public

KCPL Greater Missouri Operations
File No. ER-2010-0356

Company versus Staff Depreciation Proposals

USOA Account	Sub Account	MPS PROPOSAL Assigned Net Salvage %	MPS PROPOSAL Proposed Depreciation Rate	STAFF PROPOSAL Assigned Net Salvage %	STAFF PROPOSAL Effective** Depreciation Rate %	STAFF PROPOSAL Proposed Reserve Amortization $	STAFF PROPOSAL Proposed Depreciation Rate %
STEAM PRODUCTION PLANT							
311	Structures and Improvements	(1)	1.87	(20)	1.14	(516,000)	1.85
312	Boiler Plant Equipment	(5)	2.17	(30)	2.62	(1,087,000)	2.89
312.02	Boiler Plant AQC	(5)	2.15	(30)	2.89	2,000	2.89
314	Turbogenerator Units	(2)	2.33	(15)	2.46	(362,000)	2.87
315	Accessory Electrical Equipment	(3)	2.39	(10)	1.32	(243,000)	2.20
316	Miscellaneous Power Plant Equipment	(3)	2.57	(10)	2.50	(6,000)	2.69
IATAN 2 PRODUCTION PLANT							
311	Structures and Improvements	20	2.56	Same as other steam production above & Note 1			
312	Boiler Plant Equipment	15	2.77	Same as other steam production above & Note 1			
314	Turbogenerator Units	10	2.64	Same as other steam production above & Note 1			
315	Accessory Electrical Equipment	10	2.80	Same as other steam production above & Note 1			
316	Miscellaneous Power Plant Equipment	0	2.45	Same as other steam production above & Note 1			
OTHER PRODUCTION PLANT (Combustion Turbines)							
341	Structures & Improvements	(5)	1.75	(5)	1.66	(18,000)	1.75
342	Fuel Holder & Accessories	(5)	3.49	(10)	2.12	(32,000)	2.44
343	Prime Movers	(6)	4.81	(10)	4.49	133,000	4.40
344	Generators	(6)	3.80	(5)	2.49	(212,000)	3.00
345	Accessory Electrical Equip	(5)	2.85	(10)	2.31	(46,000)	2.44
346	Misc Power Plant Equipment	0	3.57	0	3.94	2,000	3.13
TRANSMISSION PLANT							
352	Structures and Improvements	(10)	1.83	(5)	1.67	(6,000)	1.75
353	Station Equipment	(2)	1.70	(10)	1.70	(185,000)	1.89
354	Towers and Fixtures	0	1.85	(20)	0.94	(4,000)	2.18
355	Poles and Fixtures	(61)	2.93	(60)	3.08	45,000	3.02
356	Overhead Conductors	(44)	2.32	(50)	2.37	(26,000)	2.42
358	Underground Conductors	(22)	2.49	0	2.00	0	2.00
DISTRIBUTION PLANT							
361	Structures and Improvements	0	1.61	(5)	1.71	(3,000)	1.75
362	Station Equipment	0	2.08	(10)	1.99	(241,000)	2.20
364	Poles, Towers and Fixtures	(79)	3.89	(75)	4.22	693,000	3.73
365	Overhead Conductors	(31)	2.18	(35)	2.21	(110,000)	2.32
366	Underground Conduit	(12)	1.70	(20)	2.01	6,000	2.00
367	Underground Conductors	(22)	2.49	(15)	2.19	(119,000)	2.30
368	Line Transformers	(14)	3.45	(15)	3.17	(193,000)	3.29
369.01	Services - Overhead	(100)	3.64	(100)	3.29	(33,000)	3.50
369.02	Services - Underground	(16)	3.05	(25)	3.10	(93,000)	3.29
370	Meters	(6)	2.00	(5)	1.82	(134,000)	2.33
370.01	Meters - Load Research	0	7.14	0	0.00	(127,000)	6.25
371	Installations on Customer Prop	(33)	5.12	(20)	2.95	(178,000)	4.14
373	Street Lighting, Signal Systems	(8)	3.18	(5)	4.00	5,000	3.98

KCPL Greater Missouri Operations
File No. ER-2010-0356

Company versus Staff Depreciation Proposals

USOA Account	Sub Account		MPS PROPOSAL Assigned Net Salvage %	MPS PROPOSAL Proposed Depreciation Rate	STAFF PROPOSAL Assigned Net Salvage %	STAFF PROPOSAL Effective** Depreciation Rate %	STAFF PROPOSAL Proposed Reserve Amortization $	STAFF PROPOSAL Proposed Depreciation Rate %
GENERAL PLANT								
390	Structures and Improvements		(23)	2.73	(10)	2.92	85,000	2.44
391.01	Office Furniture and Equipment	(Note 2)	0	5	0	4.17		4.17*
391.02	Computer Equipment	(Note 2)	0	20	0	12.50		12.50*
391.04	Software	(Note 2)	0	14.29	0	11.11		11.11*
Transportation Equipment								
392	Autos		10	11.25	10	4.49	(5,000)	10.00
392.01	Light Trucks		10	11.25	10	14.85	43,000	10.00
392.02	Heavy Trucks		10	11.25	10	11.35	247,000	7.50
392.04	Trailers		10	11.25	10	0.71	(32,500)	5.29
392.05	Medium Trucks		10	11.25	10	10.88	94,500	9.00
393	Stores Equipment	(Note 2)	0	4.00	0	3.70		3.70*
394	Tools, Shop & Garage Equip	(Note 2)	0	5.00	0	3.68		3.68*
395	Laboratory Equipment	(Note 2)	0	5.00	0	3.43		3.43*
396	Power Operated Equipment		2	4.45	10	2.02	(76,000)	4.07
397	Communications Equipment	(Note 2)	0	6.67	0	3.70		3.70*
398	Miscellaneous Equipment	(Note 2)	none	none	0	5.00		5.00*
	*Current Ordered Rate Case ER-2005-0436							
	TOTAL AMORTIZATION			98,532			(2,732,000)	
	Effective Composite Depreciation Rate			3.31			2.82 %	
	Composite Depreciation Rate With No Amortization							2.98

** Effective depreciation rate after applying the reserve amortization to Dec. 312010 Staff accounting balances.

Note 1: The Company recommendation to life span latan 2 at 50 yearsis reflected in this table.

Note 2: The Company recommendation to switch these accounts to an amortization methodis reflected in this table.

KCPL Greater Missouri Operations
File No. ER-2010-0356

Proposed Depreciation Schedule

USOA Account	Sub Account		L&P PROPOSAL Assigned Net Salvage %	L&P PROPOSAL Proposed Depreciation Rate	STAFF PROPOSAL Assigned Net Salvage %	STAFF PROPOSAL Effective** Depreciation Rate %	STAFF PROPOSAL Proposed Reserve Amortization $	STAFF PROPOSAL Proposed Depreciation Rate %
STEAM PRODUCTION PLANT								
311	Structures and Improvements	(Note 1)	(3)	1.85	(30)	1.90	(52,000)	2.00
312	Boiler Plant Equipment	(Note 1)	(4)	2.05	(20)	2.09	(936,000)	2.40
312.02	Boiler Plant AQC	(Note 1)	(4)	2.16	(20)	2.37	(54,000)	3.00
314	Turbogenerator Units	(Note 1)	(3)	2.31	(20)	2.30	(160,000)	2.66
315	Accessory Electrical Equipment	(Note 1)	(2)	2.35	(10)	1.74	(127,000)	2.44
316	Miscellaneous Power Plant Equipment	(Note 1)	(16)	2.07	(10)	3.16	(19,000)	4.24
IATAN 2 PRODUCTION PLANT								
311	Structures and Improvements		20	2.56	Same as other steam production above & Note 1			
312	Boiler Plant Equipment		15	2.77	Same as other steam production above & Note 1			
314	Turbogenerator Units		10	2.64	Same as other steam production above & Note 1			
315	Accessory Electrical Equipment		10	2.80	Same as other steam production above & Note 1			
316	Miscellaneous Power Plant Equipment		0	2.45	Same as other steam production above & Note 1			
OTHER PRODUCTION PLANT (Combustion Turbines)								
341	Structures & Improvements		(5)	1.75	(5)	0.41	(25,000)	2.10
342	Fuel Holder & Accessories		(5)	3.09	(10)	0.44	(14,000)	2.75
343	Prime Movers		(5)	4.78	(10)	0.10	(208,000)	2.00
344	Generators		(15)	4.11	(10)	0.14	(64,000)	2.20
345	Accessory Electrical Equip		(5)	2.84	(5)	1.28	(12,000)	2.33
TRANSMISSION PLANT								
352	Structures and Improvements		(10)	1.83	(5)	1.16	(2,250)	1.75
353	Station Equipment		(2)	1.70	(5)	2.53	(70,500)	2.92
355	Poles and Fixtures		(61)	2.93	(40)	1.53	(110,800)	2.34
356	Overhead Conductors		(44)	2.32	(15)	0.95	(84,750)	1.92
356	Underground Conduit		(12)	1.70	0	1.67	0	1.67
358	Underground Conductors		(22)	2.49	0	0.11	(600)	2.00
DISTRIBUTION PLANT								
361	Structures and Improvements		0	1.61	(10)	2.24	1,250	2.18
362	Station Equipment		0	2.08	(10)	1.67	(200,750)	2.20
364	Poles, Towers and Fixtures		(79)	3.89	(80)	3.72	89,800	3.46
365	Overhead Conductors		(31)	2.18	(25)	1.93	(90,700)	2.27
366	Underground Conduit		(12)	1.70	(35)	2.14	4,600	2.08
367	Underground Conductors		(22)	2.49	(5)	1.80	(23,100)	1.91
368	Line Transformers		(14)	3.45	(10)	1.57	(321,650)	2.44
369.01	Services Overhead		(100)	3.64	(100)	3.94	25,500	3.50
369.02	Services Underground		(16)	3.05	(15)	2.57	(33,100)	2.88
370	Meters		(6)	2.00	(5)	1.15	(75,650)	2.10
371	Installations on Customer Prop		(33)	5.12	(10)	3.02	(57,000)	4.20
373	Street Lighting, Signal Systems		(8)	3.18	(5)	2.17	(48,100)	3.00

KCPL Greater Missouri Operations
File No. ER-2010-0356

Proposed Depreciation Schedule

USOA Account	Sub Account	L&P PROPOSAL Assigned Net Salvage %	L&P PROPOSAL Proposed Depreciation Rate	STAFF PROPOSAL Assigned Net Salvage %	STAFF PROPOSAL Effective** Depreciation Rate %	STAFF PROPOSAL Proposed Reserve Amortization $	STAFF PROPOSAL Proposed Depreciation Rate %
GENERAL PLANT							
390	Structures and Improvements	(13)	2.73	0	3.15	**49,000**	**2.44**
391.01	Office Furniture and Equipment (Note 2)	0	5.00	0	4.17		**4.17***
391.02	Computer Equipment (Note 2)	0	20.00	0	12.50		**12.50***
391.04	Software (Note 2)	0	14.29	0	11.11		**11.11***
391.06	Office Machines (Note 2)	0	10.00	0	4.17		**4.17***
392.00	Autos	10	11.25	15	12.15	**0**	**12.15**
392.01	Light Trucks	10	11.25	15	7.92	**(2,000)**	**8.50**
392.02	Heavy Trucks	10	11.25	15	5.30	**(39,000)**	**6.93**
392.04	Trailers	10	11.25	15	-0.97	**(10,500)**	**3.39**
392.05	Medium Trucks	10	11.25	15	14.31	**75,800**	**7.59**
393	Stores Equipment (Note 2)	0	4.00	0	3.70		**3.70***
394	Tools, Shop & Garage Equip (Note 2)	0	5.00	0	3.68		**3.68***
395	Laboratory Equipment (Note 2)	0	5.00	0	3.43		**3.43***
396	Power Operated Equipment	2	4.45	10	1.91	**(32,000)**	**4.73**
397	Communications Equipment (Note 2)	0	6.67	0	3.70		**3.70***
398	Miscellaneous Equipment (Note 2)	0	5.00	0	3.71		**3.71***
	*Current Ordered Rate Case ER-2005-0436						
	TOTAL AMORTIZATION		196,744			(2,627,500)	
	Effective Composite Depreciation Rate		2.40			1.98 %	
	Composite Depreciation Rate With **No** Amortization						**2.61**

** Effective depreciation rate after applying the reserve amortization to Dec, 31**2010** Staff accounting balances.

Note 1 The Company recommendation to life span latan 2 at 50 yearsis reflected in this table.

Note 2 The Company recommendation to switch these accounts to an amortization methodis reflected in this table.

KCPL Greater Missouri Operations ECORP
File No. ER-2010-0356

Company versus Staff Depreciation Proposals

USOA Account	Sub Account	ECORP PROPOSAL Assigned Net Salvage %	ECORP PROPOSAL Proposed Depreciation Rate	STAFF PROPOSAL Assigned Net Salvage %	STAFF PROPOSAL Effective Depreciation Rate %	STAFF PROPOSAL Proposed Reserve Amortization $	STAFF PROPOSAL Proposed Depreciation Rate %
GENERAL PLANT							
390	Structures and Improvements	0	3.02	0	NA	NA	2.22
391.01	Office Furniture and Equipment	0	5	0	NA	NA	4.17
391.02	Computer Equipment	0	20	0	NA	NA	12.50
391.04	Computer Software	0	14.29	0	NA	NA	11.11
393	Stores Equipment	0	10.6	0	NA	Note 1	0.00
394	Tools, Shop & Garage Equip	0	5	0	NA	NA	3.57
396	Laboratory Equipment	none	none	0	NA	Note 1	0.00
397	Communications Equipment	0	6.67	0	NA	NA	3.70
398	Miscellaneous Equipment	0	5	0	NA	NA	4.17
	All Staff proposed Rates are the Current Ordered Rate Case ER-2005-0436						
	TOTAL AMORTIZATION					NA	
	Effective Composite Depreciation Rate		8.94			NA	9.07
	Composite Depreciation Rate With No Amortization						9.07

Note 1 This account is fully depreciated and viewed by Staff as a Dying Account.
The Company recommendation to switch accounts to an amortization method is reflected in this table.
this table is for end of 2008 balances

KCPL Greater Missouri Operations
File No. ER-2010-0356

Excess Calculated Accumulated Depreciation Reserves

USOA Account	Sub Account	ASL Yrs	Survivor Curve Type	Net Salvage Percent	Original Cost AS OF 31-Dec-08	Book Reserves AS OF 31-Dec-08	Calculated Reserves AS OF 31-Dec-08	Excess (+) Reserves AS OF 31-Dec-08
STEAM PRODUCTION PLANT								
311	Structures and Improvements	65	R2	(20)	58,200,429	42,268,735	20,844,532	21,424,203
312	Boiler Plant Equipment	45	R2	(30)	223,936,382	127,464,455	101,316,449	26,148,006
312.02	Boiler Plant AQC	45	R2	(30)	4,417,482	448,357	547,884	-99,527
314	Turbgenerator Units	40	L2	(15)	78,145,844	39,164,411	29,828,126	9,336,285
315	Accessory Electrical Equipment	50	L1	(10)	24,070,104	15,504,736	7,931,639	7,573,097
316	Miscellaneous Power Plant Equipment	42	R2	(10)	2,960,950	1,000,376	863,901	136,475
OTHER PRODUCTION PLANT (Combustion Turbines)								
341	Structures & improvements	60	R1	(5)	22,959,536	2,597,444	1,683,110	914,334
342	Fuel Holder & Accessories	45	R2	(10)	11,177,222	2,437,987	1,328,489	1,109,498
343	Prime Movers	25	S0.5	(10)	183,240,829	35,938,875	38,584,496	-2,645,621
344	Generators	35	S0.5	(5)	55,020,972	15,179,796	9,926,098	5,253,698
345	Accessory Electrical Equip	45	R2.5	(10)	39,783,366	6,855,754	5,250,978	1,604,776
346	Misc Power Plant Equipment	32	S2	0	316,494,882	63,807,748	57,635,197	6,172,551
TRANSMISSION PLANT								
352	Structures and Improvements	60	R3	(5)	6,462,751	1,540,738	1,337,866	202,872
353	Station Equipment	58	R2	(10)	96,919,975	30,543,466	23,986,158	6,557,308
354	Towers and Fixtures	55	R3	(20)	323,639	303,142	227,502	75,640
355	Poles and Fixtures	53	S0.5	(60)	69,877,253	21,336,995	22,887,956	-1,550,961
356	Overhead Conductors	62	R2.5	(50)	47,022,676	20,748,537	19,831,336	917,201
358	Underground Conductors	50	R3	0	58,426	48,256	31,915	16,341
DISTRIBUTION PLANT								
361	Structures and Improvements	60	R3	(5)	8,505,443	1,763,812	1,655,732	108,080
362	Station Equipment	50	R1	(10)	103,534,352	28,024,413	20,448,377	7,576,036
364	Poles,Towers and Fixtures	47	R4	(75)	133,789,716	65,836,039	78,195,782	-12,359,743
365	Overhead Conductors	58	R1.5	(35)	93,221,154	29,438,481	25,512,838	3,925,643
366	Underground Conduit	60	S1.5	(20)	40,508,133	7,386,890	7,728,112	-341,222
367	Underground Conductors	50	S1.5	(15)	96,716,739	29,503,991	25,761,824	3,742,167
368	Line Transformers	35	R2	(15)	147,755,521	53,233,448	50,206,216	3,027,232
369.01	Services - Overhead	57	R4	(100)	14,275,016	11,720,933	11,023,407	697,526
369.02	Services - Underground	38	R5	(25)	49,539,256	23,913,724	22,612,301	1,301,423
370	Meters	45	R2.5	(5)	25,444,958	12,483,829	10,180,469	2,303,360
370.01	Meters - Load Research	16	S4	0	2,038,114	2,270,641	1,730,905	539,736
371	Installations on Customer Prop	29	R1.5	(20)	14,357,916	8,248,716	5,469,665	2,779,051
373	Street Lighting, Signal Systems	26	S0	(5)	27,734,720	8,343,381	8,436,756	-93,375

KCPL Greater Missouri Operations
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Excess Calculated Accumulated Depreciation Reserves

USOA Account	Sub Account	ASL Yrs	Survivor Curve Type	Net Salvage Percent	Original Cost AS OF 31-Dec-08	Book Reserves AS OF 31-Dec-08	Calculated Reserves AS OF 31-Dec-08	Excess (+) Reserves AS OF 31-Dec-08
GENERAL PLANT								
390	Structures and Improvements	45	R2.5	(10)	13,830,268	3,663,174	5,740,867	-2,077,693
391.01	Office Furniture and Equipment	*Current Ordered rate		0	1,974,217	1,485,836		
391.02	Computer Equipment	*Current Ordered rate		0	2,497,767	1,762,837		
391.04	Software	*Current Ordered rate		0	697,058	312,646		
Transportation Equipment								
392	Autos	9	S3	10	140,137	73,432	59,919	13,513
392.01	Light Trucks	9	S3	10	804,790	65,439	187,927	-122,488
392.02	Heavy Trucks	12	L3	10	4,882,974	718,829	1,765,285	-1,046,456
392.04	Trailers	17	R2	10	628,347	554,000	308,199	245,801
392.05	Medium Trucks	10	S3	10	5,154,708	410,004	892,139	-482,135
	Total Transportation Equip				11,610,956	1,821,704	3,213,469	-1,391,765
393	Stores Equipment	*Current Ordered rate		0	99,697	87,232		
394	Tools, Shop & Garage Equip	*Current Ordered rate		0	4,372,747	2,600,590		
395	Laboratory Equipment	*Current Ordered rate		0	2,062,302	1,477,566		
396	Power Operated Equipment	22	S1.5	10	4,054,205	2,273,403	1,578,660	694,743
397	Communications Equipment	*Current Ordered rate		0	10,202,135	7,810,569		
398	Miscellaneous Equip	*Current Ordered rate		0	168,338	0		

*Current Ordered Rate Case ER-2005-0436

		Book	Calculated	Excess (+)
	TOTAL Electrical Plant	2,050,063,448	734,475,367	626,752,481	92,185,610
			45	Reserves as % of Plant
			17%	Excess Book Reserves

KCPL Greater Missouri Operations
File No. ER-2010-0356

Excess Calculated Accumulated Depreciation Reserves

USOA Account	Sub Account	ASL Yrs	Survivor Curve Type	Net Salvage Percent	Original Cost AS OF 31-Dec-08	Book Reserves AS OF 31-Dec-08	Calculated Reserves AS OF 31-Dec-08	Excess (+) Reserves AS OF 31-Dec-08
STEAM PRODUCTION PLANT								
311	Structures and Improvements	65	R2	(30)	18,759,909	8,305,154	6,250,111	2,055,043
312	Boiler Plant Equipment	50	R1	(20)	91,650,234	59,976,493	31,551,902	28,424,591
312.02	Boiler Plant AQC	40	R2.5	(20)	11,911,662	5,826,833	4,485,109	1,341,724
314	Turbogenerator Units	45	S2	(20)	26,623,035	17,118,683	14,379,727	2,738,956
315	Accessory Electrical Equipment	45	L1	(10)	11,799,218	7,121,636	3,590,158	3,531,478
316	Miscellaneous Power Plant Equipment	26	L1.5	(10)	1,983,978	841,795	607,492	234,303
OTHER PRODUCTION PLANT (Combustion Turbines)								
341	Structures & improvements	50	R5	(5)	1,477,027	1,288,398	828,484	459,914
342	Fuel Holder & Accessories	40	S3	(10)	627,368	627,950	480,579	147,371
343	Prime Movers	55	R1	(10)	10,957,616	11,504,657	3,396,922	8,107,735
344	Generators	50	R2.5	(10)	3,107,233	3,247,722	1,554,077	1,693,645
345	Accessoriy Electrical Equip	45	R4	(5)	1,149,783	841,613	605,788	235,825
TRANSMISSION PLANT								
352	Structures and Improvements	60	R4	(5)	384,008	190,149	116,087	74,062
353	Station Equipment	36	R2	(5)	15,332,505	6,720,220	5,659,731	1,060,489
355	Poles and Fixtures	60	R2	(40)	10,072,255	8,126,424	4,507,493	3,618,931
356	Overhead Conductors	60	R2	(15)	7,702,148	6,208,644	3,568,546	2,640,098
356	Underground Conduit	60	R3	0	16,147	4,758	4,209	549
358	Underground Conductors	50	S3	0	31,692	29,860	16,729	13,131
DISTRIBUTION PLANT								
361	Structures and Improvements	50	R3	(10)	2,082,463	445,764	489,872	-44,108
362	Station Equipment	50	R2.5	(10)	38,604,535	16,391,006	11,354,707	5,036,299
364	Poles,Towers and Fixtures	52	S2.5	(80)	28,969,484	14,915,602	17,026,389	-2,110,787
365	Overhead Conductors	55	R1	(25)	23,863,209	9,993,590	7,112,211	2,881,379
366	Underground Conduit	65	R3	(35)	7,710,447	1,872,709	2,063,855	-191,146
367	Underground Conductors	55	R2	(5)	17,775,560	4,674,317	3,881,894	792,423
368	Line Transformers	45	R2.5	(10)	33,858,433	18,247,623	10,606,869	7,640,754
369.01	Services Overhead	57	R4	(100)	4,634,607	3,091,212	3,552,031	-460,819
369.02	Services Underground	40	S4	(15)	10,672,615	4,556,438	4,010,152	546,286
370	Meters	50	S1.5	(5)	7,488,094	4,657,347	2,772,894	1,884,453
371	Installations on Customer Prop	26	O1	(10)	4,423,065	2,043,073	1,034,563	1,008,510
373	Street Lighting, Signal Systems	35	R0.5	(5)	5,169,587	2,242,701	1,062,822	1,179,879

KCPL Greater Missouri Operations
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Excess Calculated Accumulated Depreciation Reserves

USOA Account	Sub Account	ASL Yrs	Survivor Curve Type	Net Salvage Percent	Original Cost AS OF 31-Dec-08	Book Reserves AS OF 31-Dec-08	Calculated Reserves AS OF 31-Dec-08	Excess (+) Reserves AS OF 31-Dec-08
GENERAL PLANT								
390	Structures and Improvements	45	R1.5	0	6,720,211	1,785,690	2,911,571	-1,125,881
391.01	Office Furniture and Equipment	*Current Ordered Rate						
391.02	Computer Equipment	*Current Ordered Rate						
391.04	Software	*Current Ordered Rate						
391.06	Office Machines	*Current Ordered Rate						
392.00	Autos	7	S4	15	25,099	17,940	18,866	926
392.01	Light Trucks	10	S4	15	347,522	131,686	135,568	3,882
392.02	Heavy Trucks	12	L3	15	2,134,071	1,180,062	1,060,713	-119,349
392.04	Trailers	25	R3	15	308,829	313,201	159,789	-153,412
392.05	Medium Trucks	11	S3	15	1,249,791	255,763	437,530	181,767
393	Stores Equipment	*Current Ordered Rate						
394	Tools, Shop & Garage Equip	*Current Ordered Rate						
395	Laboratory Equipment	*Current Ordered Rate						
396	Power Operated Equipment	19	19-S1.5	10	1,340,214	842,691	646,787	195,904
397	Communications Equipment	*Current Ordered Rate						
398	Miscelleaneous Equipment	*Current Ordered Rate						

*Current Ordered Rate Case ER-2005-0436

	Plant	Book	Calculated	(excess = +)
TOTAL Electrical Plant	410,963,654	225,639,404	151,942,227	73,524,805

55% Reserves as % of Plant in Service

49% Excess Reserves

KCPL Greater Missouri Operations
File No. ER-2010-0356

Life Span Estimates for Missouri Coal Fired Electrical Generating Plants
Missouri PSC Staff 12/28/2010

Company	Facility	Current Age Years	Estimated Life Span Years	Missouri Case No.
KCPL	Iatan 1	30	60	ER-2010-0355
	Hawthorn 5	41	67	
	Montrose 1	52	62	
	Montrose 2	50	50	
	Montrose 3	46	56	
	LaCyne 1	37	59	
	LaCyne 2	33	59	
MPS	Sibley 1	50	60	ER-2010-0355
	Sibley 2	48	58	
	Sibley 3	41	61	
L&P	Lake Road 2	53	63	
	Lake Road 4	43	63	
AmerenUE	Meramec 1	57	68	ER-2010-0036
	Meramec 2	56	66	
	Meramec 3	51	63	
	Meramec 4	49	61	
	Sioux 1	43	66	
	Sioux 2	42	65	
	Labadie 1	40	72	
	Labadie 2	39	71	
	Labadie 3	38	70	
	Labadie 4	37	69	
	Rush Island 1	34	70	
	Rush Island 2	33	69	
Average All Plants			**64**	

Company versus Staff Comparison						
Annual Depreciation Accruals (expense) MPS						
Using Dec. 31, 2010 EMS Balances - Includes latan2						
MPS Plant Account		**COMPANY**			**STAFF**	
Group		GMO Direct			Recommendation	
	Plant In Service	Testimony			Mass P & WL	
		Proposal	Rate		With Amortizations	Rate
		ACCRUAL	**%**		**ACCRUAL**	**%**
Steam Production (minus latan2)	547,934,940	11,929,650	2.18		12,759,855	2.33
Reserve Balance Amortization		0			(2,212,000)	
Other (Comb Turbines)	255,174,440	10,287,628	4.03		8,968,316	3.51
Reserve Balance Amortization		0			(173,000)	
Total Production	**803,109,380**	**22,217,278**	2.77		**21,728,171**	2.71
Transmission	248,599,990	5,242,636	2.11		5,368,980	2.16
Reserve Balance Amortization		0			(176,000)	
Distribution	812,242,440	23,413,941	2.88		22,897,245	2.82
Reserve Balance Amortization		0			(527,000)	
General	60,145,792	4,032,652	6.70		3,142,627	5.23
Amortization	Unrecovered Plant ->	98,543		Reserve ->	356,000	
SubTotal Accrual (no latan 2)	**1,924,097,602**	**54,906,507**	2.85		**53,137,023**	2.76
Subtotal of Amortizations		98,543			(2,732,000)	
latan 2, 53 MW Portion	98,363,955	2,687,524	2.73		2,705,646	2.75
Amortization		0			0	
Total With latan 2	**2,022,461,557**	**57,594,031**	2.85		**55,842,669**	2.76
ECORP	37,665,620	6,418,767	17.04		3,213,258	8.53
Unrecovered Plant Amortization	Note 1	2,021,307			0	
Total With ECORP	**2,060,127,177**	**64,012,798**	3.11		**59,055,927**	2.87
Total of All Amortizations		2,119,850			-2,732,000	
Company at end of 2008 estimated 17% excess reserves of --->					93,500,000	
		12/31/2010 Reserves --->			710,181,554	
		12/31/2010 Plant--->			2,060,886,976	Included Intangibles
		12/31/2010 EMS Run Dep Expense -->			61,789,927	With No Amortization
		12/31/2010 Reserves as % of Plant			34.5	
Note 1: This is a MPS to L&P dollar weighted ratio to total Ecorp plant from Company proposed ECORP $2,505,423 amort						

Company versus Staff Comparison						
Annual Depreciation Accruals (expense) L & P						
Using Dec. 31, 2010 EMS Balances - Includes Iatan2						
L&P Plant Account		COMPANY			STAFF	
Group		GMO Direct			Recommendation	
	Plant In Service	Testimony			Mass P & WL	
		Proposal	Rate		With Amortizations	Rate
		ACCRUAL	%		ACCRUAL	%
Steam Production (minus Iatan2)	240,291,994	5,011,612	2.09		4,513,686	1.88
Reserve Balance Amortization		0			(1,348,000)	
Other (Comb Turbines)	17,294,864	728,623	4.21		38,916	0.23
Reserve Balance Amortization		0			(323,000)	
Total Production	**257,586,858**	**5,740,235**	2.23		**4,552,602**	1.77
Transmission	42,828,892	918,203	2.14		752,637	1.76
Reserve Balance Amortization		0			(268,900)	
Distribution	202,085,395	5,777,758	2.86		4,449,900	2.20
Reserve Balance Amortization		0			(728,900)	
General	20,367,496	1,438,833	7.06		999,060	4.91
Amortization	Unrecovered Plant ->	98,543		Reserve ->	41,300	
SubTotal Accrual (no Iatan 2)	**522,868,641**	**13,875,029**	2.65		**10,754,199**	2.06
Subtotal of Amortizations		98,543			(2,627,500)	
Iatan 2, 53 MW Portion	186,449,664	5,094,226	2.73		4,454,028	2.39
Amortization		0			0	
Total With Iatan 2	**709,318,305**	**18,969,255**	2.67		**15,208,227**	2.14
ECORP	37,665,620	1,564,753	4.15		793,489	2.11
Unrecovered Plant Amortization	Note 1	484,116			0	
Total With ECORP	**746,983,925**	**20,534,008**	2.75		**16,001,716**	2.14
Total All Amortizations		582,659			-2,627,500	
Company at end of 2008 estimated 49% excess reserves of --->					73,500,000	
		12/31/2010 Reserves ---->			220,405,982	
		12/31/2010 Plant--->			718,700,045	Included Intangibles
	Staff	12/31/2010 EMS Run Dep Expense -->			18,611,216	With No Amortization
		12/31/2010 Reserves as % of Plant			30.7	
Note 1: This is a MPS to L&P dollar weighted ratio to total Ecorp plant from Company proposed ECORP $2,505,423 amort						