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Witness: *Paul W. Adam*
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

PAUL W. ADAM

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2001-299

Jefferson City, Missouri
April 2001

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Q. Please state your name and business address.

A. Paul W. Adam, P.O. Box 360, Jefferson City, MO 65102.

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

A. I am employed by the Missouri Public Service Commission (PSC or Commission) as an Engineer II in the Engineering and Management Services Department.

Q. What are your duties as an engineer in the Engineering and Management Services Department?

A. I am responsible for depreciation determinations and studies of companies regulated by the Commission.

Q. Would you please state briefly your qualifications, educational background and experience?

A. I am a Registered Professional Engineer in Missouri and Colorado. In 1967, I earned a Bachelor of Science degree in Chemical Engineering from the University of Missouri–Columbia. I served in the U.S. Army after graduating and subsequently was employed in the oil industry from 1969 until 1991 as an engineer in various capacities, with the exception of a brief period from 1971 to 1974 when

I completed a Masters Degree in Business Administration at the University of Missouri and also built single family homes.

From 1991 to 1993 I managed a concrete products plant in Northwest Missouri. In 1994, I accepted my current position.

Q. Have you ever testified before the Commission?

A. Yes.

Q. Please state the purpose of your testimony in this case.

A. The purpose of my testimony is to: 1) present reasons against the Company's and consultants' positions that "tradition" is a justification for sticking with an old net salvage calculational procedure because changes have occurred since the Whole Life depreciation formula was developed decades ago that now support using a current basis for net salvage determination; and 2) present the Missouri Public Service Commission Staff's (Staff) proposed depreciation rates for capital plant.

Q. How would you characterize the difference between the Company's use of the "traditional" depreciation determination from the Whole Life formula and Staff's current basis of depreciation determination?

A. The Company is using a ratio of current net salvage (Gross Salvage less Cost of Removal) to the same plant's original cost as a factor to multiply times current plant balance to estimate the net salvage that it anticipates will be required to remove the currently active plant from service decades in the future. In this 'traditional' determination, it is common to calculate a net salvage that is negative 100% and greater, meaning that the net salvage is a cost. Net salvage cost can be as large or larger than the original cost of the same plant. Even though this large dollar amount will not be needed

for decades the Company proposes to pre-collect it from its customers decades prior to the retirement and removal of the plant.

The Staff recognizes that the Company's current net salvage cost is usually a small fraction of the amount the Company proposes to collect. The Staff proposes that the Company collect net salvage at the current, known level that the Company is experiencing.

It is recognized by the Company and Staff that the difference between an estimated future net salvage cost and a current determination of net salvage cost is about $1.5 million annually. That is, the Company proposes to collect $1.5 million more annually than it is spending for net plant removal (Net Salvage Cost). The Staff proposes that the Company collect an amount equal to what they are spending annually for net plant removal.

Viewing depreciation on a current basis eliminates the need for an amortization that is proposed by the Company of an additional $1.5 million because theoretically the reserve accrual is adequate or more than adequate. The Company's request for an additional $1.5 million annually from its Customers is based on an estimated calculation that the reserve accrual is currently inadequate. This is not true.

Another difference that exist in the depreciation annual accrual is related to the Company's proposed shorter lives for plant than is being experienced. Because of life shortening the Company proposes to collect over $5 million more annually from customers than Staff's determination.

These differences, over $1.5 million for future net salvage, $1.5 million amortization for future net salvage, and over $5 million for shorter plant lives represent

the difference of nearly $9 million that the Company proposes to collect from customers in excess of Staff's proposal.

Q. In a past case, St. Louis County Water's Case No. WR-2000-844, that company's depreciation consultant and attorney stressed that the net salvage calculation of the original Whole Life formula should be used because of "tradition." What does use of the word "tradition" mean?

A. "Tradition" is defined as "the handing down orally of stories, beliefs, customs, etc., from generation to generation" and as "a long-established custom or practice that has the effect of an unwritten law; specif., any of the usages of a school of art or literature handed down through the generations, and generally observed."[1]

Q. Are you aware of examples where traditions have changed, because external conditions affecting the tradition have changed?

A. Yes. Consider early-American life. Traditionally the father held a job while the mother stayed at home to maintain the house and raise the children. Multiple events have occurred to change this tradition. To maintain a certain standard of living, a household needed more income; therefore, wives took jobs. Also, many more women went to college and wanted to pursue a career outside the house. Additionally, modern appliances, dishwashers, modern laundry washers and dryers, microwave appliances and more allowed housework to be done in less time with less effort. The result is that today, the early American tradition of a wife/mother staying at home no longer exists for many families.

[1] Webster's New World Dictionary, Copyright © 1988 by Simon & Schuster, Inc., Published by Webster's New World Dictionaries, A Division of Simon and Schuster, Inc., 15 Columbus Circle, New York, New York 10023.

Q. Are there other examples where external change has resulted in a tradition being set aside?

A. Many. A few are single-room schools where one teacher taught many grades and all subjects. This tradition has changed to develop a higher level of education where large facilities with specific teachers teaching specific subjects to a single grade level of students is the current standard. We also see "traditions" stopped in other areas as external conditions change, such as religion and treatment of workers at the workplace. Many traditions have been stopped in the past few decades as our society changes.

Q. Do any depreciation textbooks from several decades ago shed any light on the companies' and their consultants' positions when they suggest that the Staff is proposing a new idea in the Staff's handling of net salvage cost?

A. Yes. In Engineering Valuation And Depreciation[2], the authors speak of net salvage by using the term "salvage value."

The authors of this 1953 depreciation text state, on pages 184 and 185:

> 8.10. Salvage Value. The salvage value of industrial property is the net sum (actual or estimated), over and above the cost of removal and sale, realized for it when it is disposed of by its owner or the value of the property retired for use in a different location or for a different purpose.
>
> ... Salvage value often is zero and sometimes may be negative; it is not necessarily the same as scrap value or junk value, though for many properties these values are the same.
>
> ....
>
> Salvage value in depreciation accounting is usually an estimated value because the salvage value is required to be estimated before the annual accounting depreciation costs can be determined. The expected salvage recovery is not to be allocated as a depreciation

[2] Engineering Valuation And Depreciation, Marston, Winfrey and Hempstead, McGraw-Hill Book Company, Inc., 1953.

> cost. As with the probable life of the property, salvage value should be re-estimated from time to time during the service life of the property. Salvage value is a value, not a cost, because it is the value of the property realized at the time of retirement or the probable value realized at the forecasted date of retirement.

Note that in the early 1950s, the authors discuss salvage value as "over and above the cost of removal" and "salvage value is a value, not a cost ..." These statements show that prior to 1953, the authors' experience was that "salvage value," the same term we call net salvage in the "traditional" Whole Life formula, was not considered a cost to the company, let alone a large cost that could be larger than the plant's original cost, rather salvage value was expected to be positive (i.e., Gross Salvage was expected to be greater than Cost of Removal COR).

In the same text on page 226, the authors state:

> Regulatory commissions for utilities and the U.S. Bureau of Internal Revenue are careful to see that any appreciable salvage value is taken into account in determining the depreciation allocation. When the salvage is negative, the numerator of Eq. (10.1) becomes greater than unity, which permits the recovery of more than the original cost by the amount of the estimated negative salvage value. Under income tax regulations, however, the depreciation charges cannot exceed the cost. Negative salvage is charged as a current operating cost.
>
> Industrial Accountants frequently assume that the salvage value will be zero, and then they charge all costs of removal to operating expense and credit salvage income to operating revenue. This procedure has the advantage of not requiring an estimate of salvage value and eliminates adjustments in the reserve account because of salvage. In the long run there is no adverse effect upon the statement of profit and loss, although if salvage value is a material positive amount in a single accounting period, the profits might be somewhat higher than in previous years. When excessive removal costs occur in one accounting year, the reverse effect on the profit and loss statement would prevail.

This statement by the authors, who today are still considered among the most learned of regulatory depreciation professionals, discusses the current booking of Cost of

Removal (COR) and salvage income (Gross Salvage) on a current basis, as the Staff is proposing. This is the authors' point when they say, "Industrial accountants frequently...charge all cost of removal to operating expense and credit salvage income [Gross Salvage] to operating revenue."

Q. Do these learned authors address any other issues that the Staff has addressed recently?

A. Yes. They say that charging COR to expense and crediting Gross Salvage to operating revenue "... has the advantage of not requiring an estimate of salvage value and eliminates adjustments in the reserve account because of salvage." The Staff is proposing this exact position. The Staff proposes removing net salvage from the Whole Life formula and allowing Staff auditors to handle COR and Gross Salvage on a current basis. Generally speaking, companies and their consultants argue vigorously that the net salvage cost, as calculated with the "traditional" Whole Life formula, should be included in the reserve account (depreciation accrual). The resulting outcome of including net salvage cost in the reserve account is that a theoretical calculation of the reserve account can be significantly larger than a theoretical calculation of the reserve account if only original plant is included in the calculation.

The large theoretical reserve balance figures calculated in the "traditional" manner results in the companies collecting even greater amounts through utility rates because frequently consultants propose that a large theoretical reserve balance calculation must be met by adding an annual amortization to the annual depreciation accrual.

The net effect is that the companies collect, through utility rates, monies that are much greater than current net salvage cost.

Q. How does the change of external conditions to the "traditional" Whole Life formula effect the net salvage cost determination?

A. The "traditional" whole life formula was developed decades ago when, for most accounts, the Gross Salvage value of plant at retirement was greater than the Cost of Removal (COR). The result was that a company would recover the original cost of the plant minus the Net Salvage ([Net Salvage] = [Gross Salvage] – [COR] Where Gross Salvage was greater than COR) over the used and useful life, or average life, of the plant. The "traditional" application of the Whole Life formula resulted in the company collecting through customer rates something less than 100% of the original cost of the capital plant. External conditions have changed and during the past few decades, the relationship between Gross Salvage and Cost of Removal have reversed. Today, for large plant accounts, it is common for Cost of Removal of plant at retirement to be greater than Gross Salvage. Frequently, Gross Salvage is zero when a plant is retired but labor cost increases, environmental requirements, logistics and other changes cause Cost of Removal to be large. These external changes have a profound effect on the "traditional" Whole Life formula.

Q. Can you describe the profound effect these external changes, that have occurred over the past few decades, have on the net salvage cost and, in turn, have on the depreciation rate determined by the "traditional" Whole Life formula?

A. Yes. Applying the "traditional" Whole Life formula to today's conditions results in a determination that a company could recover from their customers much more than the 100% of original capital cost of plant through depreciation. The application of

the "traditional" Whole Life formula to large capital accounts may calculate values that are 150%, 200%, 250% of the original cost of capital plant.

Q. What is the effect of these 150%, 200%, 250% values to a utility company's customers?

A. The utility customer will pay in utility rates the 150%, 200% or whatever the "traditional" Whole Life formula calculates to the company in utility rates.

Q. Doesn't the Company spend the money that they collect for Cost of Removal (net salvage cost)?

A. The Company does not spend the money currently and sometimes never. The "traditional" Whole Life formula utilizes a simple ratio calculation of historical events to determine what is anticipated to happen decades in the future. The simple ratio is the current cost to remove retired plant divided by the original cost that was paid for the same plant decades ago, perhaps 50 to 100 years ago. No adjustment is made for inflation or any other external condition. This ratio is then applied to the cost of current plant in-service to estimate what the Cost of Removal is anticipated to be decades into the future. Normally, companies and consultants make no study of expected future events that could affect the true future Cost of Removal. Staff believe the "traditional" whole life formula is unfair. That is why Staff propose that net salvage cost be determined using current expenses and current gross salvage.

Q. In other words, the "traditional" Whole Life formula allows a company to collect from customers today the anticipated Cost of Removal of plant decades, perhaps 50 to 100 years, in the future. Isn't this sound economics and financial planning?

A. Not in my opinion. The simple ratio, that I just discussed as part of the "traditional" Whole Life formula, has imbedded in it the inflation that occurred over the decades between placement of plant and retirement of that plant. For major accounts, this can be 50 to 100 years. The companies and their consultants expect to apply this ratio, with the imbedded inflation factor, to the current plant balance. The companies and their consultants do not propose an adjustment to the current collections that include the imbedded inflation factor. The companies and their consultants do not point out that they are proposing a pre-collection of a future unknown estimate that includes inflation. The companies and their consultants do not propose that an internal rate of return factor be applied to the pre-collected net salvage cost, between the pre-collection date and the plant's retirement date which may be 50 to 100 years after the pre-collection. The companies and their consultants do not propose to pay the customers for the use of the pre-collected monies during the period between pre-collection and the same plant's retirement and removal dates.

Q. As some companies and their consultants have suggested, does the Staff stand as the only, or nearly the only, group concerned about the "traditional" Whole Life formula?

A. The concern about the net salvage cost calculated in a "traditional" Whole Life formula is not a position of the Staff alone. The text Public Utility Depreciation Practices, published in August 1996 by the National Association of Regulatory Utility Commissioners (NARUC), addressed the same concerns that have been addressed in previous rate cases by the Staff.

Q. Can you explain some of the concerns noted in the NARUC text?

A. Yes, on page 18 under the heading Salvage Considerations, the text points out that the future looking concept of the traditional Whole Life formula "... carries with it the premise that property ownership includes the responsibility for the property's ultimate abandonment or removal." This we know is not consistently the case because when property is sold by a regulated utility company the responsibility for the property's ultimate abandonment or removal is transferred to the new, possibly non-regulated, owner. Therefore, the collections for future abandonment and removal (net salvage cost) that a utility company makes prior to the abandonment or removal are not utilized as the "traditional" Whole Life formula would imply.

Q. Are there other problems pointed out in the NARUC text?

A. Yes. The text also states on page 18 that:

> The practical difficulties of estimating, reporting, and accounting for salvage and cost of retirement have raised questions as to whether more satisfactory results might be obtained if net salvage were credited or charged, as appropriate, to current operations at the time of retirement instead of being provided for over the life of the asset.
>
> ....
>
> The advocates of recording salvage at the time of retirement further contend that salvage could be properly accounted for on the bases of known happenings at the date of retirement rather than on speculative estimates of factors, such as junk material prices, furniture labor costs, and environmental remediation costs in effect at the time of retirement.

Then, on page 18, it is stated that:

> The sensitivity of salvage and cost of retirement to the age of the property retired is also troublesome. Due to inflation and other factors, there is a tendency for costs of retirement, typically labor, to increase more rapidly than material prices. In an increasing

> number of instances, the average net salvage is estimated to be a large negative number when expressed as a percentage of original cost, sometimes in excess of negative 100%.

These are some of the issues that Staff put forth in previous rate cases. Other companies and their consultants have suggested that the concerns put forth by the Staff are concerns of the Missouri and Pennsylvania Staffs alone. This is not true.

Q. Does the NARUC text offer a definition of depreciation that more clearly covers the current application of depreciation to regulated utility companies?

A. Yes. On page 14 of the NARUC text the following definition and the author's conclusion are stated:

> Depreciation accounting is a system of accounting which aims to distribute cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation. Depreciation for the year is the portion of the total charge under such a system that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be a measurement of the effect of all such occurrences.
>
> This definition of depreciation accounting brings the "allocation of cost" concept into much clearer focus. It de-emphasizes the concept of depreciation expense as a "loss in service value" or an "allowance" and emphasizes the concept of depreciation expense as the cost of an asset which is allocable to a particular accounting period. This definition also clearly illustrates that the goal is recognizing cost, not providing funds for replacement of the asset.

Q. In Chapter XI of the NARUC text, the authors discuss Estimating Salvage and Cost of Removal. Can you give some of their statements that debunk points made in past rate cases by companies and their consultants?

A. Yes, beginning on page 157 and running through page 161, the authors state:

Historically, most regulatory commissions have required that both gross salvage and cost of removal be reflected in depreciation rates. The theory behind this requirement is that since most physical plant placed in service will have some residual value at the time of its retirement, the original cost recovered through depreciation should be reduced by that amount. Closely associated with this reasoning are [sic] the accounting principle that revenues be matched with costs and the regulatory principle that utility customers who benefit from the consumption of plant pay for the cost of that plant, no more, no less. The application of the latter principle also requires that the estimated cost of removal of plant be recovered over its life.

Some commissions have abandoned the above procedure and moved to current-period accounting for gross salvage and/or cost of removal. In some jurisdictions gross salvage and cost of removal are accounted for as income and expense, respectively, when they are realized. Other jurisdictions consider any gross salvage in depreciation rates, with the cost of removal being expensed in the year incurred.

Determining a reasonably accurate estimate of the average or future net salvage is not an easy task; estimates can be the subject of considerable discussion and controversy between regulators and utility personnel.

. . . .

... Today few utility plant categories experience positive net salvage; this means that most depreciation rates must be designed to recover more than the original cost of plant. The predominance of this circumstance is another reason why some utility commissions have switched to current-period accounting for gross salvage and, particularly, cost of removal.

. . . .

Past trends should not be the sole guide in predicting future net salvage because they can be misleading....

. . . .

The majority of present day utility plant will not be retired for many more years, and the sale of the retired plant will largely depend upon economic conditions existing at that time. It is, of course, impossible to make an accurate estimate of economic

> conditions expected to exist at some exact time in the distant future....
>
> It is often stated that future costs of removal must logically be higher than past costs simply because labor costs are constantly on the increase. In general, this may be a true statement but it does not necessarily indicate that the percentage removal cost will increase.
>
> ....
>
> Furthermore, if labor costs and/or the number of items to be removed are increasing, it becomes economical in many cases to invest in special tools which may actually result in an overall decrease in removal cost per item removed.

All of these statements are applications of common sense to each topic. These common sense statements about the net salvage cost calculated from the "traditional" Whole Life formula show that external events have changed and that the tradition of using the Whole Life formula as it was developed decades ago does not apply at this time.

Q. Are there some Missouri-regulated companies and their consultants that utilize current events to determine depreciation rates and accruals?

A. Yes. Missouri Gas Energy (MGE) has submitted a depreciation study compiled by Thomas Sullivan of Black and Veatch. This study is a current study that Black and Veatch transmitted to MGE in a cover letter dated June 8, 2000, and is the depreciation study supporting MGE's position in a current rate case, Case GR-2001-292.

Q. What is Mr. Sullivan's position on net salvage?

A. He disagrees with the "traditional" application of the Whole Life formula. On page 11 of his study, he states the following:

> The traditional approach for incorporating allowances for net salvage is to compare annual net salvage (salvage minus cost of removal) to the original cost of the plant retired during that year over a representative historical period, preferably at least 10 years. The traditional approach assumes that the ratio of net salvage dollars to the original cost dollars of the retirements is representative of the allowance that will ultimately apply to all plant in service over that life of that asset. In a whole life depreciation calculation, this allowance is then added to (for a net cost of removal) or deducted from (for a net salvage) one in the numerator and then divided by the average service life.
>
> This approach provides reasonable results where there are modest amounts of salvage or cost of removal or where the amounts are fairly consistent (such as for unit property or general plant). However, cost of removal for some natural gas distribution plant can be as much as or more than the original cost of the plant retired especially if natural gas lines that are under streets need to be relocated. In these instances, it may not be reasonable to assume that this experience applies to all plant.
>
> Problems may result (especially with mains and services) if the net salvage allowance is large and a relatively small amount of plant is being retired. A large depreciation reserve may be accumulated in anticipation of cost of removal expenses that may or may not occur....

On page 12 of his study, he points out how he and his staff determined current net salvage cost as follows:

> ... we analyzed MGE's salvage costs and cost of removal of the 1988 through 1998 period and found that the annual net salvage amounts are fairly consistent. ... The depreciation rates recommended...are based on producing an annual dollar amount equal to these allowances. Rather than developing a net salvage allowance based on the ratio of net salvage to the original cost of the plant retired, the ratio is based on the ratio of an annual allowance to total plant in service.
>
> It could be argued that this annual allowance approach is an "impure" application of the "whole" life perspective because it is based on a rather short term analysis of activity. As plant ages and retirement activity increases, it would be expected that the annual allowance should be increased over time. Insufficient depreciation reserve might be accumulated if the annual allowance is not reviewed on a regular basis. However, in Missouri, depreciation

rates are reviewed every five years as required by Commission rule. This frequency will allow for adjustment of the annual allowance to reflect changes in activity, if necessary.

Q. To recap, with the exception of MGE and Tom Sullivan of Black and Veatch, various Missouri-regulated companies, including Empire District Electric and their consultant, have proposed that net salvage cost be calculated based on a simple ratio of the current Cost of Removal or the net salvage cost ratioed to the original cost of the plant being removed. They argue that although this determination results in each company collecting much more from customers than the company is currently spending, this determination should be continued because of tradition. Is that correct?

A. That is the crux of their argument. They do not address the inability to accurately predict the future and make reasonable estimates. They do not explain what should be done with Cost of Removal funds that are collected in excess of the actual removal. They do not discuss the imbedded inflation that is in the ratio they calculate and offer an adjustment to the pre-collected Cost of Removal from current customers. They do not state how the Commission or customers can be certain that pre-collection of Cost of Removal will offer assurance that the company will have those funds available to proceed with removal when the plant is retired. They do not advise the Commission or customers of how there can be certainty that a company that pre-collects Cost of Removal will be the owner of and responsible for the removal of the plant when it is retired. The "traditional" calculation of net salvage as a pre-collection and its inclusion in the depreciation rate determination exposes risk that Cost of Removal funds will be collected from customers for retirement and removal of plant decades in the future but will not be used for or available for the removal of specific plant. The future is unknown and it cannot be determined what plant will retire, at what time it will retire, if it will be sold, be

removed or left standing at retirement and what cost, if any, will be incurred at retirement. It is Staff's position that net salvage cost should be determined on current expense levels.

Q. In past cases and legal filings, some companies and their consultants who argue for the "traditional" Whole Life formula suggest that the Missouri Commission and the Pennsylvania Commission are the only utility commissions to move away from the "traditional" Whole Life formula to a current expense determination. Do you agree with them?

A. I doubt that Missouri and Pennsylvania are the only states to recognize the large difference between net salvage calculated using the "traditional" Whole Life formula and a current expense determination. But, based on prior information given in this testimony, we can see that in 1953 a calculation of net salvage was expected to be positive in most accounts (i.e., Gross Salvage greater than COR). At that time and for some years afterward, the issue of net salvage was nearly non-existent because depreciation determinations were basically a recovery of the plant's original cost and no more. During the very late 1970s and early 1980s, two external conditions changed significantly resulting in a change in the value calculated as net salvage in the "traditional" Whole Life formula. These two external conditions were rapid increases in labor rates and environmentalism.

In turn, these external conditions have caused net salvage to become a large cost instead of a positive value. The effect of these changes in external conditions is becoming better known as more is written and discussed about large net salvage cost determinations. State Commissions, especially Commissions that have no depreciation

engineers on staff, may be accepting depreciation accruals calculated using the "traditional" Whole Life formula without understanding the basis of the huge accruals they are ordering. Only commissions with depreciation engineers on staff that recognize the large difference between "traditional" net salvage determinations and current net salvage cost can be expected to be considering ordering net salvage cost on a current expense basis.

Q. What is the fallout for utility customers in states that are not addressing the large difference between the net salvage cost collected when using the "traditional" Whole Life formula versus current net salvage cost?

A. The large collection of monies from utility customers for anticipated net salvage cost that will not occur for many decades plus amortizations for theoretical calculations that exist only because future net salvage costs are being included in the reserve account represent, for most companies, millions of dollars annually that each company will collect from customers in utility rates. These dollars, for the most part, will not be spent on current removal cost. These millions of dollars are not earmarked for future removal of the specific plant that they are collected to cover. Rather, these millions of dollars collected each year can be used in any manner the company's management determines. The customers, in this case, are paying an estimate of an unknown future event that may or may not occur.

Q. How will Staff handle depreciation rates and net salvage cost?

A. Depreciation Staff will determine depreciation rates that allow the Company to collect from customers the original cost of plant over the average service life (ASL) of the plant. Staff Auditors will determine the current level of net salvage cost.

This will be normalized over several years and net salvage cost will be presented as an expense item included with other audit expense items. Finally, if there is a major retirement and removal, such as a power plant, Staff depreciation engineers will evaluate the Company's cost presentation and will propose an amortization that will allow the Company to recover the appropriate amount from customers for the major plant retirement at the time the plant's removal is underway.

Q. Turning to your depreciation study and determinations of depreciation rates for this case, are there any specific concerns to address?

A. Yes. The Commission has adopted accounting regulations prescribed by the Federal Energy Regulatory Commission in Commission rule 4 CSR 240-40.030. Section 3(J) of this rule states that the utility shall "Maintain records which classify, for each plant account, the amounts of the annual additions and retirements so as to show the number and cost of the various record units or retirement units by vintage year..." Service life is defined in 18 CFR Part 101, paragraph 15001, as "...the time between the date electric plant is includible in electric plant in service,...,and the date of its retirement."

Commission rule 4 CSR 240-20.030(A) and (M) require records of plant placement and retirement and mortality records that "...reflect the average life of property which has been retired." This requirement extends to all plant accounts. The Staff has been told that the conversion to a different computer system left the Company absent the ability to submit their generation plant's mortality files. Transmission, Distribution and General plant mortality files were submitted. The Staff has referred Empire to a company that is in the business of converting data files from one format to

another. There are other companies that do this same type of work. Staff propose that the Company be ordered to meet the requirements of the previously stated rules by July 1, 2001, by having the data from the Company's retired computer system formatted to the Company's new computer system and that these accounts be submitted to Staff in the Gannett-Fleming format by July 15, 2001.

Q. What depreciation determinations have the Staff done for this case?

A. The Staff determined average service lives and depreciation rates for all accounts in Transmission, Distribution and General plant. These determinations were made by analysis of historical mortality data. Additionally, Staff engineers toured the Company's major plant facilities and met with Company personnel to discuss operations. The plant tours and the meetings were for the specific purpose of determining if any adjustments should be made to the lives and depreciation rates determined from the mortality data. For this plant, the Staff concluded that no adjustments were required.

Q. What did the depreciation Staff determine for the Company's Generation plant given the absence of historical mortality data?

A. Staff utilized the information learned from the Generating Plant tours combined with the results of a depreciation study completed for Case No. ER-94-174. Although the study is six years old, Staff's tours and meetings did not bring forth any justification to change any of the lives and depreciation rates determined in the ER-94-174 study. As previously stated, the Company did not provide Staff with any newer mortality data. Staff are unaware of events that would result in a change to the lives determined for the Generating Plant that was studied in ER-94-174. Therefore, with the

exception of new plant, Staff propose that these rates, presented in Schedule 1, be ordered for the Generating Plant.

Q. What did the Depreciation Staff determine for the Company's new Generating Plant in the absence of historical mortality data and in the absence of a previous Staff depreciation study?

A. The Generation Plant that was not included in the ER-94-174 study is the combustion turbine installations at the State Line location. When the current work at State Line is completed, the simple combustion turbine (CT) State Line #1 (about 90mw) will continue to be used as a peaking unit and a new combined cycle unit, two combustion turbines and a waste heat steam turbine, State Line #2, (referred to by some others as State Line Combined Cycle Unit, SLCC Unit) will be used as a floating base load unit.

Q. What is the situation with State Line #1?

A. State Line #1 has been in service several years. Staff have used data from similar simple combustion turbines that are used for peaking of electric demand. Lives have been assigned to each account as given in Schedule #1.

Q. How would you describe State Line #2 as a floating base load unit?

A. The State Line #2 Unit consists of two CTs of about 150 megawatts (mw) each and a steam turbine that utilizes the waste heat from the two CT units and will generate an additional 200mw. The total of 500mw is a full-load capability. As with most base load units, coal, oil, nuclear and gas, there is an annual down period of several weeks for major maintenance. With coal and nuclear, the efficiency curves dictate that when these units drop below their full load capability their efficiency drops rapidly. With

a combined cycle unit this is less of a problem. The result is that a combined cycle unit can vary during any 24-hour period to follow electrical demand much easier than coal and nuclear base load units. A unit that has the ability to follow electrical demand is frequently called a floating base load unit.

Q. What have you determined as the Company's plans for State Line #2?

A. Based on our meetings with the Company, the State Line #2 unit will run at capacity, 500mw, during times of power demand when its cost to generate is less than the cost of purchased power. Generally speaking, the unit will always run except for its annual down time for major repairs. Unique to the combined cycle unit is its ability to very output with daily demand. It can be expected, on a hot summer day, that State Line #2 will run at 500mw during the day but at night when demand drops off, the gas charge to the turbines will be reduced and, in turn, the electrical power output will be reduced. There will be some efficiency loss. In February 2001, several months prior to completion of State Line #2, the Company expects State Line #2 to meet about 60% of its 100% theoretical capacity. In other words, with the annual down time and the night time power reductions, the unit will only produce 60% of the power it could produce if it were on line all year running at full capacity 24 hours every day.

Q. State Line #2 is scheduled to start production on June 1, 2001. What have you learned about this date?

A. Staff's plant visit to the State Line location left Staff skeptical of the start date of June 1, 2001. The Company personnel, when asked questions about work that must be completed, repeatedly stated that it would be difficult to finish all work by that date.

Q. With State Line #2 still under construction and the scheduled start date in doubt, what have you determined for plant life and depreciation rate for this plant?

A. It was necessary for us to turn to design engineers to develop a design life for the combined cycle unit because there is no similar plant history in Missouri. The design engineers are in a position to tell us what is expected based on their design work but they too have no broad based history of mortality events for combined cycle units.

Based on the design engineers' statements, the State Line #2 Combined Cycle Unit has a design life of 35 years. Although we have seen other base load plants outlive design life, specifically most coal-fired power plants were designated as 40-year plants yet Missouri base-load, coal-fired plants will have lives well in excess of 40 years. Staff are proposing a 35-year Average Service Life (ASL) be assigned to State Line #2 until more data can be gathered to refine this estimate. This 35-year ASL equates to a 2.86% depreciation rate.

Q. What are the annual accrual values based on the December 31, 1999 plant balances supplied to Staff by the Company?

A. The annual accrual values are presented in Schedule 1 to this testimony. Let me review some critical values from this table:

1) The plant balance as of December 31, 1999, for all plant exclusive of State Line #2 is $800,187,818. This is an adjusted value because Staff removed the second State Line CT that has now been incorporated in the combined cycle unit.

2) The expected total Company plant balance including an estimate for the completed combined cycle unit is $940,663,022 (i.e., State Line #2 is

estimated to have a plant balance of $140,475,204). It is important to note that there is some difference in plant balance values presented by Empire's consultant, Mr. L. W. Loos of Black and Veatch, and the values in Schedule 1. These differences are small and Staff have used plant balance values submitted by the Company to recalculate their consultant's annual accrual values. For this reason, there will be some difference in Schedule 1's "Company proposal" numbers from those presented in the Black and Veatch depreciation study completed for Empire.

3) The annual accrual using the currently ordered depreciation rates is $24,482,724. The annual accrual using the Company's proposed depreciation rates is $30,291,570. The annual accrual using the Staff's proposed depreciation rates is $19,639,566. But, these values are not directly comparative. They are apples and oranges so to speak.

Q. Can you clear up the differences in these values?

A. Yes. The currently ordered depreciation rates include net salvage cost as calculated in the "traditional" Whole Life formula. The Company's proposed depreciation rates include net salvage cost as calculated in the "traditional" Whole Life formula, plus an amortization of over $51 million spread across the average service lives of the applicable accounts. The Staff's proposed depreciation rates are for recovery of the original cost of plant in service. Staff auditors will include net salvage cost as a current expense with other expenses in their audit work.

Q. What are the values on an apples-to-apples basis?

A. The following table presents the annual accruals considering only recovery of the original cost of plant in service (the $800,187,818).

Ordered Annual Accrual	$23,523,766
Company's Proposed Annual Accrual	$25,249,068
Staff's Proposed Annual Accrual	$19,638,073

Q. The differences in annual accrual values that were previously stated and the smaller differences that were just stated are a result of the "traditional" Whole Life formula's net salvage cost calculation. Is that correct?

A. That would be true for the ordered rates but the Company's proposal also includes an amortization. The amortization is proposed as an adjustment for a theoretical reserve balance calculation done by the consultant. The data files necessary to actually calculate a theoretical reserve balance are not available. Thus, the consultant's theoretical calculation is suspect.

Q. What was Staff's determination concerning a calculation of a theoretical reserve balance?

A. Because there are no data files in Generation plant, a theoretical calculation cannot be done. But, a reserve ratio can be calculated to determine what percentage of the total plant balance is covered by the reserve balance. This value is 37.48% ($299,880,798 ÷ $800,187,818) of the reserve balance or over 1/3 of the total plant in service.

Q. What conclusions can you draw from the 37.48% value?

A. Staff's position is that this is a sufficient and probably a more than sufficient reserve balance considering that the plant accounts with large balances range in ASL from 30 to 60 years. It is reasonable to expect that the Company will collect depreciation accruals that will equal the original cost of plant as plant retires from

service. When historical files are available for all accounts, Staff will determine if the Company's reserve balance is under- or over-recovered.

Q. Can you give a brief table that shows the relationship of the ordered, Company and Staff depreciation determinations that breaks out the net salvage cost and amortizations where applicable?

A. Yes.

For Plant balance exclusive of State Line #2 or $800,187,818.

	Ordered	Company	Staff
Annual Accrual (To recover original cost only)	$23,523,766	$25,249,068	$19,638,073
Net Salvage Cost	$ 2,951,113	$ 3,574,744	$ 1,061,444*
Amortization (From theoretical determination)	$ 0	$ 1,467,758	$ 0
Total annual accrual	$26,474,879	$30,291,570	$20,699,517

(*This value was determined by Staff auditors and is included with other expenses determined by them. It is included here only for comparison.)

For State Line #2 or $140,475,204 Plant balance.

	Ordered	Company	Staff
Annual Accrual	$ 0	$7,122,093	$4,017,591
Net Salvage Cost	$ 0	<$ 196,665>	$ 0
Amortization (From theoretical determination)	$ 0	$ 84,285	$ 0
Total annual accrual	$ 0	$7,009,713	$4,017,591

Q. What are Staff's proposals in this case?

A. Staff propose that:

1) The Company be ordered to submit all accounts, specifically generation accounts, in the Gannett-Fleming format to Staff by July 15, 2001.

2) The depreciation rates and plant lives given in Schedule 1 of this testimony as "Staff's Proposal" be ordered excepting rates for State Line #2.

3) The depreciation rates and plant life in Schedule 1 of this testimony as "Staff's Proposal" be ordered for State Line #2 if, and only if, it has been declared 'in service' by the Missouri Public Service Commission before this case is concluded.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of the Empire District Electric Company for a General Rate Increase	)))	Case No. ER-2001-299

AFFIDAVIT OF PAUL W. ADAM

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Paul W. Adam, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 27 pages to be presented in the above case; that the answers in the foregoing Direct 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.

Paul W. Adam

Subscribed and sworn to before me this 2nd day of April 2001.

D SUZIE MANKIN
NOTARY PUBLIC STATE OF MISSOURI
COLE COUNTY
MY COMMISSION EXP. JUNE 21,2004

EMPIRE DISTRICT ELECTRIC COMPANY (ER-2001-299)
DEPRECIATION DETERMINATION SPREADSHEET

ACCOUNT NUMBER	ACCOUNT	PLANT ORIGINAL COST 12 31-99	ORDERED			COMPANY'S PROPOSAL			STAFF'S PROPSOSAL		ORDERED ANNUAL ACCRUAL	STAFF'S INCREASE (DECREASE) ANNUAL ACCRUAL	STAFF'S ANNUAL ACCRUAL	ACTUAL ACCRUED RESERVE 12-31-99	COMPANY PROPOSAL (ADJUSTED) AMORT.	COMPANY PROPOSAL (ADJUSTED) ANNUAL ACCRUAL
			LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	DEP RATE (%)						
RIVERTON - STEAM PRODUCTION																
311.00	STRUCTURES & IMPROVEMEI	8,109,522	55.6	(14.0)	2.05%			8.29%	95.0	1.05%	166,245	(81,095)	85,150	3,668,770	332,490	672,279
312.00	BOILER PLANT EQUIPMENT	19,892,539	48.4	(34.0)	2.77%			5.04%	54.0	1.85%	551,023	(183,011)	368,012	14,610,099	252,635	1,002,584
314.00	TURBOGENERATOR UNITS	7,025,329	56.4	(1.0)	1.79%			2.38%	63.0	1.59%	125,753	(14,051)	111,703	5,371,700	(28,101)	167,203
315.00	ACCESSORY ELECTRIC EQUI	1,334,121	54.5	(8.0)	1.98%			-0.73%	56.0	1.79%	26,416	(2,535)	23,881	1,407,685	(39,223)	(9,739)
316.00	MISCELLANEOUS POWER PLA	1,405,032	52.5	6.0	2.02%			8.64%	51.0	1.96%	28,382	(843)	27,539	536,000	51,986	121,395
Total Riverton		37,766,543						5.21%			897,819	(281,535)	616,284	25,594,254	569,787	1,953,722
ASBURY- STEAM PRODUCTION																
311.00	STRUCTURES & IMPROVEMENTS	8,831,444	53.0	(14.0)	2.15%			6.53%	95.0	1.05%	189,876	(97,146)	92,730	2,681,870	140,420	576,693
312.00	BOILER PLANT EQUIPMENT	53,717,464	46.0	(34.0)	2.91%			7.49%	54.0	1.85%	1,563,178	(569,405)	993,773	14,636,399	1,111,952	4,023,438
312.00	UNIT TRAIN	5,580,296	15.0	(15.0)	5.67%			3.82%	15.0	6.67%	316,403	55,803	372,206	2,988,542	(8,928)	213,167
314.00	TURBOGENERATOR UNITS	19,559,982	39.0	(1.0)	2.60%			4.60%	63.0	1.59%	508,560	(197,556)	311,004	7,238,184	187,776	899,759
315.00	ACCESSORY ELECTRIC EQUI	2,328,233	52.0	(8.0)	2.10%			2.86%	56.0	1.79%	48,893	(7,218)	41,675	1,378,752	466	66,587
316.00	MISCELLANEOUS POWER PLA	2,709,597	45.0	6.0	2.10%			7.46%	51.0	1.96%	56,902	(3,793)	53,108	680,159	37,934	202,136
Total Asbury		92,727,016						6.45%			2,683,811	(819,315)	1,864,496	29,603,906	1,469,619	5,981,781
IATAN - STEAM PRODUCTION																
311.00	STRUCTURES & IMPROVEMEI	3,789,814	34.0	(14.0)	3.35%			4.83%	95.0	1.05%	126,959	(87,166)	39,793	1,887,129	34,487	183,048
312.00	UNIT TRAIN	8,365	15.0	(15.0)	4.19%			0.00%	0.0	0.00%	0	0	0	8,365	0	0
312.00	BOILER PLANT EQUIPMENT	28,143,994	32.0	(34.0)	5.67%			2.68%	54.0	1.85%	1,179,233	(658,569)	520,664	20,047,199	(163,235)	754,259
314.00	TURBOGENERATOR UNITS	7,705,138	34.0	(1.0)	3.00%			3.36%	63.0	1.59%	231,154	(108,642)	122,512	4,235,698	20,804	258,893
315.00	ACCESSORY ELECTRIC EQUI	3,494,267	34.0	(8.0)	3.18%			3.00%	56.0	1.79%	111,118	(48,570)	62,547	1,963,641	2,097	104,828
316.00	MISCELLANEOUS POWER PLA	702,320	32.0	6.0	2.94%			5.96%	51.0	1.96%	20,648	(6,883)	13,765	277,529	8,077	41,858
Total Iatan		43,843,898						3.06%			1,669,112	(909,830)	759,281	28,419,561	(97,771)	1,342,886
OZARK BEACH - HYDRO																
331.00	STRUCTURES & IMPROVEMEI	501,917	61.0	(20.0)	1.98%			5.26%	61.0	1.64%	9,938	(1,707)	8,231	187,999	8,834	26,401
332.00	RESERVOIRS, DAMS, & GATE	1,396,858	60.0	(10.0)	1.90%			1.39%	60.0	1.67%	26,540	(3,213)	23,328	1,205,184	(2,235)	19,416
333.00	WATER WHEEL, TURBINE & G	353,036	68.0	0.0				-0.52%	68.0	1.47%	0	5,190	5,190	417,575	(6,249)	(1,836)
334.00	ACCESSORY ELECTRIC EQUI	737,341	70.0	(5.0)				3.87%	70.0	1.43%	0	10,544	10,544	177,407	4,866	28,535
335.00	MISCELLANEOUS POWER PLA	244,207	41.0	(14.0)	2.10%			5.89%	41.0	2.44%	5,128	830	5,959	104,151	3,321	14,384
Total Ozark Beach		3,233,359						2.68%			41,607	11,645	53,251	2,092,316	8,538	86,900

Schedule 1-1

ACCOUNT NUMBER	ACCOUNT	PLANT ORIGINAL COST 12 31-99	ORDERED			COMPANY'S PROPOSAL			STAFF'S PROPSOSAL		ORDERED ANNUAL ACCRUAL	STAFF'S INCREASE (DECREASE) ANNUAL ACCRUAL	STAFF'S ANNUAL ACCRUAL	ACTUAL ACCRUED RESERVE 12-31-99	COMPANY PROPOSAL (ADJUSTED) AMORT.	COMPANY PROPOSAL (ADJUSTED) ANNUAL ACCRUAL
			LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	DEP RATE (%)						
RIVERTON - COMBUSTION TURBINE																
341.00	STRUCTURES & IMPROVEME	181,573	34.3	(3.6)	3.02%				55.0	1.82%	5,484	(2,179)	3,305	96,333		
342.00	FUEL HOLDERS, PRODUCERS	78,806	26.0	(3.6)	3.71%				26.0	3.85%	2,924	110	3,034	39,946		
343.00	PRIME MOVERS	9,691,783	28.4	(3.5)	3.40%				52.0	1.92%	329,521	(143,438)	186,082	4,052,189		
344.00	GENERATORS	926,850	31.1	(3.6)	3.10%				55.0	1.82%	28,732	(11,864)	16,869	468,124		
345.00	ASSESSORY ELECTRIC EQUIP	256,601	28.0	(3.6)	3.44%				28.0	3.57%	8,827	334	9,161	137,342		
346.00	MISCELLANEOUS POWER PLA	83,907	25.0	(3.6)	3.86%				25.0	4.00%	3,239	117	3,356	46,445		
Total Riverton C.T.		11,219,520						4.50%			378,726	(156,920)	221,806	4,840,379	46,000	504,878
ENERGY CENTER - COMBUSTION TURBINE																
341.00	STRUCTURES & IMPROVEME	1,844,595	30.5	(3.6)	3.16%				55.0	1.82%	58,289	(24,718)	33,572	1,293,974		
342.00	FUEL HOLDERS, PRODUCERS	3,700,886	26.0	(3.6)	3.71%				26.0	3.85%	137,303	5,181	142,484	1,195,117		
343.00	PRIME MOVERS	23,573,340	28.0	(3.5)	3.44%				52.0	1.92%	810,923	(358,315)	452,608	11,454,711		
344.00	GENERATORS	4,160,383	28.0	(3.6)	3.16%				55.0	1.82%	131,468	(55,749)	75,719	2,816,414		
345.00	ACCESSORY ELECTRIC EQUI	321,973	30.5	(3.6)	3.44%				28.0	3.57%	11,076	419	11,494	320,077		
346.00	MISCELLANEOUS POWER PLA	1,165,925	25.0	(3.6)	3.86%				25.0	4.00%	45,005	1,632	46,637	755,880		
Total Energy Center C.T.		34,767,102						4.18%			1,194,064	(431,549)	762,514	17,836,173	97,348	1,453,265
STATE LINE - COMBUSTION TURBINE																
341.00	STRUCTURES & IMPROVEME	2,508,343	30.5	(3.6)	3.16%				55.0	1.82%	79,264	(33,612)	45,652	582,165		
342.00	FUEL HOLDERS, PRODUCERS	685,090	26.0	(3.6)	3.71%				26.0	3.85%	25,417	959	26,376	191,298		
343.00	PRIME MOVERS	26,439,710	28.0	(3.5)	3.44%				52.0	1.92%	909,526	(401,884)	507,642	6,534,264		
344.00	GENERATORS	5,371,129	28.0	(3.6)	3.16%				55.0	1.82%	169,728	(71,973)	97,755	1,296,334		
345.00	ACCESSORY ELECTRIC EQUI	337,602	30.5	(3.6)	3.44%				28.0	3.57%	11,614	439	12,052	88,700		
346.00	MISCELLANEOUS POWER PLA	374,150	25.0	(3.6)	3.86%				25.0	4.00%	14,442	524	14,966	106,602		
Total State Line C.T		35,716,024						4.70%			1,209,990	(505,547)	704,443	8,799,363	(32,144)	1,678,653

Schedule 1-2

ACCOUNT NUMBER	ACCOUNT	PLANT ORIGINAL COST 12 31-99	ORDERED			COMPANY'S PROPOSAL			STAFF'S PROPSOSAL		ORDERED ANNUAL ACCRUAL	STAFF'S INCREASE (DECREASE) ANNUAL ACCRUAL	STAFF'S ANNUAL ACCRUAL	ACTUAL ACCRUED RESERVE 12-31-99	COMPANY PROPOSAL (ADJUSTED) AMORT.	COMPANY PROPOSAL (ADJUSTED) ANNUAL ACCRUAL
			LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	DEP RATE (%)						
TRANSMISSION																
352.00	STRUCTURES & IMPROVEME	2,333,000	R2-77	(22.0)	1.58%	50	(15)	1.76%	73.0	1.37%	36,861	(4,899)	31,962	703,299	(12,589)	41,061
353.00	STATION EQUIPMENT	59,405,380	R2-44	(13.0)	2.57%	46	(20)	2.59%	45.7	2.19%	1,526,718	(225,740)	1,300,978	18,987,594	(8,257)	1,538,599
354.00	TOWERS & FIXTURES	777,079	S3.5-71	(11.0)	1.56%	50	(25)	1.51%	77.0	1.30%	12,122	(2,020)	10,102	648,674	(7,730)	11,734
355.00	POLES & FIXTURES	21,264,197	R2-48	(30.0)	2.71%	50	(30)	2.43%	54.0	1.85%	576,260	(182,872)	393,388	8,406,683	(36,064)	516,720
356.00	OVERHEAD CONDUCTOR & D	38,472,953	R3.5-48	(8.0)	2.25%	50	(15)	2.23%	70.0	1.43%	865,641	(315,478)	550,163	10,844,795	(25,815)	857,947
Total Transmission		122,252,609						2.43%			3,017,603	(731,010)	2,286,593	39,591,045	(90,456)	2,966,061
DISTRIBUTION																
361.00	STRUCTURES & IMPROVEME	8,503,742	S1.5-49	(10.0)	2.25%	50	(15)	2.34%	50.5	1.98%	191,334	(22,960)	168,374	2,073,689	3,810	198,988
362.00	STATION EQUIPMENT	47,342,773	R1.5-35	(5.0)	3.00%	38	(10)	2.79%	40.9	2.44%	1,420,283	(265,120)	1,155,164	14,547,526	(49,947)	1,320,863
364.00	POLES, TOWERS & FIXTURES	76,134,159	R4-39	(66.0)	4.25%	41	(65)	4.22%	41.1	2.43%	3,235,702	(1,385,642)	1,850,060	31,193,168	146,254	3,212,862
365.00	OVERHEAD CONDUCTORS &	83,780,468	R3-45	(29.0)	2.87%	48	(20)	2.46%	47.7	2.10%	2,404,499	(645,110)	1,759,390	24,867,164	(36,612)	2,061,000
366.00	UNDERGROUND CONDUIT	11,852,108	S3-25	(1.0)	3.96%	34	(5)	2.93%	33.7	2.97%	469,343	(117,336)	352,008	3,051,668	(18,229)	347,267
367.00	UNDERGROUND CONDUIT & I	25,434,744	S6-21	12.0	4.19%	27	0	3.64%	27.7	3.61%	1,065,716	(147,522)	918,194	6,900,338	(16,736)	925,825
368.00	LINE TRANSFORMERS	55,472,177	R2-35	35.0	2.82%	40	(10)	2.71%	39.9	2.51%	1,564,315	(171,964)	1,392,352	16,438,422	(24,962)	1,503,296
369.00	SERVICES	35,129,096	S3-28	(16.0)	4.19%	33	(25)	3.68%	33.0	3.03%	1,471,909	(407,498)	1,064,412	14,524,814	(39,309)	1,292,751
370.00	METERS	12,650,096	S1.5-38	0.0	2.63%	39	0	2.28%	38.7	2.58%	332,698	(6,325)	326,372	4,593,904	(35,990)	288,422
371.00	INSTALLATION ON CUSTOME	9,575,079	S1-17	10.0	5.82%	20	(10)	5.13%	19.4	5.15%	557,270	(64,153)	493,117	3,919,951	(35,275)	491,202
373.00	STREET LIGHTING & SIGNAL S	8,514,692	R1-31	(23.0)	2.48%	43	(20)	2.24%	42.4	2.36%	211,164	(10,218)	200,947	3,328,912	(47,188)	190,729
Total Distribution		374,389,134						3.16%			12,924,234	(3,243,845)	9,680,389	125,439,556	(154,184)	11,833,203
GENERAL																
390.00	STRUCTURES & IMPROVEME	9,162,406	L0-22	(3.0)	4.68%	25	(10)	5.42%	23.4	4.27%	428,801	(37,566)	391,235	2,910,156	93,182	496,602
391.10	OFFICE FURNITURE & EQUIPN	4,633,354	S0.5-21	2.0	4.67%	20	0	4.90%	20.8	4.81%	338,341	(115,477)	222,864	2,065,186	(2,961)	227,034
391.20	COMPUTER EQUIPMENT	2,611,643			0.00%	5	10	18.00%	7.0	14.29%	0	373,204	373,204	0	0	470,096
392.00	TRANSPORTATION EQUIPMEI	5,239,524	L1.5-11	1.0	9.00%	10	10	3.22%	10.5	9.52%	471,557	27,246	498,803	3,918,098	(349,324)	168,713
393.00	STORES EQUIPMENT	350,585	R2-23	(5.0)	4.57%	25	(5)	3.69%	25.3	3.95%	16,022	(2,174)	13,848	162,899	(1,795)	12,937
394.00	TOOLS, SHOP & GARAGE EQU	2,172,031	S1-27	1.0	3.67%	40	0	1.44%	40.0	2.50%	79,714	(25,413)	54,301	1,108,943	(1,379)	31,277
395.00	LABORATORY EQUIPMENT	879,219	S1-34	(2.0)	3.00%	38	0	1.84%	37.6	2.66%	26,377	(2,989)	23,387	444,941	(69,300)	16,178
396.00	POWER OPERATED EQUIPME	9,418,970	S4-14	6.0	6.71%	15	5	6.09%	15.0	6.67%	632,013	(3,768)	628,245	3,497,619	(23,293)	573,615
397.00	COMMUNICATION EQUIPMEN	9,620,430	S5-21	0.0	4.76%	20	0	5.07%	20.2	4.95%	457,932	18,279	476,211	3,495,085	6,715	487,756
398.00	MISCELLANEOUS EQUIPMENT	184,451	R1-26	(1.0)	3.88%	27	0	3.26%	26.7	3.75%	7,157	(240)	6,917	61,318	(822)	6,013
Total General		44,272,613						4.54%			2,457,913	231,102	2,689,015	17,664,245	(348,978)	2,490,221
Total Plant		800,187,818									26,474,878	(6,836,805)	19,638,073	299,880,798	1,467,758	30,291,570

Schedule 1-3

ACCOUNT NUMBER	ACCOUNT	PLANT ORIGINAL COST 12 31-99	ORDERED			COMPANY'S PROPOSAL			STAFF'S PROPSOSAL		ORDERED ANNUAL ACCRUAL	STAFF'S INCREASE (DECREASE) ANNUAL ACCRUAL	STAFF'S ANNUAL ACCRUAL	ACTUAL ACCRUED RESERVE 12-31-99	COMPANY PROPOSAL (ADJUSTED) AMORT.	COMPANY PROPOSAL (ADJUSTED) ANNUAL ACCRUAL
			LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	NET SALVAGE (%)	DEP RATE (%)	LIFE (YRS)	DEP RATE (%)						
STATE LINE - COMBINED CYCLE																
311.00	STRUCTURES & IMPROVEMENTS															
312.00	BOILER PLANT EQUIPMENT															
314.00	TURBOGENERATOR UNITS															
315.00	ACCESSORY ELECTRIC EQUIPMENT															
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT															
341.00	STRUCTURES & IMPROVEMENTS															
342.00	FUEL HOLDERS, PRODUCERS & ACCESSORIES															
343.00	PRIME MOVERS															
344.00	GENERATORS															
345.00	ACCESSORY ELECTRIC EQUIPMENT															
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT															
Total State Line C. C.		140,475,204						4.99%		2.86%			4,017,591			7,009,713
Total Plant and State Line C.C.		940,663,022						3.97%					23,655,664			37,344,322