ORIGINAL

VOLUME II

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DUQUESNE LIGHT COMPANY
DOCKET NO. R-00974104

APPLICATION FOR APPROVAL OF RESTRUCTURING PLAN UNDER SECTION 2806 OF THE PUBLIC UTILITY CODE

Direct Testimony of : **Morgan K. O'Brien**
James A. Lahtinen

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Duquesne Statement No. 4

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Direct Testimony
of
Morgan K. O'Brien

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Regarding Regulatory Assets, Decommissioning Costs and 1996 Revenues, Expenses and Rate Base

DIRECT TESTIMONY OF MORGAN K. O'BRIEN

Q. Please state your name and business address.

A. Morgan K. O'Brien. 411 Seventh Avenue, Pittsburgh, PA 15219.

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

A. I am employed by Duquesne Light Company ("Duquesne" or "the Company") as its Controller and Chief Accounting Officer.

Q. Describe your responsibilities.

A. In general, I oversee Duquesne's accounting organization. This organization consists of departments which include regulatory reporting, tax, corporate accounting, accounts payable, customer accounting, valuation and property records, and payroll, all of which report directly to me. I establish and direct all corporate accounting policies and procedures. I also am responsible for ensuring accuracy and completeness of all financial statements and all regulatory filings dealing with financial information.

Q. Please state your background with Duquesne.

A. I have been with Duquesne since September, 1991. During that time I have been employed first as Manager of Taxes and later, Assistant Controller before being named Controller of the Company in 1995.

Q. Please describe your professional background before coming to Duquesne.

Prior to joining Duquesne, I held the position of Assistant Vice President of Corporate Taxes at PNC Bank in Pittsburgh. Prior to PNC, I was employed as a Manager in the Pittsburgh office of Deloitte & Touche, a public accounting firm. I have also lectured numerous times on various accounting and tax issues to various professional accounting

groups. I also taught numerous undergraduate accounting courses in the University of Pittsburgh's School of Business.

Q. *What is your educational background?*

A. I hold a Bachelor of Science Degree in Business Administration, as well as, a Masters of Science Degree in Taxation. Both degrees were awarded from Robert Morris College in Pittsburgh.

Q. Do you hold any professional licenses and are you a member of any professional organizations?

A. I am a Certified Public Accountant. Although I am currently in an inactive status, I previously was an active member of the American Institute of Certified Public Accountants, as well as, Pennsylvania Institute of Certified Public Accountants. I am currently a member of the Edison Electric Institute Chief Accounting Officers Committee.

Q. What is the purpose of your testimony?

A. The primary purpose of my testimony is to present all relevant facts concerning the Company's regulatory assets, including both nuclear and fossil decommissioning, which will become "stranded" as a result of the various provisions of the Electricity Generation Customer Choice And Competition Act ("the Act") and for which the Company seeks recovery. I will also provide an explanation of the financial impact of an adverse order relating to the Company's request to recover its stranded costs relating to generation, including regulatory assets, nuclear and fossil decommissioning and investments in generating assets. I will also provide the Company's revenue requirements calculation including the functional assignment of costs into generation, transmission and

distribution, which Mr. Lahtinen will then use to develop the Company's cost of service study. Finally, I will also describe and support various of the Company's accounting and financial data submitted in response to the filing guidelines (Appendix A) for electric utility restructuring in the Commission's order issued in Docket No. M-00960890.

REGULATORY ASSETS & DECOMMISSIONING OF POWER PLANTS

Q. Please describe the Company's claim for recovery of certain regulatory assets, as well as decommissioning costs associated with nuclear and fossil power stations.

A. First, the Company is seeking to recover the entire balance of its generation related regulatory assets over the nine year transition period. Second, the Company is seeking to recover annually over the transition period its current level of nuclear decommissioning costs (including the $5 million increase as part of the Ft. Martin sale agreement with the Commission). The Company is not foregoing the potential to further mitigate the unfunded balance of nuclear decommissioning liability during the transition period. Third, the Company is not seeking to recover any of its unfunded fossil decommissioning costs over the transition period (unless either future mitigation allows for the recovery or future market prices allow for the recovery). Fourth, the Company is proposing to treat the unfunded fossil decommissioning and, if any, the unfunded nuclear decommissioning as a reduction in any residual value of the generation stations at January 1, 2006.

Q. You referred previously to the Company's claim for the recovery of certain regulatory assets, as well as decommissioning costs associated with nuclear and fossil power stations. Please explain what you mean by regulatory assets.

A. In short, a regulatory asset is created when a company is permitted by accounting rules (most notably SFAS 71) to book an "asset" for a sum to be collected in the future for which the relevant regulator has issued a valid order which provides for the certainty of recovery of that sum. Generally, the basis for the creation of a regulatory asset is that the regulator agrees that a regulated company has the right to the current recovery of a certain sum in rates but, for various reasons, determines that such recovery should either be deferred to a date certain in the future or should be amortized over a certain number of years.

Q. What is the basis for the Company's claim for recovery of its regulatory assets, as well as its claim for decommissioning of its generating stations?

A. There are several. First is the Act, itself. Section 2808(C)(1) states that, "in determining the level of transition or stranded costs that an electric utility may recover through the competitive transition charge, the Commission shall apply the following principles: (1) the Commission shall allow recovery of regulatory assets and the unfunded portion of the utility's projected nuclear generating plant decommissioning costs.

Q. Are there other reasons why the Company should be permitted to recover through a competitive transition charge its regulatory assets which become stranded as a result of the electric restructuring?

A. Yes, there are several. The first reason is that the Commission has already determined that these costs are due the Company and should be recovered through rates. As I will show, in each instance the Commission has explicitly made this determination or has done so implicitly by determining the schedule for cost recovery, either at a date certain or through an amortization schedule. That the Company has not yet recovered all of these

costs is simply the result of a regulatory determination that requires Duquesne to forego immediate recovery of those Commission-approved costs. The second reason is fundamental fairness. The Company has provided the benefits associated with the regulatory assets to ratepayers without yet recovering all of the attendant costs. It is only proper that the Company should be permitted to recover the attendant costs which would otherwise be rendered unrecoverable by the restructuring of the industry. The third reason is that the Company will be required to write off its regulatory assets without the certainty of recovery through the competitive transition charge. This would create a very dire financial situation for the Company. The fourth reason is that investors and the credit-providing community have relied on the Commission's assurance that the Company would be permitted to recover these costs. Indeed, that is why the accounting profession permitted Duquesne to book these costs as regulatory assets. The failure to live up to this bargain would have very serious consequences for any entity looking to secure financing for business activities in Pennsylvania. [I discuss these consequences in more detail later in my testimony.]

Q. Is the Company seeking both "return of and on" all regulatory assets?

A. No. The "early window" costs associated with the nuclear plants was specifically denied a return on in previous Commission decisions. The Company is not seeking a return on these costs but rather just the recovery of these previously incurred costs. In addition, there are a number of other regulatory assets which Duquesne is not including as rate base. These include deferred fuel expense, D.O.E. decontamination & decommissioning assessment, as well as any regulatory asset which has not been actually incurred prior to the time of the proposed collection period.

Q. Does this mean the Company is seeking both a "return of and on" the regulatory tax receivable? If so, why?

A. The literal answer is yes. The Company is seeking both a "return of and on" the regulatory tax receivable. The reason for this is that the corresponding additional deferred tax liability associated with this future tax receivable has reduced the Company's claim for its plant-in-service rate base. Thus, the Company is reducing the otherwise sought plant-in-service rate base return while at the same time increasing the return it is seeking regarding regulatory assets by the same dollar amounts. These two adjustments completely offset one another, one increasing the return and one decreasing the return.

Regulatory Assets & Decommissioning Expenses

Q. Please list each of the generation related regulatory assets for which the Company seeks recovery and the associated claim.

A. They are as follows:

	Generation $	PUC Order
Regulatory Tax Receivable	$244,800,000	R-860378
Unamortized Premium on Reacquired Debt	56,949,000	R-870651
Unamortized Debt Expense	5,476,000	R-870651
Beaver Valley No. 2 Premium on Reacquired Debt	30,059,000	R-870651
Deferred Rate Synchronization Costs	41,446,000	R-870222
Injuries and Damages	9,053,000	R-870651
Compensated Absences	7,954,000	R-870651
Def'd Nuclear Maintenance Outage Costs	13,461,000	R-870651
DOE Decontamination and Decommissioning	9,780,000	RM93-18-000*
Deferred Coal Costs	12,130,000	P-890386/387
Deferred Caretaker Expenses	6,772,000	P-900485
BV2 Training Costs	2,616,000	R-870651
FAS No. 106 Costs	22,428,000	
Cold Reserved Units	106,800,000	R-860378
Warwick Mine Investment	15,295,000	R-870651
Pilot Program Incentive Credit	4,350,000	
Customer Education	2,000,000	
Transition Filing	1,000,000	
Transition Implementation Costs	11,000,000	
Low Level Rad. Waste	2,274,000	R-870651
Total Regulatory Assets	$605,643,000	

* FERC Order

Nuclear Decommissioning	281,000,000
Fossil Decommissioning	274,400,000
Total Regulatory Assets & Decommissioning	$1,161,043,000

Generation Related Regulatory Assets

Q.. Please explain the basis of the Company's claim for the Regulatory Tax Receivable.

A. In Pennsylvania, utility rates historically have been set based upon the doctrine of "actual taxes paid," except where Federal Income Tax law requires normalization of tax benefits. In its order in Docket R-860378, the Commission required Duquesne to flow back to its customers the then-current period State Tax benefits associated with accelerated depreciation for income tax purposes. The order further required the Company to flow through on a current basis the federal income tax benefits associated with basis differences between ratemaking balances and the income tax basis of plant. This treatment was reconfirmed in the order issued by the PUC in Docket R-870651. Pursuant to its required adoption of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" (SFAS 109), Duquesne in January, 1994 recorded an initial balance of $550 million reflecting the reversal of these previously flowed-through income tax benefits. This regulatory asset was booked in recognition of the fact that the tax benefits will "turn around" in the future, leading to a higher tax expense which must be paid by the Company. At that time, however, the plant which gave rise to the accelerated depreciation will no longer be in jurisdictional rates. Ratepayers, therefore, would have gotten the benefit of lower rates in the past due to the tax advantages of the accelerated depreciation, but also would be able to avoid the higher tax

bill in the future when the assets which gave rise to be depreciation become deregulated. This result is incompatible with the even-handed treatment envisioned in the PUC's past orders. This regulatory asset simply recognizes the tax expense associated with the reversal of the timing differences between ratemaking accounting and tax accounting -- an expense which, otherwise, would be inequitably avoided by the Company's customers.

Q. Please describe the regulatory asset for the Unamortized Premium on Reacquired Debt.

A. From time to time it becomes advantageous to require existing long term debt and issue new debt at lower interest costs. This reacquistion of high cost debt offers direct benefits to customers in the form of a lower cost of service. The Unamortized Premium on Reacquired Debt represents the excess of the reacquisition price over the net carrying amount of First Mortgage Bonds, Debentures, and Pollution Control Obligations. In recognition of the benefits to ratepayers resulting from the refinancing, the PUC has permitted the Company to recover these costs through an amortization over the life of the new debt issuance. This accounting has been consistently applied throughout Duquesne's ratemaking history and was most recently reconfirmed in the order issued in Docket R-870651. Ratepayers have already enjoyed the savings that arose as a result of the Company's refinancing of debt at lower interest rates. It would be patently unfair to deny the Company the recovery of the costs it had to incur to produce those savings.

Q. Please describe the regulatory asset arising from Unamortized Debt Costs.

A. The Company incurs costs associated with the issuance of First Mortgage Bonds, Debentures and Pollution control Obligations. Instead of permitting the Company to recover these costs on a current basis, the Commission has consistently required that they be amortized over the life of the underlying bonds. This rate treatment has been applied

consistently to Duquesne, the most recent order authorizing it having been issued in Docket R-870651. Here, again, this is a case of the Company having paid an expense and the PUC having determined that it should be recovered over a number of years. Due to the restructuring, however, the Company will not be able to recover fully the Unamortized remainder of the expense. Elementary fairness demands that Duquesne be permitted to recover the remainder of this expense which was undertaken in the service of the ratepayers.

Q. Please describe the Premium on Reacquired Debt Associated with Beaver Valley No. 2.

A. These costs represent the excess of the reacquisition price over the net carrying amount on the bonds issued in conjunction with the sale and leaseback of the Beaver Valley Nuclear Unit No. 2 generating station. Instead of allowing a current recovery of this expense, these costs are being amortized over the life of the new issue of lower cost debt. As in the case of the Premium on Reacquired Debt, for which the accounting treatment has been consistently applied to Duquesne, this treatment was specifically adopted in the order issued in Docket R-870651.

Q. Would you please continue with a description of Deferred Synchronization Costs?

A. In Docket R-870222, the PUC granted Duquesne's request for "early window" rate treatment for two nuclear generating plants, Beaver Valley Unit No. 2 and Perry Unit No. 1. The "Early Window" refers to the fact that the plants went into commercial operation before the date on which rates were adjusted to include the plants. The early window rate treatment allowed the Company to defer the costs and seek recovery, over time, of the costs incurred between the dates of commercial operation and rate recognition. As part of Duquesne's sale of its interest in the Fort Martin Plant, the PUC approved a

comprehensive settlement agreement under which the Company, among other things, agreed to write off $9.0 million of the Deferred Rate Synchronization costs and amortize the remaining balance over the 10 year period concluding in 2006. The electric restructuring effort will make it impossible to recover fully the remaining early window amortization unless it is included in the CTC. The failure to permit such recovery would be violative of the terms of the Ft. Martin agreement which has provided tangible benefits to customers, including, but not limited to, a rate freeze until 2001.

Q. Please continue your description of regulatory assets with the category "Injuries and Damages."

A. These costs relate to the Company's workers compensation liability. For financial accounting purposes, Duquesne is required to book an accrual for the cost of these benefits. Despite the fact that ratemaking is based almost entirely on accrual accounting, the Commission, permits the Company to recover these costs, through rates, only on a "pay-as-you-go" or "cash" basis. This rate treatment, which was most recently confirmed in the Company's last rate case in Docket R-870651, produces a shortfall between the higher accrual for this expense and its cash recognition. If the Company's generation had remained part of the regulated assets, Duquesne would recover the difference between the cash and accrual basis of this expense over time. Because the generation portion is being "deregulated," however, Duquesne will not be permitted to recover these amounts. In effect this is simply a timing issue, much the same as the FAS 106 issue and basic fairness requires that Duquesne be permitted to recover the shortfall.

Q. You mentioned "Compensated Absences" as another regulatory asset. Is the treatment indicated for Compensated Absences like that for Injuries and Damages?

A. Yes. The costs for Compensated Absences relate to Duquesne's accrued liability for its employees' right to receive compensation for future absences when that compensation is attributable to service already rendered. Although the Company must book an accrual for these expenses, the Commission only permits the Company to recover the cash basis of the expenses in rates. The Company is then permitted to book a regulatory asset reflecting the difference between the accrual basis and cash basis of the expense. This rate treatment was confirmed in the Company's last rate case in the order issued in Docket R-870651. The continued recognition of the regulatory asset and recovery of the portion rendered unrecoverable by electric restructuring, is necessary to maintain consistency with this long-established ratemaking protocol.

Q. Please continue with a discussion of Deferred Nuclear Maintenance Outage Costs.

A. Duquesne has historically recovered the costs of maintenance outages for its nuclear fueled generating plants over the ensuing operating period. In other words, the Company is permitted to amortize its costs over the period between the last outage and the next scheduled outage. Under this ratemaking treatment, the Company must incur the expense but must defer recovery of the entire expense over a period of years. This regulatory asset simply reflects the Unamortized, and hence, uncollected, cost of the most recent outages at the Company's nuclear plants. Inasmuch as the Company has already incurred and paid the expenses, it is only fair that it be permitted to recover the Unamortized balances.

Q. Please explain the rationale for the recovery of the regulatory asset for DOE Decontamination and Decommissioning Expenses.

A. The Department of Energy is collecting funds for utilities to pay for the decommissioning of its uranium enrichment facility. In Docket RM93-18-000 the FERC authorized the recording of a regulatory asset for this liability and the collection of the liability over time through a surcharge to utility customers. Unless the PUC recognizes the Unamortized amount as a regulatory asset which should be collected through the CTC, Duquesne will owe the liability to the DOE but its customers will escape from having to reimburse Duquesne through the surcharge. This would be an unfair result which would run counter to FERC's orders.

Q. Please continue with a discussion of Deferred Coal Costs.

A. In Docket Nos. P-890386 and P-890387, the PUC imposed a cap on the amount of fuel costs that Duquesne could recover through the ECR fuel adjustment rate. The Company, however, was permitted to defer for future recovery the amount of energy costs in excess of the cap. In other words, although the Company actually incurred fuel charges in excess of the cap, it was not permitted a current recovery of those costs. The quid pro quo for this arrangement was that Duquesne would be permitted to defer and recover these costs at some point in the future. Electric restructuring, however, will render these costs unrecoverable due to the deregulation of generation. Accordingly, the Company must be permitted to recover these costs through the CTC.

Q. Please describe the FAS No. 106 Cost being claimed as stranded costs.

A. In addition to normal pension benefits, Duquesne provides certain heath care benefits and life insurance for some retired employees. Company-provided health care benefits terminate when covered individuals become eligible for Medicare benefits or reach age 65, whichever comes first. FAS No. 106 was issued in December, 1990 and became

effective for Duquesne beginning in 1993. This statement required the accrual established for these types of post-retirement benefits. Consistent with the Commission's guidelines for implementing FAS No. 106, the Company is amortizing the liability required upon adoption of this statement over 20 years. Due to the change in legislation, this liability which relates solely to employees liability incurred prior to the date of legislation must be now recovered over the transition period of the Act rather than the original 20 year period.

Q. Please discuss Deferred Caretaker Costs.

A. In Docket P-900485, Duquesne requested, and the PUC approved, deferred accounting treatment for preservation costs associated with maintaining the Philips and Brunot Island generating plants. The Company was specifically granted the right to seek recovery of these costs upon the return to commercial operation of the plants. With restructuring, these plants will be "deregulated" and Duquesne will never be able to recover the costs of preserving the plants for future needs of its customers unless it can recover the costs through the CTC. Fairness requires this be done.

Q. Please describe the Company's claim related to the "cold reserve" units at Brunot Island and Phillips Power Stations.

A. These units (Brunot Island 3 and 4; Phillips 1,2,3 and 4) were put in cold reserve in 1986. The plants were put into cold reserve instead of being retired because the Company believed the units still had economic value to customers. This belief was shown to be justified by the willingness of the GPU Companies to purchase part of the capacity several years ago (in a transaction that ultimately was not consummated). However, because of the transition to a competitive market, these cold reserve units now

appear to be uneconomic to operate on a production cost basis. Specifically, the capital improvements needed to restore these units to operation together with their going forward expected operating costs ("to-go" costs) exceed the expected market prices, which precludes the economic operation of these units in the future.

Q. What would have been the result had the Company not placed the units in "cold reserve" status, but rather had retired the units in 1986.

A. The net plant value would have reduced the applicable plant depreciation reserve balance and, thus, would have been amortized over the remaining life of the applicable plant accounts through the operation of the remaining life method. Stated another way, rate recovery for these net plant balances would have occurred over the remaining life of the other operating fossil power stations from customers.

Q. How did you calculate the Company's stranded cost claim for the "cold reserved" units.

A. The Company has included the net undepreciated cost of these units in its claim for stranded costs of $106,800,000.

Nuclear Decommissioning Expenses

Q. What are nuclear decommissioning expenses?

A. Nuclear decommissioning expenses are the costs to dismantle, decontaminate, remove and dispose of nuclear generating facilities at the end of their useful lives. Nuclear decommissioning, like all aspects of nuclear plant operation, is heavily regulated by the Nuclear Regulatory Commission ("NRC"). Nuclear decommissioning expenses are estimated on the basis of the studies prepared by qualified experts with special knowledge of the planning, engineering and management of decommissioning projects and the applicable NRC requirements.

Q. How are nuclear decommissioning expenses reflected for ratemaking and book purposes?

A. For ratemaking purposes, the total estimated nuclear decommissioning expense for a nuclear generating unit is recovered over the estimated useful life of that unit. For book accounting purposes, the amount recorded as an annual expense for decommissioning is based upon the amount included in rates charged to customers. Under Generally Accepted Accounting Principles ("GAAP"), utilities are not required to record their total estimated decommissioning expense as a liability, although the Financial Accounting Standards Board ("FASB") is currently reviewing whether it is appropriate to record such liability.

Q. What is done with the amounts collected from customers for nuclear decommissioning expenses?

A. As required by NRC regulations and applicable Commission orders, the amounts collected from customers are deposited in external decommissioning trust funds, which can be used only for future decommissioning costs. Currently, the bulk of the money collected is placed in "qualified nuclear decommissioning trust funds" as defined by the Internal Revenue Code. The Company claims a current tax deduction for the amounts paid into a qualified decommissioning trust fund for both federal and state tax purposes. In addition, the earnings on the qualified decommissioning trust fund balances are not treated as taxable income of the Company. Instead, they are taxed at a favorable 20% rate for federal income tax purposes (as opposed to the Company's federal tax rate of 35%) and are taxed at the personal income tax rate of 2.8% for Pennsylvania income tax purposes (as opposed to the corporate net income tax rate of 9.9%).

Q. What is the Company's estimated nuclear decommissioning expense?

A. The Company's total estimated nuclear decommissioning expense, as of December 31, 1996, is $281,000,000 (in year end 1996 dollars).

Q. How was the total nuclear decommissioning expense estimate determined?

A. The nuclear decommissioning expense estimate was based on the results of site-specific studies of Perry and Beaver Valley nuclear power plants that were prepared by Mr. Thomas S. LaGuardia, President of TLG Services, Inc. Mr. LaGuardia estimated total decommissioning expenses, as of December 31, 1996 of $312 million (in 1996 dollars).

Q. How much of the Company's estimated nuclear decommissioning expense is funded as of December 31, 1996?

A. As of December 31, 1996, the aggregate trust fund balances were approximately $ 33.7 million. The Company is currently recovering in rates approximately $ 9 million per year of nuclear decommissioning expense, which is being deposited in the trust on an ongoing basis.

Q. Given the estimated nuclear decommissioning costs at December 31, 1996, and the trust fund balance on the same date, how did you calculate the Company's stranded cost claim for nuclear decommissioning?

A. The Company has claimed the unfunded portion of the projected nuclear generating plant decommissioning costs as of December 31, 1996 as stranded. However, as previously outlined the Company is proposing to continue to fund approximately $9 million per year on an ongoing basis until January 1, 2006. At that time, the Company is proposing to treat the unfunded balance as a reduction in any residual value of its generation plant.

FOSSIL DECOMMISSIONING

Q. What are fossil decommissioning expenses?

A. Fossil decommissioning expenses are the costs to dismantle, remove and dispose of fossil-fired steam generating facilities at the end of their useful lives. Like the corresponding expenses for nuclear facilities, fossil decommissioning expenses are estimated on the basis of studies prepared by qualified experts with special knowledge and expertise in the areas of planning, engineering and managing such projects.

Q. How are fossil decommissioning expenses reflected for ratemaking and book purposes?

A. Fossil decommissioning expenses are treated as a cost of removal. Under prior historical Pennsylvania regulatory practice, neither the cost of removal nor any salvage value is recognized until an asset is retired and the cost of removal is actually incurred. The actual cost of removal less any associated salvage value (net negative salvage) is recorded as a deduction from accrued depreciation and, thus, is amortized over the remaining life of the applicable plant accounts through the operation of the remaining life method. Stated another way, both the expense recognition and rate recovery for fossil decommissioning expenses have been after the fact. Because of the ratemaking and accounting procedures explained above, there has been no recognition of the decommissioning costs that will be incurred upon retirement of the Company's fossil-fired generating units. Thus, unlike nuclear decommissioning expenses, the Company's fossil decommissioning expenses have not been funded.

Q. What is the estimated fossil decommissioning expense for which the Company is financially responsible?

A. For fossil-fired steam generating units, the Company estimates decommissioning expenses of $ 274.4 million.

Q. Given the estimated fossil decommissioning costs and the fact that there has been no funding of these amounts, how did you calculate the Company's stranded cost claim for fossil decommissioning?

A. The Company has claimed the unfunded portion of the projected fossil generating plant decommissioning costs as of December 31, 1996 as stranded. However, as previously outlined the Company is proposing as of January 1, 2006 to treat the unfunded balance as a stranded cost which would reduce any residual value of its generation plant.

Q. How was the total fossil decommissioning expense estimate determined?

A. Fossil decommissioning expenses for the units listed in Mr. Laguardia's testimony are based on the site specific studies performed by Mr. LaGuardia as of December 31, 1996.

Q. Will the transition to competition change the way in which the Company accounts for fossil decommissioning expenses?

A. Yes. When the Statement of Financial Accounting Standards No. 71 ("SFAS 71"), Accounting for the Effects of Certain Types of Regulation, ceases to apply to the Company's generation function, the Company will have to record the liability and accrue this expense each year over the operating life of the fossil generating plant.

EFFECT OF AN ADVERSE ORDER ON FINANCIAL CONDITION

Q. You previously stated that the write-off of the Company's assets could create a dire financial situation. Please explain.

A. After reducing the carrying value of an asset, the effect of any asset write-off is a reduction in the current period earnings. This reduction in current period earnings would directly reduce the equity of the Company. The effect of this reduction in equity, if it caused Duquesne's equity to fall below required minimum levels, would be to cause Duquesne to default on its debt covenants, including, potentially, covenants made under Duquesne's sale and leaseback agreement for its Beaver Valley Unit No. 2. A default in these covenants would have a number of detrimental effects on the Company including the potential of forcing Duquesne into a bankruptcy proceeding. At a minimum, a write-off could adversely affect Duquesne's credit ratings which could raise the cost of future borrowings. An adverse order also could depress the Company's stock price, thereby reducing the value of the Company's publicly traded stock and potentially limiting the Company's ability to raise new capital.

Q. When would the Company incur a write-off loss in its financial earnings?

A. The Company would incur a write-off loss in its current period earnings either when an asset is impaired or deemed worthless. Specifically in this scenario, the impairment of either a regulatory asset or a generating plant investment would cause the Company to incur a write-off loss.

Q. Under what circumstances can a regulatory asset become impaired causing the Company to recognize a loss for financial purposes?

A. Once a regulatory asset is created, subsequent rate actions of a regulator can reduce or eliminate the value of a regulatory asset. If a regulator excludes all or part of a cost from allowable costs, the carrying amount of any asset recognized pursuant to Statement No.

71 would be reduced, and the Company would recognize an immediate loss to the extent of the excluded costs.

Q. Describe when an impairment loss should be recognized relating to generating assets.

A. When events or changes in circumstances indicate that the carrying amount of the generating asset may not be recoverable, the Company must also conduct a review for impairment.

Q. What is the basis for this determination?

A. FASB Statement No. 121 establishes the rules for recognition of impairment for long lived assets.

Q. How does Statement No. 121 determine whether generating assets are impaired?

A. To test for impairment, the Company should compare future cash flows from the use and ultimate disposal of the asset to the carrying amount of the asset. Impairment exists when the expected future nominal (undiscounted) cash flows excluding interest charges are less than the carrying amount.

Q. What is the impact to the Company's financial statements if an asset fails an impairment test?

A. If an impairment is found to exist, the impairment loss to be recorded is the amount by which the assets carrying amount exceeds its fair value. The best estimate of fair value are quoted market prices.

Q. Please explain how a current period earnings loss reduces the Company's equity section of its balance sheet.

A. The equity section of a Company's balance sheet has two basic components: (i) contributed capital and (ii) earned capital. Contributed capital consists of preferred and

common stock along with additional paid-in capital. The basic source of earned capital is income from operations. Any losses from operations directly reduces the earned capital component of equity.

Q. Based on the outlined accounting rules, what would be the impact of any disallowance of the Company's claim for stranded costs?

A. The disallowance of any stranded costs sought to be recovered in this filing could cause the Company to incur an immediate financial impairment loss to either its generation related regulatory assets or its investment in generation plant assets or both groups of assets, depending on the nature of the disallowance. As discussed, such write-off would reduce current period earnings and equity of the Company in the quarter in which the order disallowing the claim becomes final.

PLANT IN SERVICE AND DEPRECIATION EXPENSE

Q. Have the Company's generating plants been reflected in rate base in rate orders of the Commission?

A. Yes. In the order in Docket R-870651, the Company's last fully litigated rate case, the Commission authorized rates which reflected the following plants: Elrama, Cheswick, Ft. Martin, Sammis, Eastlake, Mansfield, Beaver Valley Unit Nos. 1 and 2 and Beaver Valley Common Plant, Perry Unit No. 1 and Brunot Island. I show the original cost, book reserve and net book value associated with these plants as reflected in Docket R-870651 in my exhibits.

Q. Was depreciation expense for those plants reflected in that rate case?

A. Yes. I have presented the depreciation expense approved in that case in my exhibits.

Q. Does the Company's claim for stranded costs include any amounts previously disallowed by the Commission as imprudently incurred?

A. No. The Commission did disallow in the Company's last rate case, R-870651, an equity return on the Beaver Valley Unit No. 2. However, the Company subsequently sold and leased back this facility. As the lease is an operating lease for accounting purposes, there is no claim for an equity return on the facility in this filing.

Q. Does the Company's claim for stranded costs include any amount which was not included in the Company's last rate case.

A. Yes. As previously discussed the Company is including Warwick Mine as well as the cold reserved units at Brunot Island and Phillips Power Station in the Company's calculation of rate base. All three of these assets have at some time prior to the enactment of the legislation provided benefits to the Company's customers.

PRO FORMA FINANCIAL DATA

Q. Why is the Company submitting pro forma financial data for a 1996 base year?

A. The Commission's recent restructuring filing requirements direct utilities to file data for a pro forma 1996 base period to enable them to unbundle rates into generation, transmission, and distribution components. In compliance with that directive, Duquesne is submitting Exhibit MKO-1, which sets forth the 1996 data and the adjustments necessary to establish normalized conditions.

Q. What is contained in Exhibit MKO-1?

A. Exhibit MKO-1 contains five sections:

Section A presents basic accounting information as of December 31, 1996 from the Company's books of account, as well as the revenue and expenses for 1996.

Section B identifies the adjusted data relating to Duquesne's rate base as of December 31, 1996, as well as the adjusted revenue and expenses for 1996 for determining the Cost of Service Study.

Section C unbundles the rate base into generation, transmission and distribution, as well as unbundling the adjusted revenue and expenses for 1996 for determining the Cost of Service Study into generation, transmission, and distribution.

Section D identifies necessary adjustments to revenues and expenses.

Section E provides the allocation factors utilized in Section C to unbundle the rate base, as well as the factors utilized in allocating the revenues and expenses into functions, i.e., generation, distribution and transmission.

Q. Please describe the components of Duquesne's net plant at December 31, 1996.

A. The pro forma 1996 net plant is comprised of the original cost of plant in FERC Accounts 301, 302, 303, and 310 through 399, less associated accrued depreciation for the same accounts. General plant and associated depreciation reserve have also been reflected. The foregoing data are set forth in Section C of Exhibit MKO-1 and summarized on Page C-1.

Q. Do any adjustments need to be made to the year-end 1996 data?

A. Yes. Adjustments to plant-in service are being made for certain costs at the Perry Unit No. 1 which had been reclassified within the plant accounts to intangible plant. These costs are specifically related to the Perry Unit No. 1.

Q. Is the Company's plant-in-service balance audited?

A. Yes. Both this Commission and the FERC periodically audit the Company's plant records. In addition, annual audits are performed by the Internal Revenue Service, Pennsylvania Department of Revenue and the Ohio Department of Revenue. The Company's independent accounting firm of Deloitte & Touche issues an opinion on

Duquesne's financial statements. In addition, the Commission's Bureau of Audits is currently reviewing the Company's property records and regulatory assets.

Q. Please describe Duquesne's accumulated deferred tax balance.

A. The accumulated deferred tax balance consists of two components: (1) the traditional deferred taxes associated with accelerated depreciation and (2) deferred federal and state taxes associated with previously flowed through benefits which have yet to reverse.

Q. Please elaborate upon the second component.

A. Starting with the adoption of SFAS No. 109, the Company began maintaining deferred taxes based on the difference in the net investment in plant assets under Duquesne's historic regulatory book accounting methodology and its federal income tax accounting methodology. This included establishing and maintaining deferred tax balances for the previously flowed-through differences. As the Company has requested an opportunity to earn a return on and of the corresponding regulatory asset relating to the second component, the entire deferred tax balance appropriately reduces the company's rate base.

Q. Please describe the Company's rate base claim for deferred taxes on contributions in aid of construction.

A. When the Company receives a contribution in aid of construction, the appropriate plant account is reduced by the contribution, with the accompanying effect on plant-in-service and book depreciation. At the same time, the Company is taxed on the contribution and a deferred tax liability is created. The deferred tax liability is reversed through adjustment to the tax depreciation of the facility over the tax life of the facility. Meanwhile, there is a tax cost associated with the initial tax payment by the Company upon receipt of the contribution. The addition of accumulated deferred taxes on contributions in aid of

construction allows the Company to earn a return on this tax payment for the deferred tax on the contribution in aid of construction less any deferred tax reversal over the facility's tax life.

Q. Please describe the pro forma adjustments that were made to base year (1996) operating and maintenance expense.

A. Two types of pro forma adjustments have been made to the Company's base year data: (1) annualizing adjustments to reflect a full year's impact of known changes and (2) normalizing adjustments to eliminate extraordinary items to reflect normal conditions.

Q. Please elaborate on each of the annualization adjustments included in Exhibit MKO-1, Section D.

A. There were a number of annualizing adjustments made to 1996 base year data, each of which is discussed below:

Full Year Effect of the Present State Tax Adjustment Clause("STAC"). The purpose of this adjustment is to eliminate the effect of a credit that was in effect to refund prior year over-collections. This adjustment is reflected on Page 1, Section D of Exhibit MKO-1.

Annualization for Growth of Customers. The purpose of this adjustment is to adjust the 1996 year-end level of customers to annualize the growth of new customers added during the base year. These adjustments are shown on Page 2, Section D of Exhibit MKO-1.

Annualization of Energy Cost Adjustment Revenue ("ECR"). The Company as part of its sale of Fort Martin Power Plant agreed to cap its fuel clause at 14.7. The purpose of

this adjustment is to reflect this level of revenues associated with fuel being rolled into base rates for a full year. Expenses have been adjusted accordingly. This adjustment is show on Page 3, Section D of Exhibit MKO-1.

Sale of Ft. Martin Power Station. Duquesne sold its interest in the Ft. Martin Power Station on October 31, 1996. Thus, base year expenses were required to be adjusted to reflect the absence of these operating and maintenance expenses going forward. The details of this adjustments are set forth on Page 4, Section D of Exhibit MKO-1.

Wages-Benefits Increase. The purpose of this adjustment, which is set forth on Page 5, Section D of Exhibit MKO-1, is to reflect the full year impact of wage and benefit increase for union and management employees.

Annualization of Depreciation. The amortization of the depreciation accrual consists of three components: (1) the amortization of the book accrual, (2) the full year effect on tax depreciation, and (3) the impact on deferred taxes. The book depreciation is annualized by applying the current accrual rates to the year-end plant balance. The current accrual rate includes the increased depreciation of Duquesne's nuclear power plant as well as increased decommissioning expense in accordance with the Company's agreement with the Commission under the Fort Martin Power Plant sale agreement. Effectively, the annualized 1996 accrual is equal to 1997 depreciation without any capital additions. The tax depreciation is amortized in a similar manner. The base year is adjusted to reflect a full year of tax depreciation on year-end plant. Finally, since the Company normalizes federal and state taxes associated with depreciation, the deferred taxes in the test year

must also be adjusted to reflect the new book and tax depreciation. These adjustments are developed on Pages 6, Section D of Exhibit MKO-1.

Annualization of Amortization. The amortization accrual adjustment consists of three components: (1) an adjustment to reflect the amortization of the Company's regulatory assets,(2) an adjustment for the Beaver Valley Unit No. II lease expense. The purpose--the adjustment for the regulatory asset amortization is to reflect the increased collection required during the transition period, rather than as previously included in rates. The lease expense adjustment reflects an increase in this amortization to mitigate the stranded costs associated with the lease of the Company's nuclear plant. These adjustments are developed on Page 7, Section D of Exhibit MKO-1.

Full Year Effect Benefits of Increase In Base. The purpose of this adjustment is to annualize the Company's benefit expense to reflect the level payable upon previously adjusted salaries. This adjustment is set forth on Page 8, Section D of Exhibit MKO-1.

Q. Please describe the Company's weather normalizing adjustment.

A. The purpose of this adjustment is to reflect the impact of normal weather on the base year data. The adjustment is made for each class of service and based upon the relationship between sales and degree days in the winter and degree hours in the summer. Once the impact on customer consumption is determined, it is multiplied by the average unit revenue for the rate class. In addition to adjusting revenues, expenses equal to the sales change multiplied by the marginal energy cost are deducted, resulting in a pre-tax impact. This adjustment appears on Page 9, Section D of Exhibit MKO-1 .

Q. Are there any other adjustments to the base year data?

A. Yes. The consolidated tax savings adjustment allocates the tax benefits associated with a number of investments which have significant tax benefits. The investments include investments in affordable housing projects, investments in IRC Section 29 gas projects, as well as structured tax leasing investments. This adjustment is necessary to reflect the Company's mitigation of taxes which are included in stranded costs. This adjustment is set forth on Page 10 of Exhibit MKO-1.

Functional Unbundling of Revenues, Expenses, and Rate Base

Q. Please describe how expenses were unbundled into generation, transmission and distribution.

A. As can be seen in Exhibit MKO-1 Section E the vast majority of expenses are directly assignable to their specific function. The FERC System of Accounting provides for specific identification of costs. In addition, Duquesne's general accounting system provides for the capturing of costs by specific function.

Q. Describe how the allocation of costs, other than those directly assignable, were developed.

A. A comprehensive analysis of the cost structure of Duquesne was performed in 1996. The goal of this analysis was to develop the ability to allocate costs to the generation function of the business. Because of the legislation which was being contemplated, the Company had taken the initiative to begin looking at the functional unbundling of its vertically integrated business.

Q. Describe the process on how the allocation factors indicated in Section E of Exhibit MKO-1 were developed.

A. Duquesne engaged Metzler and Associates, as well as Deloitte & Touche to review the functional unbundling of the generation portion of the business. A key part of this project including reviewing and developing allocation factors for non-direct charges.

Each component was reviewed in detail, including what factors influenced the amount of charges any one item derived. The factors which influenced the amount of charges incurred for an item were weighted. Based on which factors most directly influenced the variable aspect of the item, these factors were identified as the allocation factor most appropriate in functional unbundling of the specific charge. This process of identifying factors was developed over a number of weeks and included extensive interviews of various support and corporate administration personnel.

Q. Based upon the analysis, does the Company believe the costs contained in Exhibit MKO-1 are properly unbundled to specific functions?

A. Yes. The allocation of costs is a process which requires the exercise of judgment. Our process of analyzing each cost and reviewing each different allocation factor, by item, is a thorough and reasonable process for developing allocation factors. In addition, our process was guided by consultants who have significant experience in this area.

APPENDIX A ITEMS

Q. Mr. O'Brien, you stated that you are responsible for certain of the items required to be filed with the Company's restructuring filing. Please identify these items.

A. Items A: 2, 3, 4, 5, 6, and 7.

Items B: 1, 2, and 3.

Items C: 1 through 22

Items D: 1 through 22

Items E: 1 through 8

Items F: 1 through 19

Items O: 4, 5, and 6.

Q. Does this conclude your testimony?

A. Yes.

EXHIBIT MKO-1 SECTION A

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year
Operating Revenues:		
	Electric Service Revenues	
440	Residential Sales	$404,183,112
442	Commercial Sales	475,319,391
442	Industrial Sales	189,526,889
444	Public Street and Highway Lighting	16,620,246
447	Sales For Resale - Pitcairn	857,283
	Total Electric Service Revenues	1,086,506,921
	Other Electric Revenues	
450	Late Payment Charges	4,746,547
451	Miscellaneous Service Revenues	1,454,946
454	Rent from Electric Property	7,608,687
456	Other Electric Revenues	24,275,196
447	Sales For Resale - Other Utilities	58,291,849
	Total Other Electric Revenues	96,377,225
	Total Operating Revenues	1,182,884,146
Operating Expenses:		
	Production Expense	
500	Operation Supervision and Engineering	5,264,774
501	Fuel	175,962,858
502	Steam Expenses	9,003,904
505	Electric Expenses	2,148,465
506	Miscellaneous Labor and Expenses	7,322,114
507	Rents	335,734
509	Emission Allowance	2,068,025
510	Maintenance Supervision and Engineering	1,504,322
511	Maintenance of Structures	1,255,864
512	Maintenance of Boiler Plant	16,766,780
513	Maintenance of Electric Plant	4,803,725
514	Maintenance of Misc. Plant Equipment	5,353,336
	Total Steam Power O&M Expenses	231,789,901
517	Operation Supervision and Engineering	13,575,986
518	Fuel	26,648,415
519	Coolants and Water	558,656
520	Steam Expenses	5,455,447
523	Electric Expenses	129,447
524	Miscellaneous Nuclear Power Expenses	16,937,324
525	Rents	47,728,121
528	Maintenance Supervision and Engineering	3,295,342
529	Maintenance of Structures	1,641,883

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year
530	Maintenance of Reactor Plant	7,760,707
531	Maintenance of Electric Plant	3,324,829
532	Maintenance of Misc. Nuclear Plant	8,111,238
	Total Nuclear Power O&M Expenses	135,167,395
546	Operation Supervision and Engineering	26,232
547	Fuel	201,637
548	Generation Expenses	25,322
549	Miscellaneous Other Power Expenses	130,029
551	Maintenance Supervision and Engineering	26,391
552	Maintenance of Structures	32,128
553	Maintenance of Electric Plant	36,380
554	Maintenance of Misc. Generation Plant	17,924
	Total Other Power O&M Expenses	496,043
555	Purchased Power	32,269,274
556	System Load Dispatching	828,636
557	Other Power Supply Expense	382,659
557	Deferred Energy Costs	(4,527,073)
	Total Power Production Expenses	396,406,835
	Transmission Expenses	
560	Operation Supervision and Engineering	229,232
561	Load Dispatching	715,428
562	Station Expenses	585,615
563	Overhead Line Expenses	3,116
564	Underground Line Expenses	33,965
565	Transmission of Electricity by Others	5,411,140
566	Miscellaneous Expenses	64,167
567	Rents	486,227
568	Maintenance Supervision and Engineering	61,655
569	Maintenance of Structures	457,572
570	Maintenance of Station Equipment	438,228
571	Maintenance of Overhead Lines	2,275,982
572	Maintenance of Underground Lines	40,997
573	Maintenance of Misc. Transmission Plant	0
	Total Transmission Expenses	10,803,324
	Distribution Expenses	
580	Operation Supervision and Engineering	1,266,741
581	Load Dispatching	574,447
582	Station Expenses	2,833,152
583	Overhead Line Expenses	3,631,484
584	Underground Line Expenses	802,063
585	Street Lighting and Signal System	292,590
586	Meter Expenses	1,285,488
587	Customer Installations	3,447,613

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year
588	Miscellaneous Expenses	3,192,187
589	Rents	1,827,440
590	Maintenance Supervision and Engineering	454,314
591	Maintenance of Structures	466,745
592	Maintenance of Station Equipment	1,457,120
593	Maintenance of Overhead Lines	13,504,784
594	Maintenance of Underground Lines	845,121
595	Maintenance of Line Transformers	105,029
596	Maint. of Street Lighting and Signal System	84,234
597	Maintenance of Meters	596,821
598	Maintenance of Misc. Distribution Plant	403,934
	Total Distribution Expenses	37,071,307
	Customer Accounts Expenses	
901	Supervision	3,406,371
902	Meter Reading	4,382,518
903	Customer Records and Collection	13,520,070
904	Uncollectible Accounts	11,000,000
905	Miscellaneous Customer Accounts Exp.	187,178
	Total Customer Accounts Expenses	32,496,137
	Customer Service and Info Expenses	
907	Supervision	176,328
908	Customer Assistance Expenses	1,740,258
909	Info and Instructional Advertising Expenses	220,069
910	Misc. Customer Service and Info Expenses	30,974
	Total Customer Service and Info Expenses	2,167,629
	Sales Expenses	
911	Supervision	18,837
912	Demonstrating and Selling	4,377,036
913	Advertising	19,427
916	Miscellaneous Sales Expenses	118,689
	Total Sales Expenses	4,533,989
	Administrative and General Expenses	
920	Administrative and General Salaries	25,690,455
921	Office Supplies and Expenses	5,596,877
922	Administrative Expense Transferred	(6,171,869)
923	Outside Services Employed	8,467,154
924	Property Insurance	5,604,103
925	Injuries and Damages	3,604,775
926	Employee Pension and Benefits	12,725,517
928	Regulatory Commission Expenses	1,790,074
929	Duplicate Charges	(1,247,245)

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year
930	Miscellaneous General Expenses	20,628,427
931	Rents	11,498,652
935	Maintenance of General Plant	3,262,706
	Total Administrative and General Expenses	91,449,626
	Total Operating Expenses	574,928,847
403	Depreciation Expense	172,588,875
403	Nuclear Decontamination and Dismantling Expense	5,027,197
404	Amortization of Leasehold Improvements	8,193,897
405	Amortization of Early Window Costs	9,702,476
405	Amortization of Transition Costs	0
406	Amortization of Utility Plant Adjustments	353,580
407	Amortization of Perry Unit No. 2 Abandonment Loss	8,471,653
408	Taxes Other Than Income Taxes	84,569,688
	Total Operating Expenses Before Federal and State Income Taxes	863,836,213
	Net Operating Income Before Federal and State Income Taxes	319,047,933
409	Federal Income Tax	94,901,767
409	State Income Tax	29,130,353
410	Deferred Federal Income Tax	15,799,927
410	Deferred State Income Tax	1,235,284
411	Income Tax Deferred in Prior Years	(36,611,485)
411	Amortization of Investment Tax Credits	(7,838,483)
411	Gain From Disposal of Allowances	(226,313)
	Total Income Taxes	96,391,050
	Net Utility Operating Income	222,656,883
418	Equity in Subsidiary Company's Earnings	31,619,253
418	Non-Operating Rental Income & Expense	(57,428)
419	Interest Revenues	11,563,066
419	Allowance For Funds Used During Construction	1
421	Miscellaneous Non-Operating Income	3,452,177
	Total Other Income	46,577,069

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year
426	Donations	1,606,873
426	Civic, Political and Related Activities	725,714
426	Other	6,330,988
	Total Other Income Deductions	8,663,575
409	Federal Income Tax	(418,561)
409	State Income Tax	(779,727)
420	Investment Tax Credit	(1,720,529)
	Total Taxes Applicable to Other Income and Deductions	(2,918,817)
	Income Before Interest Charges	263,489,194
	Interest Charges	
427	Interest on Long-Term Debt	82,504,832
428	Amortization of Debt Discount and Expense	6,091,881
429	Amortization of Premium on Debt	(118,820)
431	Other Interest	26,670,636
432	Allowance For Borrowed Funds Used During Construction	(1,249,515)
	Total Interest Charges	113,899,014
	Net Income	$149,590,180

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Test Year
Intangible Plant:		
301	Organization	$100,275
302	Franchises and Consents	6,830
303	Miscellaneous Intangible Plant	286,993,420
	Total Intangible Plant	287,100,525
Production Plant:		
	Steam Production Plant	
310	Land and Land Rights	8,026,760
311	Structures and Improvements	128,853,875
312	Boiler Plant Equipment	484,460,835
313	Engines/Engine-Driven Generators	0
314	Turbogenerator Units	115,768,800
315	Assessory Electric Equipment	78,729,366
316	Misc. Power Plant Equipment	24,280,712
	Total Steam Production Plant	840,120,348
	Nuclear Production Plant	
320	Land and Land Rights	617,903
321	Structures and Improvements	229,416,299
322	Reactor Plant Equipment	656,156,421
323	Turbo Generator Units	119,726,878
324	Accessory Electric Equipment	161,470,226
325	Misc. Power Plant Equipment	72,991,217
	Total Nuclear Production Plant	1,240,378,944
	Hydraulic Production Plant	
330	Land and Land Rights	0
331	Structures and Improvements	0
332	Reservoirs, Dams, and Waterways	0
333	Water Wheels, Turbines, and Generators	0
334	Accessory Electric Equipment	0
335	Misc. Power Plant Equipment	0
336	Roads, Railroads, and Bridges	0
	Total Hydraulic Production Plant	0
	Other Production Plant	
340	Land and Land Rights	393,704
341	Structures and Improvement	8,150,271
342	Fuel Holders, Products, and Accessories	3,371,626

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Test Year
343	Prime Movers	436,877
344	Generators	22,779,984
345	Accessory Electric Equipment	6,674,134
346	Misc. Power Plant Equipment	1,092,833
	Total Other Production Plant	42,899,429
	Total Production Plant	2,123,398,721
	Transmission Plant:	
350	Land and Land Rights	9,833,085
352	Structures and Improvements	8,073,681
353	Station Equipment	124,857,725
354	Towers and Fixtures	66,632,752
355	Poles and Fixtures	5,653,323
356	Overhead Conductors and Devices	43,975,550
357	Underground Conduit	34,250,903
358	Underground Conductors and Devices	18,895,858
359	Roads and Trails	13,879
	Total Transmission Plant	312,186,756
	Distribution Plant:	
360	Land and Land Rights	8,902,261
361	Structures and Improvements	41,029,378
362	Station Equipment	318,016,298
363	Storage Battery Equipment	0
364	Poles, Towers, and Fixtures	218,026,447
365	Overhead Conductors and Devices	168,933,236
366	Underground Conduit	74,561,251
367	Underground Conductors and Devices	112,816,627
368	Line Transformers	150,946,402
369	Services	57,792,430
370	Meters	59,652,919
371	Installations on Customer Premises	37,793
372	Leased Property on Customer Premises	0
373	Street Lighting and Signal Systems	22,510,688
	Total Distribution Plant	1,233,225,730
	General Plant:	
389	Land and Land Rights	6,199,971
390	Structures and Improvements	64,438,073
391	Office Furniture and Equipment	48,657,786

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Test Year
392	Transportation Equpment	16,877,412
393	Stores Equipment	2,340,839
394	Tools, Shop and Garage Equipment	9,830,485
395	Laboratory Equipment	6,289,389
396	Power Operated Equipment	1,304,358
397	Communication Equipment	88,873,334
398	Miscellaneous Equipment	432,311
	Subtotal	245,243,958
399	Other Tangible Property	72,495,480
	Total General Plant	317,739,438
	TOTAL	$4,273,651,170

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Test Year
Intangible Plant:		
301	Organization	$0
302	Franchises and Consents	0
303	Miscellaneous Intangible Plant	24,586,227
	Total Intangible Plant	24,586,227
Production Plant:		
	Steam Production Plant	
310	Land and Land Rights	0
311	Structures and Improvements	73,121,619
312	Boiler Plant Equipment	218,157,215
313	Engines/Engine-Driven Generators	0
314	Turbogenerator Units	64,854,044
315	Assessory Electric Equipment	40,961,416
316	Misc. Power Plant Equipment	14,257,747
	Total Steam Production Plant	411,352,041
	Nuclear Production Plant	
320	Land and Land Rights	0
321	Structures and Improvements	125,861,202
322	Reactor Plant Equipment	315,714,113
323	Turbo Generator Units	67,672,070
324	Accessory Electric Equipment	86,599,467
325	Misc. Power Plant Equipment	36,502,357
	Total Nuclear Production Plant	632,349,209
	Hydraulic Production Plant	
330	Land and Land Rights	0
331	Structures and Improvements	0
332	Reservoirs, Dams, and Waterways	0
333	Water Wheels, Turbines, and Generators	0
334	Accessory Electric Equipment	0
335	Misc. Power Plant Equipment	0
336	Roads, Railroads, and Bridges	0
	Total Hydraulic Production Plant	0
	Other Production Plant	
340	Land and Land Rights	0
341	Structures and Improvement	3,289,817
342	Fuel Holders, Products, and Accessories	1,583,911

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Test Year
343	Prime Movers	223,568
344	Generators	10,856,250
345	Accessory Electric Equipment	1,919,779
346	Misc. Power Plant Equipment	1,128,485
	Total Other Production Plant	19,001,810
	Total Production Plant	1,062,703,060
	Transmission Plant:	
350	Land and Land Rights	0
352	Structures and Improvements	1,960,150
353	Station Equipment	50,537,060
354	Towers and Fixtures	23,349,334
355	Poles and Fixtures	1,666,715
356	Overhead Conductors and Devices	21,424,367
357	Underground Conduit	8,072,593
358	Underground Conductors and Devices	7,918,705
359	Roads and Trails	5,122
	Total Transmission Plant	114,934,046
	Distribution Plant:	
360	Land and Land Rights	0
361	Structures and Improvements	13,307,734
362	Station Equipment	71,647,813
363	Storage Battery Equipment	0
364	Poles, Towers, and Fixtures	66,699,658
365	Overhead Conductors and Devices	60,090,427
366	Underground Conduit	15,840,062
367	Underground Conductors and Devices	34,037,405
368	Line Transformers	51,529,607
369	Services	19,868,087
370	Meters	25,120,856
371	Installations on Customer Premises	(37,544)
372	Leased Property on Customer Premises	0
373	Street Lighting and Signal Systems	14,747,084
	Total Distribution Plant	372,851,189
	General Plant:	
389	Land and Land Rights	0
390	Structures and Improvements	22,588,933
391	Office Furniture and Equipment	20,284,790

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Test Year
392	Transportation Equpment	9,511,415
393	Stores Equipment	880,929
394	Tools, Shop and Garage Equipment	3,534,301
395	Laboratory Equipment	2,217,133
396	Power Operated Equipment	855,117
397	Communication Equipment	49,594,356
398	Miscellaneous Equipment	169,296
	Subtotal	109,636,270
399	Other Tangible Property	67,751,995
	Total General Plant	177,388,265
	TOTAL	$1,752,462,787

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

		Test Year
Intangible Plant:		
301	Organization	$100,275
302	Franchises and Consents	6,830
303	Miscellaneous Intangible Plant	262,407,193
	Total Intangible Plant	262,514,298
Production Plant:		
	Steam Production Plant	
310	Land and Land Rights	8,026,760
311	Structures and Improvements	55,732,256
312	Boiler Plant Equipment	266,303,620
313	Engines/Engine-Driven Generators	0
314	Turbogenerator Units	50,914,756
315	Assessory Electric Equipment	37,767,950
316	Misc. Power Plant Equipment	10,022,965
	Total Steam Production Plant	428,768,307
	Nuclear Production Plant	
320	Land and Land Rights	617,903
321	Structures and Improvements	103,555,097
322	Reactor Plant Equipment	340,442,308
323	Turbo Generator Units	52,054,808
324	Accessory Electric Equipment	74,870,759
325	Misc. Power Plant Equipment	36,488,860
	Total Nuclear Production Plant	608,029,735
	Hydraulic Production Plant	
330	Land and Land Rights	0
331	Structures and Improvements	0
332	Reservoirs, Dams, and Waterways	0
333	Water Wheels, Turbines, and Generators	0
334	Accessory Electric Equipment	0
335	Misc. Power Plant Equipment	0
336	Roads, Railroads, and Bridges	0
	Total Hydraulic Production Plant	0
	Other Production Plant	
340	Land and Land Rights	393,704
341	Structures and Improvement	4,860,454
342	Fuel Holders, Products, and Accessories	1,787,715

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

		Test Year
343	Prime Movers	213,309
344	Generators	11,923,734
345	Accessory Electric Equipment	4,754,355
346	Misc. Power Plant Equipment	(35,652)
	Total Other Production Plant	23,897,619
	Total Production Plant	1,060,695,661
	Transmission Plant:	
350	Land and Land Rights	9,833,085
352	Structures and Improvements	6,113,531
353	Station Equipment	74,320,665
354	Towers and Fixtures	43,283,418
355	Poles and Fixtures	3,986,608
356	Overhead Conductors and Devices	22,551,183
357	Underground Conduit	26,178,310
358	Underground Conductors and Devices	10,977,153
359	Roads and Trails	8,757
	Total Transmission Plant	197,252,710
	Distribution Plant:	
360	Land and Land Rights	8,902,261
361	Structures and Improvements	27,721,644
362	Station Equipment	246,368,485
363	Storage Battery Equipment	0
364	Poles, Towers, and Fixtures	151,326,789
365	Overhead Conductors and Devices	108,842,809
366	Underground Conduit	58,721,189
367	Underground Conductors and Devices	78,779,222
368	Line Transformers	99,416,795
369	Services	37,924,343
370	Meters	34,532,063
371	Installations on Customer Premises	75,337
372	Leased Property on Customer Premises	0
373	Street Lighting and Signal Systems	7,763,604
	Total Distribution Plant	860,374,541
	General Plant:	
389	Land and Land Rights	6,199,971
390	Structures and Improvements	41,849,140
391	Office Furniture and Equipment	28,372,996

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

		Test Year
392	Transportation Equpment	7,365,997
393	Stores Equipment	1,459,910
394	Tools, Shop and Garage Equipment	6,296,184
395	Laboratory Equipment	4,072,256
396	Power Operated Equipment	449,241
397	Communication Equipment	39,278,978
398	Miscellaneous Equipment	263,015
	Subtotal	135,607,688
399	Other Tangible Property	67,751,995
	Total General Plant	203,359,683
	TOTAL	$2,584,196,893

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

		Test Year
Intangible Plant:		
301	Organization	$0
302	Franchises and Consents	0
303	Miscellaneous Intangible Plant	3,363,051
	Total Intangible Plant	3,363,051
Production Plant:		
	Steam Production Plant	
310	Land and Land Rights	
311	Structures and Improvements	
312	Boiler Plant Equipment	
313	Engines/Engine-Driven Generators	
314	Turbogenerator Units	
315	Assessory Electric Equipment	
316	Misc. Power Plant Equipment	
	Total Steam Production Plant	64,681,794
	Nuclear Production Plant	
320	Land and Land Rights	
321	Structures and Improvements	
322	Reactor Plant Equipment	
323	Turbo Generator Units	
324	Accessory Electric Equipment	
325	Misc. Power Plant Equipment	
	Total Nuclear Production Plant	168,710,461
	Hydraulic Production Plant	
330	Land and Land Rights	
331	Structures and Improvements	
332	Reservoirs, Dams, and Waterways	
333	Water Wheels, Turbines, and Generators	
334	Accessory Electric Equipment	
335	Misc. Power Plant Equipment	
336	Roads, Railroads, and Bridges	
	Total Hydraulic Production Plant	*0*
	Other Production Plant	
340	Land and Land Rights	
341	Structures and Improvement	
342	Fuel Holders, Products, and Accessories	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

		Test Year
343	Prime Movers	
344	Generators	
345	Accessory Electric Equipment	
346	Misc. Power Plant Equipment	
	Total Other Production Plant	3,269,464
	Total Production Plant	236,661,719
	Transmission Plant:	
350	Land and Land Rights	
352	Structures and Improvements	
353	Station Equipment	
354	Towers and Fixtures	
355	Poles and Fixtures	
356	Overhead Conductors and Devices	
357	Underground Conduit	
358	Underground Conductors and Devices	
359	Roads and Trails	
	Total Transmission Plant	23,087,876
	Distribution Plant:	
360	Land and Land Rights	
361	Structures and Improvements	
362	Station Equipment	
363	Storage Battery Equipment	
364	Poles, Towers, and Fixtures	
365	Overhead Conductors and Devices	
366	Underground Conduit	
367	Underground Conductors and Devices	
368	Line Transformers	
369	Services	
370	Meters	
371	Installations on Customer Premises	
372	Leased Property on Customer Premises	
373	Street Lighting and Signal Systems	
	Total Distribution Plant	99,290,960
	General Plant:	
389	Land and Land Rights	
390	Structures and Improvements	
391	Office Furniture and Equipment	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

		Test Year
392	Transportation Equpment	
393	*Stores Equipment*	
394	Tools,. Shop and Garage Equipment	
395	Laboratory Equipment	
396	Power Operated Equipment	
397	Communication Equipment	
398	Miscellaneous Equipment	
	Subtotal	25,765,908
399	Other Tangible Property	11,227,191
	Total General Plant	36,993,099
	TOTAL	$399,396,705

EXHIBIT MKO-1 SECTION B

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year
Operating Revenues:					
	Electric Service Revenues				
440	Residential Sales	$404,183,112	$14,288,888	1,2,10,12	$418,472,000
442	Commercial Sales	475,319,391	27,272,878	1,2,10	502,592,269
442	Industrial Sales	189,526,889	10,114,404	1,2,10	199,641,293
444	Public Street and Highway Lighting	16,620,246	421,139	1,2,10	17,041,385
447	Sales For Resale - Pitcairn	857,283	927	2	858,210
	Total Electric Service Revenues	1,086,506,921	52,098,236		1,138,605,157
	Other Electric Revenues				
450	Late Payment Charges	4,746,547			4,746,547
451	Miscellaneous Service Revenues	1,454,946			1,454,946
454	Rent from Electric Property	7,608,687			7,608,687
456	Other Electric Revenues	24,275,196	(1,147,264)	3,12	23,127,932
447	Sales For Resale - Other Utilities	58,291,849	(22,649,094)	12	35,642,755
	Total Other Electric Revenues	96,377,225	(23,796,358)		72,580,867
	Total Operating Revenues	1,182,884,146	28,301,878		1,211,186,024
Operating Expenses:					
	Production Expense				
500	Operation Supervision and Engineering	5,264,774	739,872	5,6,12	6,004,646
501	Fuel	175,962,858	(19,557,695)	11,12,14	156,405,163
502	Steam Expenses	9,003,904	(413,389)	12	8,590,515
505	Electric Expenses	2,148,465	(43,591)	12	2,104,874
506	Miscellaneous Labor and Expenses	7,322,114	(562,387)	12	6,759,727
507	Rents	335,734	(256)	12	335,478
509	Emission Allowance	2,068,025			2,068,025
510	Maintenance Supervision and Engineering	1,504,322	(258,352)	12	1,245,970
511	Maintenance of Structures	1,255,864	(294,925)	12	960,939
512	Maintenance of Boiler Plant	16,766,780	(1,372,988)	12	15,393,792
513	Maintenance of Electric Plant	4,803,725	(779,026)	12	4,024,699
514	Maintenance of Misc. Plant Equipment	5,353,336	(715,789)	12	4,637,547
	Total Steam Power O&M Expenses	231,789,901	(23,258,526)		208,531,375
517	Operation Supervision and Engineering	13,575,986			13,575,986
518	Fuel	26,648,415	(907,606)	11	25,740,809
519	Coolants and Water	558,656			558,656
520	Steam Expenses	5,455,447			5,455,447
523	Electric Expenses	129,447			129,447
524	Miscellaneous Nuclear Power Expenses	16,937,324			16,937,324
525	Rents	47,728,121	(1,505,001)	11	46,223,120
528	Maintenance Supervision and Engineering	3,295,342			3,295,342
529	Maintenance of Structures	1,641,883			1,641,883
530	Maintenance of Reactor Plant	7,760,707			7,760,707
531	Maintenance of Electric Plant	3,324,829			3,324,829
532	Maintenance of Misc. Nuclear Plant	8,111,238	(90,300)	11	8,020,938
	Total Nuclear Power O&M Expenses	135,167,395	(2,502,907)		132,664,488
546	Operation Supervision and Engineering	26,232			26,232
547	Fuel	201,637			201,637
548	Generation Expenses	25,322			25,322

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year
549	Miscellaneous Other Power Expenses	130,029			130,029
551	Maintenance Supervision and Engineering	26,391			26,391
552	Maintenance of Structures	32,128			32,128
553	Maintenance of Electric Plant	36,380			36,380
554	Maintenance of Misc. Generation Plant	17,924			17,924
	Total Other Power O&M Expenses	496,043	0		496,043
555	Purchased Power	32,269,274			32,269,274
556	System Load Dispatching	828,636			828,636
557	Other Power Supply Expense	382,659			382,659
557	Deferred Energy Costs	(4,527,073)	4,527,073	7	0
	Total Power Production Expenses	396,406,835	(21,234,360)		375,172,475
	Transmission Expenses				
560	Operation Supervision and Engineering	229,232	60,164	4,5	289,396
561	Load Dispatching	715,428			715,428
562	Station Expenses	585,615			585,615
563	Overhead Line Expenses	3,116			3,116
564	Underground Line Expenses	33,965			33,965
565	Transmission of Electricity by Others	5,411,140			5,411,140
566	Miscellaneous Expenses	64,167			64,167
567	Rents	486,227			486,227
568	Maintenance Supervision and Engineering	61,655			61,655
569	Maintenance of Structures	457,572			457,572
570	Maintenance of Station Equipment	438,228			438,228
571	Maintenance of Overhead Lines	2,275,982			2,275,982
572	Maintenance of Underground Lines	40,997			40,997
573	Maintenance of Misc. Transmission Plant	0			0
	Total Transmission Expenses	10,803,324	60,164		10,863,488
	Distribution Expenses				
580	Operation Supervision and Engineering	1,266,741	950,158	4,5	2,216,899
581	Load Dispatching	574,447			574,447
582	Station Expenses	2,833,152			2,833,152
583	Overhead Line Expenses	3,631,484			3,631,484
584	Underground Line Expenses	802,063			802,063
585	Street Lighting and Signal System	292,590			292,590
586	Meter Expenses	1,285,488			1,285,488
587	Customer Installations	3,447,613			3,447,613
588	Miscellaneous Expenses	3,192,187			3,192,187
589	Rents	1,827,440			1,827,440
590	Maintenance Supervision and Engineering	454,314			454,314
591	Maintenance of Structures	466,745			466,745
592	Maintenance of Station Equipment	1,457,120			1,457,120
593	Maintenance of Overhead Lines	13,504,784			13,504,784
594	Maintenance of Underground Lines	845,121			845,121
595	Maintenance of Line Transformers	105,029			105,029
596	Maint. of Street Lighting and Signal System	84,234			84,234
597	Maintenance of Meters	596,821			596,821
598	Maintenance of Misc. Distribution Plant	403,934			403,934
	Total Distribution Expenses	37,071,307	950,158		38,021,465

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year
	Customer Accounts Expenses				
901	Supervision	3,406,371			3,406,371
902	Meter Reading	4,382,518			4,382,518
903	Customer Records and Collection	13,520,070			13,520,070
904	Uncollectible Accounts	11,000,000			11,000,000
905	Miscellaneous Customer Accounts Exp.	187,178			187,178
	Total Customer Accounts Expenses	32,496,137	0		32,496,137
	Customer Service and Info Expenses				
907	Supervision	176,328			176,328
908	Customer Assistance Expenses	1,740,258			1,740,258
909	Info and Instructional Advertising Expenses	220,069			220,069
910	Misc. Customer Service and Info Expenses	30,974			30,974
	Total Customer Service and Info Expenses	2,167,629	0		2,167,629
	Sales Expenses				
911	Supervision	18,837			18,837
912	Demonstrating and Selling	4,377,036			4,377,036
913	Advertising	19,427			19,427
916	Miscellaneous Sales Expenses	118,689			118,689
	Total Sales Expenses	4,533,989	0		4,533,989
	Administrative and General Expenses				
920	Administrative and General Salaries	25,690,455	648,390	4,5	26,338,845
921	Office Supplies and Expenses	5,596,877			5,596,877
922	Administrative Expense Transferred	(6,171,869)			(6,171,869)
923	Outside Services Employed	8,467,154			8,467,154
924	Property Insurance	5,604,103			5,604,103
925	Injuries and Damages	3,604,775			3,604,775
926	Employee Pension and Benefits	12,725,517	778,929	6	13,504,446
928	Regulatory Commission Expenses	1,790,074			1,790,074
929	Duplicate Charges	(1,247,245)			(1,247,245)
930	Miscellaneous General Expenses	20,628,427			20,628,427
931	Rents	11,498,652			11,498,652
935	Maintenance of General Plant	3,262,706			3,262,706
	Total Administrative and General Expenses	91,449,626	1,427,319		92,876,945
	Total Operating Expenses	574,928,847	(18,796,719)		556,132,128
403	Depreciation Expense	172,588,875	25,000,000	12	197,588,875
403	Nuclear Decontamination and Dismantling Expense	5,027,197	(5,027,197)	11	0
404	Amortization of Leasehold Improvements	8,193,897			8,193,897
405	Amortization of Early Window Costs	9,702,476	(9,702,476)	11	0
405	Amortization of Transition Costs	0	84,031,667	11	84,031,667
406	Amortization of Utility Plant Adjustments	353,580	(353,580)	13	0
407	Amortization of Perry Unit No. 2 Abandonment Loss	8,471,653	(8,471,653)	9	0
408	Taxes Other Than Income Taxes	84,569,688	(4,352,878)	12	80,216,810
	Total Operating Expenses Before Federal and State Income Taxes	863,836,213	62,327,164		926,163,377

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year
	Net Operating Income Before Federal and State Income Taxes	319,047,933	(34,025,286)		285,022,647
409	Federal Income Tax	94,901,767	(1,898,439)	8,15	93,003,328
409	State Income Tax	29,130,353	5,215,971	15	34,346,324
410	Deferred Federal Income Tax	15,799,927	(42,740,251)	11,15	(26,940,324)
410	Deferred State Income Tax	1,235,284	(220,443)	15	1,014,841
411	Income Tax Deferred in Prior Years	(36,611,485)			(36,611,485)
411	Amortization of Investment Tax Credits	(7,838,483)			(7,838,483)
411	Gain From Disposal of Allowances	(226,313)			(226,313)
	Total Income Taxes	96,391,050	(39,643,162)		56,747,888
	Net Utility Operating Income	222,656,883	5,617,876		228,274,759
418	Equity in Subsidiary Company's Earnings	31,619,253	(19,665,341)	8	11,953,912
418	Non-Operating Rental Income & Expense	(57,428)			(57,428)
419	Interest Revenues	11,563,066			11,563,066
419	Allowance For Funds Used During Construction	1			1
421	Miscellaneous Non-Operating Income	3,452,177			3,452,177
	Total Other Income	46,577,069	(19,665,341)		26,911,728
426	Donations	1,606,873			1,606,873
426	Civic, Political and Related Activities	725,714			725,714
426	Other	6,330,988			6,330,988
	Total Other Income Deductions	8,663,575	0		8,663,575
409	Federal Income Tax	(418,561)			(418,561)
409	State Income Tax	(779,727)			(779,727)
420	Investment Tax Credit	(1,720,529)			(1,720,529)
	Total Taxes Applicable to Other Income and Deductions	(2,918,817)	0		(2,918,817)
	Income Before Interest Charges	263,489,194	(14,047,465)		249,441,729
	Interest Charges				
427	Interest on Long-Term Debt	82,504,832			82,504,832
428	Amortization of Debt Discount and Expense	6,091,881	(3,765,532)	11	2,326,349
429	Amortization of Premium on Debt	(118,820)			(118,820)
431	Other Interest	26,670,636			26,670,636
432	Allowance For Borrowed Funds Used During Construction	(1,249,515)			(1,249,515)
	Total Interest Charges	113,899,014	(3,765,532)		110,133,482
	Net Income	$149,590,180	($10,281,933)		$139,308,247

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Test Year	Adjustments		Adjusted Test Year
Intangible Plant:					
301	Organization	$100,275			$100,275
302	Franchises and Consents	6,830			6,830
303	Miscellaneous Intangible Plant	286,993,420	(243,000,000)	1	43,993,420
	Total Intangible Plant	287,100,525	(243,000,000)		44,100,525
Production Plant:					
	Steam Production Plant				
310	Land and Land Rights	8,026,760			8,026,760
311	Structures and Improvements	128,853,875			128,853,875
312	Boiler Plant Equipment	484,460,835			484,460,835
313	Engines/Engine-Driven Generators	0			0
314	Turbogenerator Units	115,768,800			115,768,800
315	Assessory Electric Equipment	78,729,366			78,729,366
316	Misc. Power Plant Equipment	24,280,712			24,280,712
	Total Steam Production Plant	840,120,348	0		840,120,348
	Nuclear Production Plant				
320	Land and Land Rights	617,903			617,903
321	Structures and Improvements	229,416,299			229,416,299
322	Reactor Plant Equipment	656,156,421	243,000,000	1	899,156,421
323	Turbo Generator Units	119,726,878			119,726,878
324	Accessory Electric Equipment	161,470,226			161,470,226
325	Misc. Power Plant Equipment	72,991,217			72,991,217
	Total Nuclear Production Plant	1,240,378,944	243,000,000		1,483,378,944
	Hydraulic Production Plant				
330	Land and Land Rights	0			0
331	Structures and Improvements	0			0
332	Reservoirs, Dams, and Waterways	0			0
333	Water Wheels, Turbines, and Generators	0			0
334	Accessory Electric Equipment	0			0
335	Misc. Power Plant Equipment	0			0
336	Roads, Railroads, and Bridges	0			0
	Total Hydraulic Production Plant	0	0		0
	Other Production Plant				
340	Land and Land Rights	393,704			393,704
341	Structures and Improvement	8,150,271			8,150,271
342	Fuel Holders, Products, and Accessories	3,371,626			3,371,626
343	Prime Movers	436,877			436,877
344	Generators	22,779,984			22,779,984
345	Accessory Electric Equipment	6,674,134			6,674,134
346	Misc. Power Plant Equipment	1,092,833			1,092,833
	Total Other Production Plant	42,899,429	0		42,899,429
Total Production Plant		2,123,398,721	243,000,000		2,366,398,721

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Test Year	Adjustments		Adjusted Test Year
Transmission Plant:					
350	Land and Land Rights	9,833,085			9,833,085
352	Structures and Improvements	8,073,681			8,073,681
353	Station Equipment	124,857,725			124,857,725
354	Towers and Fixtures	66,632,752			66,632,752
355	Poles and Fixtures	5,653,323			5,653,323
356	Overhead Conductors and Devices	43,975,550			43,975,550
357	Underground Conduit	34,250,903			34,250,903
358	Underground Conductors and Devices	18,895,858			18,895,858
359	Roads and Trails	13,879			13,879
	Total Transmission Plant	312,186,756	0		312,186,756
Distribution Plant:					
360	Land and Land Rights	8,902,261			8,902,261
361	Structures and Improvements	41,029,378			41,029,378
362	Station Equipment	318,016,298			318,016,298
363	Storage Battery Equipment	0			0
364	Poles, Towers, and Fixtures	218,026,447			218,026,447
365	Overhead Conductors and Devices	168,933,236			168,933,236
366	Underground Conduit	74,561,251			74,561,251
367	Underground Conductors and Devices	112,816,627			112,816,627
368	Line Transformers	150,946,402			150,946,402
369	Services	57,792,430			57,792,430
370	Meters	59,652,919			59,652,919
371	Installations on Customer Premises	37,793			37,793
372	Leased Property on Customer Premises	0			0
373	Street Lighting and Signal Systems	22,510,688			22,510,688
	Total Distribution Plant	1,233,225,730	0		1,233,225,730
General Plant:					
389	Land and Land Rights	6,199,971			6,199,971
390	Structures and Improvements	64,438,073			64,438,073
391	Office Furniture and Equipment	48,657,786			48,657,786
392	Transportation Equpment	16,877,412			16,877,412
393	Stores Equipment	2,340,839			2,340,839
394	Tools, Shop and Garage Equipment	9,830,485			9,830,485
395	Laboratory Equipment	6,289,389			6,289,389
396	Power Operated Equipment	1,304,358			1,304,358
397	Communication Equipment	88,873,334			88,873,334
398	Miscellaneous Equipment	432,311			432,311
	Subtotal	245,243,958	0		245,243,958
399	Other Tangible Property	72,495,480	(72,495,480)	3	0
	Total General Plant	317,739,438	(72,495,480)		245,243,958
	TOTAL	$4,273,651,170	($72,495,480)		$4,201,155,690

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Test Year	Adjustments		Adjusted Test Year
Intangible Plant:					
301	Organization	$0			$0
302	Franchises and Consents	0			0
303	Miscellaneous Intangible Plant	24,586,227	(24,586,227)	1	0
	Total Intangible Plant	24,586,227	(24,586,227)		0
Production Plant:					
	Steam Production Plant				
310	Land and Land Rights	0			0
311	Structures and Improvements	73,121,619			73,121,619
312	Boiler Plant Equipment	218,157,215			218,157,215
313	Engines/Engine-Driven Generators	0			0
314	Turbogenerator Units	64,854,044			64,854,044
315	Assessory Electric Equipment	40,961,416			40,961,416
316	Misc. Power Plant Equipment	14,257,747			14,257,747
	Total Steam Production Plant	411,352,041	0		411,352,041
	Nuclear Production Plant				
320	Land and Land Rights	0			0
321	Structures and Improvements	125,861,202			125,861,202
322	Reactor Plant Equipment	315,714,113	18,824,322	1,2	334,538,435
323	Turbo Generator Units	67,672,070			67,672,070
324	Accessory Electric Equipment	86,599,467			86,599,467
325	Misc. Power Plant Equipment	36,502,357			36,502,357
	Total Nuclear Production Plant	632,349,209	18,824,322		651,173,531
	Hydraulic Production Plant				
330	Land and Land Rights	0			0
331	Structures and Improvements	0			0
332	Reservoirs, Dams, and Waterways	0			0
333	Water Wheels, Turbines, and Generators	0			0
334	Accessory Electric Equipment	0			0
335	Misc. Power Plant Equipment	0			0
336	Roads, Railroads, and Bridges	0			0
	Total Hydraulic Production Plant	0	0		0
	Other Production Plant				
340	Land and Land Rights	0			0
341	Structures and Improvement	3,289,817			3,289,817
342	Fuel Holders, Products, and Accessories	1,583,911			1,583,911
343	Prime Movers	223,568			223,568
344	Generators	10,856,250			10,856,250
345	Accessory Electric Equipment	1,919,779			1,919,779
346	Misc. Power Plant Equipment	1,128,485			1,128,485
	Total Other Production Plant	19,001,810	0		19,001,810
Total Production Plant		1,062,703,060	18,824,322		1,081,527,382

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Test Year	Adjustments		Adjusted Test Year
Transmission Plant:					
350	Land and Land Rights	0			0
352	Structures and Improvements	1,960,150			1,960,150
353	Station Equipment	50,537,060	2,756,556	2	53,293,616
354	Towers and Fixtures	23,349,334			23,349,334
355	Poles and Fixtures	1,666,715			1,666,715
356	Overhead Conductors and Devices	21,424,367			21,424,367
357	Underground Conduit	8,072,593			8,072,593
358	Underground Conductors and Devices	7,918,705			7,918,705
359	Roads and Trails	5,122			5,122
	Total Transmission Plant	114,934,046	2,756,556		117,690,602
Distribution Plant:					
360	Land and Land Rights	0			0
361	Structures and Improvements	13,307,734			13,307,734
362	Station Equipment	71,647,813	13,556,779	2	85,204,592
363	Storage Battery Equipment	0			0
364	Poles, Towers, and Fixtures	66,699,658			66,699,658
365	Overhead Conductors and Devices	60,090,427			60,090,427
366	Underground Conduit	15,840,062			15,840,062
367	Underground Conductors and Devices	34,037,405			34,037,405
368	Line Transformers	51,529,607			51,529,607
369	Services	19,868,087			19,868,087
370	Meters	25,120,856			25,120,856
371	Installations on Customer Premises	(37,544)			(37,544)
372	Leased Property on Customer Premises	0			0
373	Street Lighting and Signal Systems	14,747,084			14,747,084
	Total Distribution Plant	372,851,189	13,556,779		386,407,968
General Plant:					
389	Land and Land Rights	0			0
390	Structures and Improvements	22,588,933			22,588,933
391	Office Furniture and Equipment	20,284,790			20,284,790
392	Transportation Equpment	9,511,415			9,511,415
393	Stores Equipment	880,929			880,929
394	Tools, Shop and Garage Equipment	3,534,301			3,534,301
395	Laboratory Equipment	2,217,133			2,217,133
396	Power Operated Equipment	855,117			855,117
397	Communication Equipment	49,594,356			49,594,356
398	Miscellaneous Equipment	169,296			169,296
	Subtotal	109,636,270	0		109,636,270
399	Other Tangible Property	67,751,995	(67,751,995)	2,3	0
	Total General Plant	177,388,265	(67,751,995)		109,636,270
	TOTAL	$1,752,462,787	($57,200,565)		$1,695,262,222

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

		Test Year	Adjustments	Adjusted Test Year
Intangible Plant:				
301	Organization	$100,275	$0	$100,275
302	Franchises and Consents	6,830	0	6,830
303	Miscellaneous Intangible Plant	262,407,193	(218,413,773)	43,993,420
	Total Intangible Plant	262,514,298	(218,413,773)	44,100,525
Production Plant:				
	Steam Production Plant			
310	Land and Land Rights	8,026,760	0	8,026,760
311	Structures and Improvements	55,732,256	0	55,732,256
312	Boiler Plant Equipment	266,303,620	0	266,303,620
313	Engines/Engine-Driven Generators	0	0	0
314	Turbogenerator Units	50,914,756	0	50,914,756
315	Assessory Electric Equipment	37,767,950	0	37,767,950
316	Misc. Power Plant Equipment	10,022,965	0	10,022,965
	Total Steam Production Plant	428,768,307	0	428,768,307
	Nuclear Production Plant			
320	Land and Land Rights	617,903	0	617,903
321	Structures and Improvements	103,555,097	0	103,555,097
322	Reactor Plant Equipment	340,442,308	224,175,678	564,617,986
323	Turbo Generator Units	52,054,808	0	52,054,808
324	Accessory Electric Equipment	74,870,759	0	74,870,759
325	Misc. Power Plant Equipment	36,488,860	0	36,488,860
	Total Nuclear Production Plant	608,029,735	224,175,678	832,205,413
	Hydraulic Production Plant			
330	Land and Land Rights	0	0	0
331	Structures and Improvements	0	0	0
332	Reservoirs, Dams, and Waterways	0	0	0
333	Water Wheels, Turbines, and Generators	0	0	0
334	Accessory Electric Equipment	0	0	0
335	Misc. Power Plant Equipment	0	0	0
336	Roads, Railroads, and Bridges	0	0	0
	Total Hydraulic Production Plant	0	0	0
	Other Production Plant			
340	Land and Land Rights	393,704	0	393,704
341	Structures and Improvement	4,860,454	0	4,860,454
342	Fuel Holders, Products, and Accessories	1,787,715	0	1,787,715
343	Prime Movers	213,309	0	213,309
344	Generators	11,923,734	0	11,923,734
345	Accessory Electric Equipment	4,754,355	0	4,754,355
346	Misc. Power Plant Equipment	(35,652)	0	(35,652)
	Total Other Production Plant	23,897,619	0	23,897,619
Total Production Plant		1,060,695,661	224,175,678	1,284,871,339

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

	Test Year	Adjustments	Adjusted Test Year
Transmission Plant:			
350 Land and Land Rights	9,833,085	0	9,833,085
352 Structures and Improvements	6,113,531	0	6,113,531
353 Station Equipment	74,320,665	(2,756,556)	71,564,109
354 Towers and Fixtures	43,283,418	0	43,283,418
355 Poles and Fixtures	3,986,608	0	3,986,608
356 Overhead Conductors and Devices	22,551,183	0	22,551,183
357 Underground Conduit	26,178,310	0	26,178,310
358 Underground Conductors and Devices	10,977,153	0	10,977,153
359 Roads and Trails	8,757	0	8,757
Total Transmission Plant	197,252,710	(2,756,556)	194,496,154
Distribution Plant:			
360 Land and Land Rights	8,902,261	0	8,902,261
361 Structures and Improvements	27,721,644	0	27,721,644
362 Station Equipment	246,368,485	(13,556,779)	232,811,706
363 Storage Battery Equipment	0	0	0
364 Poles, Towers, and Fixtures	151,326,789	0	151,326,789
365 Overhead Conductors and Devices	108,842,809	0	108,842,809
366 Underground Conduit	58,721,189	0	58,721,189
367 Underground Conductors and Devices	78,779,222	0	78,779,222
368 Line Transformers	99,416,795	0	99,416,795
369 Services	37,924,343	0	37,924,343
370 Meters	34,532,063	0	34,532,063
371 Installations on Customer Premises	75,337	0	75,337
372 Leased Property on Customer Premises	0	0	0
373 Street Lighting and Signal Systems	7,763,604	0	7,763,604
Total Distribution Plant	860,374,541	(13,556,779)	846,817,762
General Plant:			
389 Land and Land Rights	6,199,971	0	6,199,971
390 Structures and Improvements	41,849,140	0	41,849,140
391 Office Furniture and Equipment	28,372,996	0	28,372,996
392 Transportation Equpment	7,365,997	0	7,365,997
393 Stores Equipment	1,459,910	0	1,459,910
394 Tools, Shop and Garage Equipment	6,296,184	0	6,296,184
395 Laboratory Equipment	4,072,256	0	4,072,256
396 Power Operated Equipment	449,241	0	449,241
397 Communication Equipment	39,278,978	0	39,278,978
398 Miscellaneous Equipment	263,015	0	263,015
Subtotal	135,607,688	0	135,607,688
399 Other Tangible Property	67,751,995	(67,751,995)	0
Total General Plant	203,359,683	(67,751,995)	135,607,688
TOTAL	$2,584,196,893	($78,303,425)	$2,505,893,468

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

	Test Year	Adjustments		Adjusted Test Year
Intangible Plant:				
301 Organization	$0			$0
302 *Franchises and Consents*	*0*			*0*
303 Miscellaneous Intangible Plant	3,363,051	(3,363,051)	1	0
Total Intangible Plant	3,363,051	(3,363,051)		0
Production Plant:				
Steam Production Plant				
310 Land and Land Rights				
311 Structures and Improvements				
312 Boiler Plant Equipment				
313 Engines/Engine-Driven Generators				
314 Turbogenerator Units				
315 Assessory Electric Equipment				
316 Misc. Power Plant Equipment				
Total Steam Production Plant	64,681,794	0		64,681,794
Nuclear Production Plant				
320 Land and Land Rights				
321 Structures and Improvements				
322 Reactor Plant Equipment				
323 Turbo Generator Units				
324 Accessory Electric Equipment				
325 Misc. Power Plant Equipment				
Total Nuclear Production Plant	168,710,461	295,013,937	1,2	463,724,398
Hydraulic Production Plant				
330 Land and Land Rights				
331 Structures and Improvements				
332 Reservoirs, Dams, and Waterways				
333 Water Wheels, Turbines, and Generators				
334 Accessory Electric Equipment				
335 Misc. Power Plant Equipment				
336 Roads, Railroads, and Bridges				
Total Hydraulic Production Plant	0	0		0
Other Production Plant				
340 Land and Land Rights				
341 Structures and Improvement				
342 Fuel Holders, Products, and Accessories				
343 Prime Movers				
344 Generators				
345 Accessory Electric Equipment				
346 Misc. Power Plant Equipment				
Total Other Production Plant	3,269,464	0		3,269,464
Total Production Plant	236,661,719	295,013,937		531,675,656

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

	Test Year	Adjustments		Adjusted Test Year
Transmission Plant:				
350 Land and Land Rights				
352 Structures and Improvements				
353 Station Equipment				
354 Towers and Fixtures				
355 Poles and Fixtures				
356 Overhead Conductors and Devices				
357 Underground Conduit				
358 Underground Conductors and Devices				
359 Roads and Trails				
Total Transmission Plant	23,087,876	43,830,767	2	66,918,643
Distribution Plant:				
360 Land and Land Rights				
361 Structures and Improvements				
362 Station Equipment				
363 Storage Battery Equipment				
364 Poles, Towers, and Fixtures				
365 Overhead Conductors and Devices				
366 Underground Conduit				
367 Underground Conductors and Devices				
368 Line Transformers				
369 Services				
370 Meters				
371 Installations on Customer Premises				
372 Leased Property on Customer Premises				
373 Street Lighting and Signal Systems				
Total Distribution Plant	99,290,960	111,259,635	2	210,550,595
General Plant:				
389 Land and Land Rights				
390 Structures and Improvements				
391 Office Furniture and Equipment				
392 Transportation Equpment				
393 Stores Equipment				
394 Tools, Shop and Garage Equipment				
395 Laboratory Equipment				
396 Power Operated Equipment				
397 Communication Equipment				
398 Miscellaneous Equipment				
Subtotal	25,765,908	0		25,765,908
399 Other Tangible Property	11,227,191	(11,227,191)	5	0
Total General Plant	36,993,099	(11,227,191)		25,765,908
TOTAL	$399,396,705	$435,514,097		$834,910,802

EXHIBIT MKO-1 SECTION C

DUQUESNE LIGHT COMPANY
Functionalized Rate Base
For the Year Ended December 31, 1996

	Total	Generation	Transmission	Distribution
Gross Plant	$4,201,155,690	$2,540,456,719	$319,052,035	$1,341,646,936
Accumulated Depreciation	1,695,262,222	1,147,480,150	120,291,943	427,490,129
Net Book Value	2,505,893,468	1,392,976,569	198,760,092	914,156,807
Deferred Taxes	(834,910,802)	(547,175,389)	(67,529,991)	(220,205,422)
Net Plant	1,670,982,666	845,801,180	131,230,101	693,951,385
Regulatory Assets	544,788,485	455,273,723	32,670,171	56,844,591
Phillips	78,399,252	78,399,252		
Brunot Island	28,758,563	28,758,563		
Warwick	15,294,914	15,294,914		
Deferred Taxes	(39,966,357)	(39,966,357)		
Working Capital	69,940,000	63,590,000	1,240,000	5,110,000
Rate Base	$2,368,197,523	$1,447,151,275	$165,140,272	$755,905,976

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

		Adjusted Test Year	Generation	Transmission	Distribution
Intangible Plant:					
301	Organization	$100,275	$60,321	$2,379	$37,574
302	Franchises and Consents	6,830	4,109	162	2,559
303	Miscellaneous Intangible Plant	43,993,420	26,464,671	1,043,832	16,484,916
	Total Intangible Plant	44,100,525	26,529,101	1,046,374	16,525,050
Production Plant:					
	Steam Production Plant				
310	Land and Land Rights	8,026,760	8,026,760		
311	Structures and Improvements	128,853,875	128,853,875		
312	Boiler Plant Equipment	484,460,835	484,460,835		
313	Engines/Engine-Driven Generators	0	0		
314	Turbogenerator Units	115,768,800	115,768,800		
315	Assessory Electric Equipment	78,729,366	78,729,366		
316	Misc. Power Plant Equipment	24,280,712	24,280,712		
	Total Steam Production Plant	840,120,348	840,120,348	0	0
	Nuclear Production Plant				
320	Land and Land Rights	617,903	617,903		
321	Structures and Improvements	229,416,299	229,416,299		
322	Reactor Plant Equipment	899,156,421	899,156,421		
323	Turbo Generator Units	119,726,878	119,726,878		
324	Accessory Electric Equipment	161,470,226	161,470,226		
325	Misc. Power Plant Equipment	72,991,217	72,991,217		
	Total Nuclear Production Plant	1,483,378,944	1,483,378,944	0	0
	Hydraulic Production Plant				
330	Land and Land Rights	0	0		
331	Structures and Improvements	0	0		
332	Reservoirs, Dams, and Waterways	0	0		
333	Water Wheels, Turbines, and Generators	0	0		
334	Accessory Electric Equipment	0	0		
335	Misc. Power Plant Equipment	0	0		
336	Roads, Railroads, and Bridges	0	0		
	Total Hydraulic Production Plant	0	0	0	0
	Other Production Plant				
340	Land and Land Rights	393,704	393,704		
341	Structures and Improvement	8,150,271	8,150,271		
342	Fuel Holders, Products, and Accessories	3,371,626	3,371,626		
343	Prime Movers	436,877	436,877		
344	Generators	22,779,984	22,779,984		
345	Accessory Electric Equipment	6,674,134	6,674,134		
346	Misc. Power Plant Equipment	1,092,833	1,092,833		
	Total Other Production Plant	42,899,429	42,899,429	0	0
Total Production Plant		2,366,398,721	2,366,398,721	0	0
Transmission Plant:					
350	Land and Land Rights	9,833,085		9,833,085	
352	Structures and Improvements	8,073,681		8,073,681	
353	Station Equipment	124,857,725		124,857,725	
354	Towers and Fixtures	66,632,752		66,632,752	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

	Adjusted Test Year	Generation	Transmission	Distribution
355 Poles and Fixtures	5,653,323		5,653,323	
356 Overhead Conductors and Devices	43,975,550		43,975,550	
357 Underground Conduit	34,250,903		34,250,903	
358 Underground Conductors and Devices	18,895,858		18,895,858	
359 Roads and Trails	13,879		13,879	
Total Transmission Plant	312,186,756	0	312,186,756	0
Distribution Plant:				
360 Land and Land Rights	8,902,261			8,902,261
361 Structures and Improvements	41,029,378			41,029,378
362 Station Equipment	318,016,298			318,016,298
363 Storage Battery Equipment	0			0
364 Poles, Towers, and Fixtures	218,026,447			218,026,447
365 Overhead Conductors and Devices	168,933,236			168,933,236
366 Underground Conduit	74,561,251			74,561,251
367 Underground Conductors and Devices	112,816,627			112,816,627
368 Line Transformers	150,946,402			150,946,402
369 Services	57,792,430			57,792,430
370 Meters	59,652,919			59,652,919
371 Installations on Customer Premises	37,793			37,793
372 Leased Property on Customer Premises	0			0
373 Street Lighting and Signal Systems	22,510,688			22,510,688
Total Distribution Plant	1,233,225,730	0	0	1,233,225,730
General Plant:				
389 Land and Land Rights	6,199,971	3,729,653	147,107	2,323,211
390 Structures and Improvements	64,438,073	38,763,352	1,528,923	24,145,798
391 Office Furniture and Equipment	48,657,786	29,270,566	1,154,504	18,232,716
392 Transportation Equpment	16,877,412	10,152,772	400,451	6,324,190
393 Stores Equipment	2,340,839	1,408,155	55,541	877,143
394 Tools, Shop and Garage Equipment	9,830,485	5,913,624	233,248	3,683,613
395 Laboratory Equipment	6,289,389	3,783,443	149,228	2,356,717
396 Power Operated Equipment	1,304,358	784,649	30,949	488,760
397 Communication Equipment	88,873,334	53,462,622	2,108,698	33,302,014
398 Miscellaneous Equipment	432,311	260,061	10,257	161,993
Subtotal	245,243,958	147,528,897	5,818,906	91,896,155
399 Other Tangible Property	0	0	0	0
Total General Plant	245,243,958	147,528,897	5,818,906	91,896,155
TOTAL	$4,201,155,690	$2,540,456,719	$319,052,035	$1,341,646,935

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Adjusted Test Year	Generation	Transmission	Distribution
Intangible Plant:					
301	Organization	$0			
302	Franchises and Consents	0			
303	Miscellaneous Intangible Plant	0			
	Total Intangible Plant	0	0	0	0
Production Plant:					
	Steam Production Plant				
310	Land and Land Rights	0	0		
311	Structures and Improvements	73,121,619	73,121,619		
312	Boiler Plant Equipment	218,157,215	218,157,215		
313	Engines/Engine-Driven Generators	0	0		
314	Turbogenerator Units	64,854,044	64,854,044		
315	Assessory Electric Equipment	40,961,416	40,961,416		
316	Misc. Power Plant Equipment	14,257,747	14,257,747		
	Total Steam Production Plant	411,352,041	411,352,041	0	0
	Nuclear Production Plant				
320	Land and Land Rights	0	0		
321	Structures and Improvements	125,861,202	125,861,202		
322	Reactor Plant Equipment	334,538,435	334,538,435		
323	Turbo Generator Units	67,672,070	67,672,070		
324	Accessory Electric Equipment	86,599,467	86,599,467		
325	Misc. Power Plant Equipment	36,502,357	36,502,357		
	Total Nuclear Production Plant	651,173,531	651,173,531	0	0
	Hydraulic Production Plant				
330	Land and Land Rights	0	0		
331	Structures and Improvements	0	0		
332	Reservoirs, Dams, and Waterways	0	0		
333	Water Wheels, Turbines, and Generators	0	0		
334	Accessory Electric Equipment	0	0		
335	Misc. Power Plant Equipment	0	0		
336	Roads, Railroads, and Bridges	0	0		
	Total Hydraulic Production Plant	0	0	0	0
	Other Production Plant				
340	Land and Land Rights	0	0		
341	Structures and Improvement	3,289,817	3,289,817		
342	Fuel Holders, Products, and Accessories	1,583,911	1,583,911		
343	Prime Movers	223,568	223,568		
344	Generators	10,856,250	10,856,250		
345	Accessory Electric Equipment	1,919,779	1,919,779		
346	Misc. Power Plant Equipment	1,128,485	1,128,485		
	Total Other Production Plant	19,001,810	19,001,810	0	0
Total Production Plant		1,081,527,382	1,081,527,382	0	0
Transmission Plant:					
350	Land and Land Rights	0		0	
352	Structures and Improvements	1,960,150		1,960,150	
353	Station Equipment	53,293,616		53,293,616	
354	Towers and Fixtures	23,349,334		23,349,334	
355	Poles and Fixtures	1,666,715		1,666,715	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Accumulated Depreciation

		Adjusted Test Year	Generation	Transmission	Distribution
356	Overhead Conductors and Devices	21,424,367		21,424,367	
357	Underground Conduit	8,072,593		8,072,593	
358	Underground Conductors and Devices	7,918,705		7,918,705	
359	Roads and Trails	5,122		5,122	
	Total Transmission Plant	117,690,602	0	117,690,602	0
	Distribution Plant:				
360	Land and Land Rights	0			0
361	Structures and Improvements	13,307,734			13,307,734
362	Station Equipment	85,204,592			85,204,592
363	Storage Battery Equipment	0			0
364	Poles, Towers, and Fixtures	66,699,658			66,699,658
365	Overhead Conductors and Devices	60,090,427			60,090,427
366	Underground Conduit	15,840,062			15,840,062
367	Underground Conductors and Devices	34,037,405			34,037,405
368	Line Transformers	51,529,607			51,529,607
369	Services	19,868,087			19,868,087
370	Meters	25,120,856			25,120,856
371	Installations on Customer Premises	(37,544)			(37,544)
372	Leased Property on Customer Premises	0			0
373	Street Lighting and Signal Systems	14,747,084			14,747,084
	Total Distribution Plant	386,407,968	0	0	386,407,968
	General Plant:				
389	Land and Land Rights	0	0	0	0
390	Structures and Improvements	22,588,933	13,588,593	535,968	8,464,372
391	Office Furniture and Equipment	20,284,790	12,202,513	481,297	7,600,979
392	Transportation Equpment	9,511,415	5,721,685	225,677	3,564,053
393	Stores Equipment	880,929	529,931	20,902	330,096
394	Tools, Shop and Garage Equipment	3,534,301	2,126,093	83,858	1,324,349
395	Laboratory Equipment	2,217,133	1,333,738	52,606	830,789
396	Power Operated Equipment	855,117	514,404	20,289	320,424
397	Communication Equipment	49,594,356	29,833,969	1,176,726	18,583,661
398	Miscellaneous Equipment	169,296	101,842	4,017	63,437
	Subtotal	109,636,270	65,952,768	2,601,341	41,082,161
399	Other Tangible Property	0	0	0	0
	Total General Plant	109,636,270	65,952,768	2,601,341	41,082,161
	TOTAL	$1,695,262,222	$1,147,480,150	$120,291,943	$427,490,128

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

	Adjusted Test Year	Generation	Transmission	Distribution
Intangible Plant:				
301 Organization	$100,275	$60,321	$2,379	$37,574
302 Franchises and Consents	6,830	4,109	162	2,559
303 Miscellaneous Intangible Plant	43,993,420	26,464,671	1,043,832	16,484,916
Total Intangible Plant	44,100,525	26,529,101	1,046,374	16,525,050
Production Plant:				
Steam Production Plant				
310 Land and Land Rights	8,026,760	8,026,760	0	0
311 Structures and Improvements	55,732,256	55,732,256	0	0
312 Boiler Plant Equipment	266,303,620	266,303,620	0	0
313 Engines/Engine-Driven Generators	0	0	0	0
314 Turbogenerator Units	50,914,756	50,914,756	0	0
315 Assessory Electric Equipment	37,767,950	37,767,950	0	0
316 Misc. Power Plant Equipment	10,022,965	10,022,965	0	0
Total Steam Production Plant	428,768,307	428,768,307	0	0
Nuclear Production Plant				
320 Land and Land Rights	617,903	617,903	0	0
321 Structures and Improvements	103,555,097	103,555,097	0	0
322 Reactor Plant Equipment	564,617,986	564,617,986	0	0
323 Turbo Generator Units	52,054,808	52,054,808	0	0
324 Accessory Electric Equipment	74,870,759	74,870,759	0	0
325 Misc. Power Plant Equipment	36,488,860	36,488,860	0	0
Total Nuclear Production Plant	832,205,413	832,205,413	0	0
Hydraulic Production Plant				
330 Land and Land Rights	0	0	0	0
331 Structures and Improvements	0	0	0	0
332 Reservoirs, Dams, and Waterways	0	0	0	0
333 Water Wheels, Turbines, and Generators	0	0	0	0
334 Accessory Electric Equipment	0	0	0	0
335 Misc. Power Plant Equipment	0	0	0	0
336 Roads, Railroads, and Bridges	0	0	0	0
Total Hydraulic Production Plant	0	0	0	0
Other Production Plant				
340 Land and Land Rights	393,704	393,704	0	0
341 Structures and Improvement	4,860,454	4,860,454	0	0
342 Fuel Holders, Products, and Accessories	1,787,715	1,787,715	0	0
343 Prime Movers	213,309	213,309	0	0
344 Generators	11,923,734	11,923,734	0	0
345 Accessory Electric Equipment	4,754,355	4,754,355	0	0
346 Misc. Power Plant Equipment	(35,652)	(35,652)	0	0
Total Other Production Plant	23,897,619	23,897,619	0	0
Total Production Plant	1,284,871,339	1,284,871,339	0	0
Transmission Plant:				
350 Land and Land Rights	9,833,085	0	9,833,085	0
352 Structures and Improvements	6,113,531	0	6,113,531	0
353 Station Equipment	71,564,109	0	71,564,109	0
354 Towers and Fixtures	43,283,418	0	43,283,418	0
355 Poles and Fixtures	3,986,608	0	3,986,608	0

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Net Book Value

		Adjusted Test Year	Generation	Transmission	Distribution
356	Overhead Conductors and Devices	22,551,183	0	22,551,183	0
357	Underground Conduit	26,178,310	0	26,178,310	0
358	Underground Conductors and Devices	10,977,153	0	10,977,153	0
359	Roads and Trails	8,757	0	8,757	0
	Total Transmission Plant	194,496,154	0	194,496,154	0
	Distribution Plant:				
360	Land and Land Rights	8,902,261	0	0	8,902,261
361	Structures and Improvements	27,721,644	0	0	27,721,644
362	Station Equipment	232,811,706	0	0	232,811,706
363	Storage Battery Equipment	0	0	0	0
364	Poles, Towers, and Fixtures	151,326,789	0	0	151,326,789
365	Overhead Conductors and Devices	108,842,809	0	0	108,842,809
366	Underground Conduit	58,721,189	0	0	58,721,189
367	Underground Conductors and Devices	78,779,222	0	0	78,779,222
368	Line Transformers	99,416,795	0	0	99,416,795
369	Services	37,924,343	0	0	37,924,343
370	Meters	34,532,063	0	0	34,532,063
371	Installations on Customer Premises	75,337	0	0	75,337
372	Leased Property on Customer Premises	0	0	0	0
373	Street Lighting and Signal Systems	7,763,604	0	0	7,763,604
	Total Distribution Plant	846,817,762	0	0	846,817,762
	General Plant:				
389	Land and Land Rights	6,199,971	3,729,653	147,107	2,323,211
390	Structures and Improvements	41,849,140	25,174,759	992,955	15,681,426
391	Office Furniture and Equipment	28,372,996	17,068,053	673,206	10,631,737
392	Transportation Equpment	7,365,997	4,431,087	174,773	2,760,137
393	Stores Equipment	1,459,910	878,223	34,639	547,048
394	Tools, Shop and Garage Equipment	6,296,184	3,787,531	149,390	2,359,263
395	Laboratory Equipment	4,072,256	2,449,705	96,622	1,525,928
396	Power Operated Equipment	449,241	270,245	10,659	168,337
397	Communication Equipment	39,278,978	23,628,653	931,973	14,718,353
398	Miscellaneous Equipment	263,015	158,219	6,241	98,555
	Subtotal	135,607,688	81,576,128	3,217,565	50,813,995
399	Other Tangible Property	0	0	0	0
	Total General Plant	135,607,688	81,576,128	3,217,565	50,813,995
	TOTAL	$2,505,893,468	$1,392,976,569	$198,760,092	$914,156,807

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

	Adjusted Test Year	Generation	Transmission	Distribution
Intangible Plant:				
301 Organization	$0			
302 Franchises and Consents	0			
303 Miscellaneous Intangible Plant	0	0	0	0
Total Intangible Plant	0	0	0	0
Production Plant:				
Steam Production Plant				
310 Land and Land Rights				
311 Structures and Improvements				
312 Boiler Plant Equipment				
313 Engines/Engine-Driven Generators				
314 Turbogenerator Units				
315 Assessory Electric Equipment				
316 Misc. Power Plant Equipment				
Total Steam Production Plant	64,681,794	64,681,794	0	0
Nuclear Production Plant				
320 Land and Land Rights				
321 Structures and Improvements				
322 Reactor Plant Equipment				
323 Turbo Generator Units				
324 Accessory Electric Equipment				
325 Misc. Power Plant Equipment				
Total Nuclear Production Plant	463,724,398	463,724,398	0	0
Hydraulic Production Plant				
330 Land and Land Rights				
331 Structures and Improvements				
332 Reservoirs, Dams, and Waterways				
333 Water Wheels, Turbines, and Generators				
334 Accessory Electric Equipment				
335 Misc. Power Plant Equipment				
336 Roads, Railroads, and Bridges				
Total Hydraulic Production Plant	0	0	0	0
Other Production Plant				
340 Land and Land Rights				
341 Structures and Improvement				
342 Fuel Holders, Products, and Accessories				
343 Prime Movers				
344 Generators				
345 Accessory Electric Equipment				
346 Misc. Power Plant Equipment				
Total Other Production Plant	3,269,464	3,269,464	0	0
Total Production Plant	531,675,656	531,675,656	0	0
Transmission Plant:				
350 Land and Land Rights				
352 Structures and Improvements				
353 Station Equipment				
354 Towers and Fixtures				
355 Poles and Fixtures				

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Deferred Taxes

	Adjusted Test Year	Generation	Transmission	Distribution
356 Overhead Conductors and Devices				
357 Underground Conduit				
358 Underground Conductors and Devices				
359 Roads and Trails				
Total Transmission Plant	66,918,643	0	66,918,643	0
Distribution Plant:				
360 Land and Land Rights				
361 Structures and Improvements				
362 Station Equipment				
363 Storage Battery Equipment				
364 Poles, Towers, and Fixtures				
365 Overhead Conductors and Devices				
366 Underground Conduit				
367 Underground Conductors and Devices				
368 Line Transformers				
369 Services				
370 Meters				
371 Installations on Customer Premises				
372 Leased Property on Customer Premises				
373 Street Lighting and Signal Systems				
Total Distribution Plant	210,550,595	0	0	210,550,595
General Plant:				
389 Land and Land Rights				
390 Structures and Improvements				
391 Office Furniture and Equipment				
392 Transportation Equpment				
393 Stores Equipment				
394 Tools, Shop and Garage Equipment				
395 Laboratory Equipment				
396 Power Operated Equipment				
397 Communication Equipment				
398 Miscellaneous Equipment				
Subtotal	25,765,908	15,499,733	611,348	9,654,827
399 Other Tangible Property	0			
Total General Plant	25,765,908	15,499,733	611,348	9,654,827
TOTAL	$834,910,802	$547,175,389	$67,529,991	$220,205,422

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Adjusted Test Year	Generation	Transmission	Distribution
Operating Revenues:					
	Electric Service Revenues				
440	Residential Sales	$418,472,000			
442	Commercial Sales	502,592,269			
442	Industrial Sales	199,641,293			
444	Public Street and Highway Lighting	17,041,385			
447	Sales For Resale - Pitcairn	858,210			
	Total Electric Service Revenues	1,138,605,157	0	0	0
	Other Electric Revenues				
450	Late Payment Charges	4,746,547			
451	Miscellaneous Service Revenues	1,454,946			
454	Rent from Electric Property	7,608,687			
456	Other Electric Revenues	23,127,932			
447	Sales For Resale - Other Utilities	35,642,755			
	Total Other Electric Revenues	72,580,867	0	0	0
	Total Operating Revenues	1,211,186,024	0	0	0
Operating Expenses:					
	Production Expense				
500	Operation Supervision and Engineering	6,004,646	$6,004,646		
501	Fuel	156,405,163	156,405,163		
502	Steam Expenses	8,590,515	8,590,515		
505	Electric Expenses	2,104,874	2,104,874		
506	Miscellaneous Labor and Expenses	6,759,727	6,759,727		
507	Rents	335,478	335,478		
509	Emission Allowance	2,068,025	2,068,025		
510	Maintenance Supervision and Engineering	1,245,970	1,245,970		
511	Maintenance of Structures	960,939	960,939		
512	Maintenance of Boiler Plant	15,393,792	15,393,792		
513	Maintenance of Electric Plant	4,024,699	4,024,699		
514	Maintenance of Misc. Plant Equipment	4,637,547	4,637,547		
	Total Steam Power O&M Expenses	208,531,375	208,531,375	0	0
517	Operation Supervision and Engineering	13,575,986	13,575,986		
518	Fuel	25,740,809	25,740,809		
519	Coolants and Water	558,656	558,656		
520	Steam Expenses	5,455,447	5,455,447		
523	Electric Expenses	129,447	129,447		
524	Miscellaneous Nuclear Power Expenses	16,937,324	16,937,324		
525	Rents	46,223,120	46,223,120		
528	Maintenance Supervision and Engineering	3,295,342	3,295,342		
529	Maintenance of Structures	1,641,883	1,641,883		
530	Maintenance of Reactor Plant	7,760,707	7,760,707		
531	Maintenance of Electric Plant	3,324,829	3,324,829		
532	Maintenance of Misc. Nuclear Plant	8,020,938	8,020,938		
	Total Nuclear Power O&M Expenses	132,664,488	132,664,488	0	0
546	Operation Supervision and Engineering	26,232	26,232		
547	Fuel	201,637	201,637		
548	Generation Expenses	25,322	25,322		
549	Miscellaneous Other Power Expenses	130,029	130,029		
551	Maintenance Supervision and Engineering	26,391	26,391		
552	Maintenance of Structures	32,128	32,128		

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Adjusted Test Year	Generation	Transmission	Distribution
553	Maintenance of Electric Plant	36,380	36,380		
554	Maintenance of Misc. Generation Plant	17,924	17,924		
	Total Other Power O&M Expenses	496,043	496,043	0	0
555	Purchased Power	32,269,274	32,269,274		
556	System Load Dispatching	828,636	828,636		
557	Other Power Supply Expense	382,659	382,659		
557	Deferred Energy Costs	0	0		
	Total Power Production Expenses	375,172,475	375,172,475	0	0
	Transmission Expenses				
560	Operation Supervision and Engineering	289,396		$289,396	
561	Load Dispatching	715,428		715,428	
562	Station Expenses	585,615		585,615	
563	Overhead Line Expenses	3,116		3,116	
564	Underground Line Expenses	33,965		33,965	
565	Transmission of Electricity by Others	5,411,140		5,411,140	
566	Miscellaneous Expenses	64,167		64,167	
567	Rents	486,227		486,227	
568	Maintenance Supervision and Engineering	61,655		61,655	
569	Maintenance of Structures	457,572		457,572	
570	Maintenance of Station Equipment	438,228		438,228	
571	Maintenance of Overhead Lines	2,275,982		2,275,982	
572	Maintenance of Underground Lines	40,997		40,997	
573	Maintenance of Misc. Transmission Plant	0		0	
	Total Transmission Expenses	10,863,488	0	10,863,488	0
	Distribution Expenses				
580	Operation Supervision and Engineering	2,216,899			$2,216,899
581	Load Dispatching	574,447			574,447
582	Station Expenses	2,833,152			2,833,152
583	Overhead Line Expenses	3,631,484			3,631,484
584	Underground Line Expenses	802,063			802,063
585	Street Lighting and Signal System	292,590			292,590
586	Meter Expenses	1,285,488			1,285,488
587	Customer Installations	3,447,613			3,447,613
588	Miscellaneous Expenses	3,192,187			3,192,187
589	Rents	1,827,440			1,827,440
590	Maintenance Supervision and Engineering	454,314			454,314
591	Maintenance of Structures	466,745			466,745
592	Maintenance of Station Equipment	1,457,120			1,457,120
593	Maintenance of Overhead Lines	13,504,784			13,504,784
594	Maintenance of Underground Lines	845,121			845,121
595	Maintenance of Line Transformers	105,029			105,029
596	Maint. of Street Lighting and Signal System	84,234			84,234
597	Maintenance of Meters	596,821			596,821
598	Maintenance of Misc. Distribution Plant	403,934			403,934
	Total Distribution Expenses	38,021,465	0	0	38,021,465
	Customer Accounts Expenses				
901	Supervision	3,406,371			3,406,371
902	Meter Reading	4,382,518			4,382,518
903	Customer Records and Collection	13,520,070			13,520,070
904	Uncollectible Accounts	11,000,000			11,000,000
905	Miscellaneous Customer Accounts Exp.	187,178			187,178
	Total Customer Accounts Expenses	32,496,137	0	0	32,496,137

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Adjusted Test Year	Generation	Transmission	Distribution
	Customer Service and Info Expenses				
907	Supervision	176,328			176,328
908	Customer Assistance Expenses	1,740,258			1,740,258
909	Info and Instructional Advertising Expenses	220,069			220,069
910	Misc. Customer Service and Info Expenses	30,974			30,974
	Total Customer Service and Info Expenses	2,167,629	0	0	2,167,629
	Sales Expenses				
911	Supervision	18,837			18,837
912	Demonstrating and Selling	4,377,036			4,377,036
913	Advertising	19,427			19,427
916	Miscellaneous Sales Expenses	118,689			118,689
	Total Sales Expenses	4,533,989	0	0	4,533,989
	Administrative and General Expenses				
920	Administrative and General Salaries	26,338,845	15,844,389	624,942	9,869,514
921	Office Supplies and Expenses	5,596,877	3,366,856	132,797	2,097,224
922	Administrative Expense Transferred	(6,171,869)	(3,712,748)	(146,440)	(2,312,681)
923	Outside Services Employed	8,467,154	5,093,499	200,900	3,172,755
924	Property Insurance	5,604,103	5,155,774	57,196	391,133
925	Injuries and Damages	3,604,775	2,168,488	85,531	1,350,757
926	Employee Pension and Benefits	13,504,446	8,123,731	320,420	5,060,295
928	Regulatory Commission Expenses	1,790,074	1,076,836	42,473	670,764
929	Duplicate Charges	(1,247,245)	(750,292)	(29,593)	(467,359)
930	Miscellaneous General Expenses	20,628,427	16,124,258	304,936	4,199,233
931	Rents	11,498,652	6,917,126	272,829	4,308,697
935	Maintenance of General Plant	3,262,706	641,465	488,802	2,132,439
	Total Administrative and General Expenses	92,876,945	60,049,383	2,354,793	30,472,770
	Total Operating Expenses	556,132,128	435,221,858	13,218,281	107,691,990
403	Depreciation Expense	197,588,875	151,016,336	6,734,746	39,837,794
403	Nuclear Decontamination and Dismantling Expense	0			
404	Amortization of Leasehold Improvements	8,193,897	4,676,182	448,779	3,068,936
405	Amortization of Early Window Costs	0			
405	Amortization of Transition Costs	84,031,667	84,031,667		
406	Amortization of Utility Plant Adjustments	0			
407	Amortization of Perry Unit No. 2 Abandonment Loss	0			
408	Taxes Other Than Income Taxes	80,216,810	57,682,569	1,341,908	21,192,333
	Total Operating Expenses Before Federal and State Income Taxes	926,163,377	732,628,612	21,743,713	171,791,052
	Net Operating Income Before Federal and State Income Taxes	285,022,647	(732,628,612)	(21,743,713)	(171,791,052)
409	Federal Income Tax	93,003,328	73,568,984	2,183,457	17,250,887
409	State Income Tax	34,346,324	27,169,180	806,355	6,370,789
410	Deferred Federal Income Tax	(26,940,324)	(30,241,939)	370,938	2,930,677
410	Deferred State Income Tax	1,014,841	802,776	23,826	188,240
411	Income Tax Deferred in Prior Years	(36,611,485)	(28,961,004)	(859,535)	(6,790,946)
411	Amortization of Investment Tax Credits	(7,838,483)	(6,200,523)	(184,026)	(1,453,935)

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

	Adjusted Test Year	Generation	Transmission	Distribution
411 Gain From Disposal of Allowances	(226,313)	(179,022)	(5,313)	(41,978)
Total Income Taxes	56,747,888	35,958,453	2,335,702	18,453,733
Net Utility Operating Income	228,274,759	(768,587,064)	(24,079,415)	(190,244,785)
418 Equity in Subsidiary Company's Earnings	11,953,912			
418 Non-Operating Rental Income & Expense	(57,428)			
419 Interest Revenues	11,563,066			
419 Allowance For Funds Used During Construction	1			
421 Miscellaneous Non-Operating Income	3,452,177			
Total Other Income	26,911,728	0	0	0
426 Donations	1,606,873			
426 Civic, Political and Related Activities	725,714			
426 Other	6,330,988			
Total Other Income Deductions	8,663,575	0	0	0
409 Federal Income Tax	(418,561)			
409 State Income Tax	(779,727)			
420 Investment Tax Credit	(1,720,529)			
Total Taxes Applicable to Other Income and Deductions	(2,918,817)	0	0	0
Income Before Interest Charges	249,441,729	(768,587,064)	(24,079,415)	(190,244,785)
Interest Charges				
427 Interest on Long-Term Debt	82,504,832	44,537,921	7,079,971	30,886,940
428 Amortization of Debt Discount and Expense	2,326,349	(477,001)	522,761	2,280,588
429 Amortization of Premium on Debt	(118,820)	(64,142)	(10,196)	(44,482)
431 Other Interest	26,670,636	14,397,395	2,288,682	9,984,559
432 Allowance For Borrowed Funds Used During Construction	(1,249,515)	(674,516)	(107,224)	(467,775)
Total Interest Charges	110,133,482	57,719,658	9,773,994	42,639,831
Net Income	$139,308,247	($826,306,722)	($33,853,409)	($232,884,616)

EXHIBIT MKO-1 SECTION D

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

ADJUSTMENTS

1. To eliminate State Tax Adjustment Surcharge revenues

Residential revenues	$3,399,000
Commercial revenues	4,038,000
Industrial revenues	1,642,000
Street Lighting revenues	135,000

2. To eliminate Energy Cost Rate revenues

Residential revenues	$10,794,458
Commercial revenues	21,248,163
Industrial revenues	8,472,404
Street Lighting revenues	233,233
Pitcairn revenues	927

3. To annualize effect of refueling outages on A&G revenues

BV1 and BV2 1996 outage costs	$18,842,000
A&G percentage	13.4%
A&G revenues related to outages	2,524,828
Portion in excess of 12 months	1/3
Adjustment to A&G revenues	$841,609

4. To annualize union wage increase effective 10/1/96

Annual union wages	$54,958,562	
Average percentage increase	3.0%	
Annual union wage increase	1,648,757	
Portion included in base 1996	3/4	
Adjustment to annualize	1,236,568	
Generation % of labor	39.9%	$493,993
Transmission % of labor	2.2%	$26,934
Distribution % of labor	34.4%	$425,368
A&G % of labor	23.5%	$290,272

5. To annualize management wage increase effective 4/1/97

Annual management wages	$50,853,070	
Average percentage increase	3.0%	
Annual management wage increase	1,525,592	
Generation % of labor	39.9%	$609,454
Transmission % of labor	2.2%	$33,230
Distribution % of labor	34.4%	$524,790
A&G % of labor	23.5%	$358,118

6. To adjust for fringes on wage increases

Labor increase	$2,762,160
Fringe rate	28.2%
Fringes on wage increases	$778,929

7. To eliminate deferred fuel expense

8. To reclassify the benefits of leasing investments to customers

9. To normalize property loss amortization

10. To annualize change in number of customers

	Avg.	Year-end	Increased Customers	Avg Usage	Increased Usage	Avg Rate	Increased Revenues
Residential	522,004	522,773	769	6,362	4,892,202	$0.122	$595,430
Commercial	53,831	54,056	225	106,581	23,980,692	$0.083	1,986,715
Industrial	2,018	2,018	0	1,627,843	0	$0.058	0
Street Lighting	1,885	1,891	6	37,359	224,155	$0.236	52,906

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

ADJUSTMENTS

11. To annualize generation-related regulatory asset recovery

	Balance	1/9 Annual	Base Year	Difference	
Regulatory tax receivable	$244,800,000	$27,200,000	$12,634,000	$14,566,000	Deferred tax expense
Unamortized premium on reacquired debt	56,949,000	6,327,667	3,336,466	2,991,200	Interest expense
Unamortized debt expense	5,476,000	608,444	429,066	179,379	Interest expense
BV No. 2 premium on reacquired debt	30,059,000	3,339,889	1,505,001	1,834,888	Nuclear rent expense
Deferred rate synchronization costs	41,446,000	4,605,111	9,702,476	(5,097,365)	Depreciation/Amortization
Injuries and damages	9,053,000	1,005,889	0	1,005,889	
Compensated absences	7,954,000	883,778	0	883,778	
Deferred nuclear refueling outage costs	13,461,000	1,495,667	0	1,495,667	
Pre-accrual of nuclear refueling outage costs	9,665,000	1,073,889	0	1,073,889	
DOE decontamination and decommissioning	9,780,000	1,086,667	907,606	179,061	Nuclear fuel
Deferred coal costs	12,130,000	1,347,778	1,774,556	(426,778)	Fossil fuel
Deferred caretaker costs	6,772,000	752,444	0	752,444	
BV2 training costs	2,616,000	290,667	90,300	200,367	Misc. nuclear power
Low level radioactive waste	2,274,000	252,667	0	252,667	
Deferred pilot program costs	4,350,000	483,333	0	483,333	
Nuclear decommissioning	108,000,000	12,000,000	5,027,197	6,972,803	Depreciation
Fossil decommissioning	191,500,000	21,277,778	0	21,277,778	
	$756,285,000	$84,031,667	$35,406,667	$48,624,999	

12. To annualize effects of Ft. Martin sale

Ft. Martin-related A&G billings	(305,655)
Taxes other than income	(4,352,878)
Sales for resale - other utilities	(22,649,094)
Operation Supervision and Engineering	(363,575)
Fuel	(18,217,806)
Steam Expenses	(413,389)
Electric Expenses	(43,591)
Miscellaneous Labor and Expenses	(562,387)
Rents	(256)
Maintenance Supervision and Engineering	(258,352)
Maintenance of Structures	(294,925)
Maintenance of Boiler Plant	(1,372,988)
Maintenance of Electric Plant	(779,026)
Maintenance of Misc. Plant Equipment	(715,789)
Depreciation	25,000,000
Residential revenues	(500,000)

13. To annualize FERC audit adjustment

14. To annualize fuel change in number of customers

	Increased Usage	Avg Rate	
Residential	4,892,202	$0.015	$73,082
Commercial	23,980,692	$0.015	358,236
Industrial	0	$0.015	0
Street Lighting	224,155	$0.015	3,349
			$434,667

15. To tax effect above changes

		Entries
Current Taxes:		
Operating revenue effects	$28,301,878	1,2,3,10,12
Operating expense/General tax effects	(23,149,597)	4,5,6,7,11,12,14
Less deferred tax items:		
Deferred fuel expense	4,527,073	7
Current effects	(27,676,670)	
Change in taxable income	55,978,548	
State tax effect	5,215,971	
Federal tax effect	17,766,902	
Deferred Taxes:		
Deferred fuel expense	4,527,073	7
Depreciation and amortization expense	85,476,761	9,11,12,13
Interest	(3,765,532)	
Change in taxable income	(86,238,302)	
State tax effect	(220,443)	
Federal tax effect	(30,106,251)	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

ADJUSTMENTS

1. To reclassify Perry-related intangibles

2. To reclassify SFAS 109-related balances

Accumulated depreciation	21,400,000
Deferred taxes	446,741,288

3. To eliminate Warwick balances from rate base

Gross plant	$72,495,480
Accumulated depreciation	57,200,566

4. To normalize for increase in depreciation in 1997

5. To eliminate non-rate base deferred taxes

EXHIBIT MKO-1 SECTION E

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year	Generation	Transmission	Distribution	Allocation
Operating Revenues:									
	Electric Service Revenues								
440	Residential Sales	$404,183,112	$14,288,888	1,2,10,12	$418,472,000				
442	Commercial Sales	475,319,391	27,272,878	1,2,10	502,592,269				
442	Industrial Sales	189,526,889	10,114,404	1,2,10	199,641,293				
444	Public Street and Highway Lighting	16,620,246	421,139	1,2,10	17,041,385				
447	Sales For Resale - Pitcairn	857,283	927	2	858,210				
	Total Electric Service Revenues	1,086,506,921	52,098,236		1,138,605,157	0	0	0	
	Other Electric Revenues								
450	Late Payment Charges	4,746,547			4,746,547				
451	Miscellaneous Service Revenues	1,454,946			1,454,946				
454	Rent from Electric Property	7,608,687			7,608,687				
456	Other Electric Revenues	24,275,196	(1,147,264)	3,12	23,127,932				
447	Sales For Resale - Other Utilities	58,291,849	(22,649,094)	12	35,642,755				
	Total Other Electric Revenues	96,377,225	(23,796,358)		72,580,867	0	0	0	
	Total Operating Revenues	1,182,884,146	28,301,878		1,211,186,024	0	0	0	
Operating Expenses:									
	Production Expense								
500	Operation Supervision and Engineering	5,264,774	739,872	5,6,12	6,004,646	$6,004,646			Direct
501	Fuel	175,962,858	(19,557,695)	11,12,14	156,405,163	156,405,163			Direct
502	Steam Expenses	9,003,904	(413,389)	12	8,590,515	8,590,515			Direct
505	Electric Expenses	2,148,465	(43,591)	12	2,104,874	2,104,874			Direct
506	Miscellaneous Labor and Expenses	7,322,114	(562,387)	12	6,759,727	6,759,727			Direct
507	Rents	335,734	(256)	12	335,478	335,478			Direct
509	Emission Allowance	2,068,025			2,068,025	2,068,025			Direct
510	Maintenance Supervision and Engineering	1,504,322	(258,352)	12	1,245,970	1,245,970			Direct
511	Maintenance of Structures	1,255,864	(294,925)	12	960,939	960,939			Direct
512	Maintenance of Boiler Plant	16,766,780	(1,372,988)	12	15,393,792	15,393,792			Direct
513	Maintenance of Electric Plant	4,803,725	(779,026)	12	4,024,699	4,024,699			Direct
514	Maintenance of Misc. Plant Equipment	5,353,336	(715,789)	12	4,637,547	4,637,547			Direct
	Total Steam Power O&M Expenses	231,789,901	(23,258,526)		208,531,375	208,531,375	0	0	
517	Operation Supervision and Engineering	13,575,986			13,575,986	13,575,986			Direct
518	Fuel	26,648,415	(907,606)	11	25,740,809	25,740,809			Direct
519	Coolants and Water	558,656			558,656	558,656			Direct
520	Steam Expenses	5,455,447			5,455,447	5,455,447			Direct
523	Electric Expenses	129,447			129,447	129,447			Direct
524	Miscellaneous Nuclear Power Expenses	16,937,324			16,937,324	16,937,324			Direct
525	Rents	47,728,121	(1,505,001)	11	46,223,120	46,223,120			Direct
528	Maintenance Supervision and Engineering	3,295,342			3,295,342	3,295,342			Direct
529	Maintenance of Structures	1,641,883			1,641,883	1,641,883			Direct
530	Maintenance of Reactor Plant	7,760,707			7,760,707	7,760,707			Direct
531	Maintenance of Electric Plant	3,324,829			3,324,829	3,324,829			Direct
532	Maintenance of Misc. Nuclear Plant	8,111,238	(90,300)	11	8,020,938	8,020,938			Direct
	Total Nuclear Power O&M Expenses	135,167,395	(2,502,907)		132,664,488	132,664,488	0	0	
546	Operation Supervision and Engineering	26,232			26,232	26,232			Direct
547	Fuel	201,637			201,637	201,637			Direct
548	Generation Expenses	25,322			25,322	25,322			Direct
549	Miscellaneous Other Power Expenses	130,029			130,029	130,029			Direct
551	Maintenance Supervision and Engineering	26,391			26,391	26,391			Direct
552	Maintenance of Structures	32,128			32,128	32,128			Direct
553	Maintenance of Electric Plant	36,380			36,380	36,380			Direct
554	Maintenance of Misc. Generation Plant	17,924			17,924	17,924			Direct
	Total Other Power O&M Expenses	496,043	0		496,043	496,043	0	0	
555	Purchased Power	32,269,274			32,269,274	32,269,274			Direct
556	System Load Dispatching	828,636			828,636	828,636			Direct
557	Other Power Supply Expense	382,659			382,659	382,659			Direct
557	Deferred Energy Costs	(4,527,073)	4,527,073	7	0	0			Direct
	Total Power Production Expenses	396,406,835	(21,234,360)		375,172,475	375,172,475	0	0	
	Transmission Expenses								Direct
									Direct
560	Operation Supervision and Engineering	229,232	60,164	4,5	289,396		$289,396		Direct
561	Load Dispatching	715,428			715,428		715,428		Direct
562	Station Expenses	585,615			585,615		585,615		Direct
563	Overhead Line Expenses	3,116			3,116		3,116		Direct
564	Underground Line Expenses	33,965			33,965		33,965		Direct
565	Transmission of Electricity by Others	5,411,140			5,411,140		5,411,140		Direct
566	Miscellaneous Expenses	64,167			64,167		64,167		Direct
567	Rents	486,227			486,227		486,227		Direct
568	Maintenance Supervision and Engineering	61,655			61,655		61,655		Direct
569	Maintenance of Structures	457,572			457,572		457,572		Direct
570	Maintenance of Station Equipment	438,228			438,228		438,228		Direct
571	Maintenance of Overhead Lines	2,275,982			2,275,982		2,275,982		Direct
572	Maintenance of Underground Lines	40,997			40,997		40,997		Direct
573	Maintenance of Misc. Transmission Plant	0			0		0		Direct
	Total Transmission Expenses	10,803,324	60,164		10,863,488	0	10,863,488	0	
									Direct

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year	Generation	Transmission	Distribution	Allocation
	Distribution Expenses								Direct
580	Operation Supervision and Engineering	1,266,741	950,158	4,5	2,216,899			$2,216,899	Direct
581	Load Dispatching	574,447			574,447			574,447	Direct
582	Station Expenses	2,833,152			2,833,152			2,833,152	Direct
583	Overhead Line Expenses	3,631,484			3,631,484			3,631,484	Direct
584	Underground Line Expenses	802,063			802,063			802,063	Direct
585	Street Lighting and Signal System	292,590			292,590			292,590	Direct
586	Meter Expenses	1,285,488			1,285,488			1,285,488	Direct
587	Customer Installations	3,447,613			3,447,613			3,447,613	Direct
588	Miscellaneous Expenses	3,192,187			3,192,187			3,192,187	Direct
589	Rents	1,827,440			1,827,440			1,827,440	Direct
590	Maintenance Supervision and Engineering	454,314			454,314			454,314	Direct
591	Maintenance of Structures	466,745			466,745			466,745	Direct
592	Maintenance of Station Equipment	1,457,120			1,457,120			1,457,120	Direct
593	Maintenance of Overhead Lines	13,504,784			13,504,784			13,504,784	Direct
594	Maintenance of Underground Lines	845,121			845,121			845,121	Direct
595	Maintenance of Line Transformers	105,029			105,029			105,029	Direct
596	Maint. of Street Lighting and Signal System	84,234			84,234			84,234	Direct
597	Maintenance of Meters	596,821			596,821			596,821	Direct
598	Maintenance of Misc. Distribution Plant	403,934			403,934			403,934	Direct
	Total Distribution Expenses	37,071,307	950,158		38,021,465	0	0	38,021,465	
									Direct
	Customer Accounts Expenses								Direct
901	Supervision	3,406,371			3,406,371			3,406,371	Direct
902	Meter Reading	4,382,518			4,382,518			4,382,518	Direct
903	Customer Records and Collection	13,520,070			13,520,070			13,520,070	Direct
904	Uncollectible Accounts	11,000,000			11,000,000			11,000,000	Direct
905	Miscellaneous Customer Accounts Exp.	187,178			187,178			187,178	Direct
	Total Customer Accounts Expenses	32,496,137	0		32,496,137	0	0	32,496,137	
									Direct
	Customer Service and Info Expenses								Direct
907	Supervision	176,328			176,328			176,328	Direct
908	Customer Assistance Expenses	1,740,258			1,740,258			1,740,258	Direct
909	Info and Instructional Advertising Expenses	220,069			220,069			220,069	Direct
910	Misc. Customer Service and Info Expenses	30,974			30,974			30,974	Direct
	Total Customer Service and Info Expenses	2,167,629	0		2,167,629	0	0	2,167,629	
									Direct
	Sales Expenses								Direct
911	Supervision	18,837			18,837			18,837	Direct
912	Demonstrating and Selling	4,377,036			4,377,036			4,377,036	Direct
913	Advertising	19,427			19,427			19,427	Direct
916	Miscellaneous Sales Expenses	118,689			118,689			118,689	Direct
	Total Sales Expenses	4,533,989	0		4,533,989	0	0	4,533,989	
	Administrative and General Expenses								
920	Administrative and General Salaries	25,690,455	648,390	4,5	26,338,845	15,844,389	624,942	9,869,514	Labor $
921	Office Supplies and Expenses	5,596,877			5,596,877	3,366,856	132,797	2,097,224	Labor $
922	Administrative Expense Transferred	(6,171,869)			(6,171,869)	(3,712,748)	(146,440)	(2,312,681)	Labor $
923	Outside Services Employed	8,467,154			8,467,154	5,093,499	200,900	3,172,755	Labor $
924	Property Insurance	5,604,103			5,604,103	5,155,774	57,196	391,133	Analysis of Insurance Costs
925	Injuries and Damages	3,604,775			3,604,775	2,168,488	85,531	1,350,757	Labor $
926	Employee Pension and Benefits	12,725,517	778,929	6	13,504,446	8,123,731	320,420	5,060,295	Labor $
928	Regulatory Commission Expenses	1,790,074			1,790,074	1,076,836	42,473	670,764	Labor $
929	Duplicate Charges	(1,247,245)			(1,247,245)	(750,292)	(29,593)	(467,359)	Labor $
930	Miscellaneous General Expenses	20,628,427			20,628,427	16,124,258	304,936	4,199,233	See Attached
931	Rents	11,498,652			11,498,652	6,917,126	272,829	4,308,697	Labor $
935	Maintenance of General Plant	3,262,706			3,262,706	641,465	488,802	2,132,439	See Attached
	Total Administrative and General Expenses	91,449,626	1,427,319		92,876,945	60,049,383	2,354,793	30,472,770	
	Total Operating Expenses	574,928,847	(18,796,719)		556,132,128	435,221,858	13,218,281	107,691,990	
403	Depreciation Expense	172,588,875	25,000,000	12	197,588,875	151,016,336	6,734,746	39,837,794	Detail Analysis
403	Nuclear Decontamination and Dismantling Expense	5,027,197	(5,027,197)	11	0				
404	Amortization of Leasehold Improvements	8,193,897			8,193,897	4,676,182	448,779	3,068,936	Labor $
405	Amortization of Early Window Costs	9,702,476	(9,702,476)	11	0				
405	Amortization of Transition Costs	0	84,031,667	11	84,031,667	84,031,667			Direct
406	Amortization of Utility Plant Adjustments	353,580	(353,580)	13	0				
407	Amortization of Perry Unit No. 2 Abandonment Loss	8,471,653	(8,471,653)	9	0				
408	Taxes Other Than Income Taxes	84,569,688	(4,352,878)	12	80,216,810	57,682,569	1,341,908	21,192,333	Detail Analysis
	Total Operating Expenses Before Federal and State Income Taxes	863,836,213	62,327,164		926,163,377	732,628,612	21,743,713	171,791,052	
	Net Operating Income Before Federal and State Income Taxes	319,047,933	(34,025,286)		285,022,647	(732,628,612)	(21,743,713)	(171,791,052)	
409	Federal Income Tax	94,901,767	(1,898,439)	8,15	93,003,328	73,568,984	2,183,457	17,250,887	O&M Expense
409	State Income Tax	29,130,353	5,215,971	15	34,346,324	27,169,180	806,355	6,370,789	O&M Expense
410	Deferred Federal Income Tax	15,799,927	(42,740,251)	11,15	(26,940,324)	(30,241,939)	370,938	2,930,677	O&M Expense
410	Deferred State Income Tax	1,235,284	(220,443)	15	1,014,841	802,776	23,826	188,240	O&M Expense
411	Income Tax Deferred in Prior Years	(36,611,485)			(36,611,485)	(28,961,004)	(859,535)	(6,790,946)	O&M Expense
411	Amortization of Investment Tax Credits	(7,838,483)			(7,838,483)	(6,200,523)	(184,026)	(1,453,935)	O&M Expense
411	Gain From Disposal of Allowances	(226,313)			(226,313)	(179,022)	(5,313)	(41,978)	O&M Expense
	Total Income Taxes	96,391,050	(39,643,162)		56,747,888	35,958,453	2,335,702	18,453,733	
	Net Utility Operating Income	222,656,883	5,617,876		228,274,759	(768,587,064)	(24,079,415)	(190,244,785)	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

		Test Year	Adjustments		Adjusted Test Year	Generation	Transmission	Distribution	Allocation
418	Equity in Subsidiary Company's Earnings	31,619,253	(19,665,341)	8	11,953,912				
418	Non-Operating Rental Income & Expense	(57,428)			(57,428)				
419	Interest Revenues	11,563,066			11,563,066				
419	Allowance For Funds Used During Constructio	1			1				
421	Miscellaneous Non-Operating Income	3,452,177			3,452,177				
	Total Other Income	46,577,069	(19,665,341)		26,911,728	0	0	0	
426	Donations	1,606,873			1,606,873				
426	Civic, Political and Related Activities	725,714			725,714				
426	Other	6,330,988			6,330,988				
	Total Other Income Deductions	8,663,575	0		8,663,575	0	0	0	
409	Federal Income Tax	(418,561)			(418,561)				
409	State Income Tax	(779,727)			(779,727)				
420	Investment Tax Credit	(1,720,529)			(1,720,529)				
	Total Taxes Applicable to Other Income and Deductions	(2,918,817)	0		(2,918,817)	0	0	0	
	Income Before Interest Charges	263,489,194	(14,047,465)		249,441,729	(768,587,064)	(24,079,415)	(190,244,785)	
	Interest Charges								
427	Interest on Long-Term Debt	82,504,832			82,504,832	44,537,921	7,079,971	30,886,940	Net Book Value
428	Amortization of Debt Discount and Expense	6,091,881	(3,765,532)	11	2,326,349	(477,001)	522,761	2,280,588	Net Book Value
429	Amortization of Premium on Debt	(118,820)			(118,820)	(64,142)	(10,196)	(44,482)	Net Book Value
431	Other Interest	26,670,636			26,670,636	14,397,395	2,288,682	9,984,559	Net Book Value
432	Allowance For Borrowed Funds Used During Construction	(1,249,515)			(1,249,515)	(674,516)	(107,224)	(467,775)	Net Book Value
	Total Interest Charges	113,899,014	(3,765,532)		110,133,482	57,719,658	9,773,994	42,639,831	
	Net Income	$149,590,180	($10,281,933)		$139,308,247	($826,306,722)	($33,853,409)	($232,884,616)	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

	Test Year	Adjustments		Adjusted Test Year	Generation	Transmission	Distribution	Allocation
Intangible Plant:								
301 Organization	$100,275			$100,275	$60,321	$2,379	$37,574	Labor $
302 Franchises and Consents	6,830			6,830	4,109	162	2,559	Labor $
303 Miscellaneous Intangible Plant	286,993,420	(243,000,000)	1	43,993,420	26,464,671	1,043,832	16,484,916	Labor $
Total Intangible Plant	287,100,525	(243,000,000)		44,100,525	26,529,101	1,046,374	16,525,050	
Production Plant:								
Steam Production Plant								
310 Land and Land Rights	8,026,760			8,026,760	8,026,760			Direct
311 Structures and Improvements	128,853,875			128,853,875	128,853,875			Direct
312 Boiler Plant Equipment	484,460,835			484,460,835	484,460,835			Direct
313 Engines/Engine-Driven Generators	0			0	0			Direct
314 Turbogenerator Units	115,768,800			115,768,800	115,768,800			Direct
315 Assessory Electric Equipment	78,729,366			78,729,366	78,729,366			Direct
316 Misc. Power Plant Equipment	24,280,712			24,280,712	24,280,712			Direct
Total Steam Production Plant	840,120,348	0		840,120,348	840,120,348	0	0	
Nuclear Production Plant								
320 Land and Land Rights	617,903			617,903	617,903			Direct
321 Structures and Improvements	229,416,299			229,416,299	229,416,299			Direct
322 Reactor Plant Equipment	656,156,421	243,000,000	1	899,156,421	899,156,421			Direct
323 Turbo Generator Units	119,726,878			119,726,878	119,726,878			Direct
324 Accessory Electric Equipment	161,470,226			161,470,226	161,470,226			Direct
325 Misc. Power Plant Equipment	72,991,217			72,991,217	72,991,217			Direct
Total Nuclear Production Plant	1,240,378,944	243,000,000		1,483,378,944	1,483,378,944	0	0	
Hydraulic Production Plant								
330 Land and Land Rights	0			0	0			Direct
331 Structures and Improvements	0			0	0			Direct
332 Reservoirs, Dams, and Waterways	0			0	0			Direct
333 Water Wheels, Turbines, and Generators	0			0	0			Direct
334 Accessory Electric Equipment	0			0	0			Direct
335 Misc. Power Plant Equipment	0			0	0			Direct
336 Roads, Railroads, and Bridges	0			0	0			Direct
Total Hydraulic Production Plant	0	0		0	0	0	0	
Other Production Plant								
340 Land and Land Rights	393,704			393,704	393,704			Direct
341 Structures and Improvement	8,150,271			8,150,271	8,150,271			Direct
342 Fuel Holders, Products, and Accessories	3,371,626			3,371,626	3,371,626			Direct
343 Prime Movers	436,877			436,877	436,877			Direct
344 Generators	22,779,984			22,779,984	22,779,984			Direct
345 Accessory Electric Equipment	6,674,134			6,674,134	6,674,134			Direct
346 Misc. Power Plant Equipment	1,092,833			1,092,833	1,092,833			Direct
Total Other Production Plant	42,899,429	0		42,899,429	42,899,429	0	0	
Total Production Plant	2,123,398,721	243,000,000		2,366,398,721	2,366,398,721	0	0	
Transmission Plant:								
350 Land and Land Rights	9,833,085			9,833,085		9,833,085		Direct
352 Structures and Improvements	8,073,681			8,073,681		8,073,681		Direct
353 Station Equipment	124,857,725			124,857,725		124,857,725		Direct
354 Towers and Fixtures	66,632,752			66,632,752		66,632,752		Direct
355 Poles and Fixtures	5,653,323			5,653,323		5,653,323		Direct
356 Overhead Conductors and Devices	43,975,550			43,975,550		43,975,550		Direct
357 Underground Conduit	34,250,903			34,250,903		34,250,903		Direct
358 Underground Conductors and Devices	18,895,858			18,895,858		18,895,858		Direct
359 Roads and Trails	13,879			13,879		13,879		Direct
Total Transmission Plant	312,186,756	0		312,186,756	0	312,186,756	0	
Distribution Plant:								
360 Land and Land Rights	8,902,261			8,902,261			8,902,261	Direct
361 Structures and Improvements	41,029,378			41,029,378			41,029,378	Direct
362 Station Equipment	318,016,298			318,016,298			318,016,298	Direct
363 Storage Battery Equipment	0			0			0	Direct
364 Poles, Towers, and Fixtures	218,026,447			218,026,447			218,026,447	Direct
365 Overhead Conductors and Devices	168,933,236			168,933,236			168,933,236	Direct
366 Underground Conduit	74,561,251			74,561,251			74,561,251	Direct
367 Underground Conductors and Devices	112,816,627			112,816,627			112,816,627	Direct
368 Line Transformers	150,946,402			150,946,402			150,946,402	Direct
369 Services	57,792,430			57,792,430			57,792,430	Direct
370 Meters	59,652,919			59,652,919			59,652,919	Direct
371 Installations on Customer Premises	37,793			37,793			37,793	Direct
372 Leased Property on Customer Premises	0			0			0	Direct
373 Street Lighting and Signal Systems	22,510,688			22,510,688			22,510,688	Direct
Total Distribution Plant	1,233,225,730	0		1,233,225,730	0	0	1,233,225,730	
General Plant:								
389 Land and Land Rights	6,199,971			6,199,971	3,729,653	147,107	2,323,211	Labor
390 Structures and Improvements	64,438,073			64,438,073	38,763,352	1,528,923	24,145,798	Labor
391 Office Furniture and Equipment	48,657,786			48,657,786	29,270,566	1,154,504	18,232,716	Labor
392 Transportation Equipment	16,877,412			16,877,412	10,152,772	400,451	6,324,190	Labor
393 Stores Equipment	2,340,839			2,340,839	1,408,155	55,541	877,143	Labor
394 Tools, Shop and Garage Equipment	9,830,485			9,830,485	5,913,624	233,248	3,683,613	Labor
395 Laboratory Equipment	6,289,389			6,289,389	3,783,443	149,228	2,356,717	Labor

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996
Gross Plant

	Test Year	Adjustments		Adjusted Test Year	Generation	Transmission	Distribution	Allocation
396 Power Operated Equipment	1,304,358			1,304,358	784,649	30,949	488,760	Labor
397 Communication Equipment	88,873,334			88,873,334	53,462,622	2,108,698	33,302,014	Labor
398 Miscellaneous Equipment	432,311			432,311	260,061	10,257	161,993	Labor
Subtotal	245,243,958	0		245,243,958	147,528,897	5,818,906	91,896,155	
399 Other Tangible Property	72,495,480	(72,495,480)	3	0	0	0	0	
Total General Plant	317,739,438	(72,495,480)		245,243,958	147,528,897	5,818,906	91,896,155	
TOTAL	$4,273,651,170	($72,495,480)		$4,201,155,690	$2,540,456,719	$319,052,035	$1,341,646,935	

DUQUESNE LIGHT COMPANY
Cost of Service Functionalization
For the Year Ended December 31, 1996

Labor:	Duquesne Light	CAPCO	Total	%	
Generation	$42,270,373	$16,162,893	$58,433,266	47.9%	60.2%
Transmission	2,304,753		2,304,753	1.9%	2.4%
Distribution	36,398,242		36,398,242	29.8%	37.5%
Admin & General	24,838,263		24,838,263	20.4%	
	$105,811,631	$16,162,893	$121,974,524		

Net Book Value:		%	
Generation	$1,240,579,558	50.9%	54.0%
Transmission	197,208,738	8.1%	8.6%
Distribution	860,338,924	35.3%	37.4%
Admin & General	140,351,459	5.8%	
	$2,438,478,679		

Average Net Book Value and Labor:		
Generation	49.4%	57.1%
Transmission	5.0%	5.5%
Distribution	32.6%	37.5%
Admin & General	13.1%	

Account 930		Generation	Transmission	Distribution	
Total	$20,628,427				
CAPCO A&G	(9,130,438)	9,130,438			
EPRI dues	(1,548,020)	1,008,319	68,853	470,848	Detail Analysis
General	$9,949,969	5,985,501	236,083	3,728,385	Labor $
		$16,124,258	$304,936	$4,199,233	

Account 935					
Total	$3,262,706				
T&D	(2,074,417)		$386,832	$1,687,585	Detail Analysis
General	$1,188,289	641,465	101,970	444,854	Labor $
		$641,465	$488,802	$2,132,439	

Account 408				
Generation-related	$28,013,551			
Ft. Martin	4,352,878			
		$23,660,673		
All else	56,556,137	34,021,896	1,341,908	21,192,333
		$57,682,569	$1,341,908	$21,192,333

VOLUME II

Duquesne Statement No. 5

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

DUQUESNE LIGHT COMPANY
DOCKET NO. R-00974104

Direct Testimony
of
James A. Lahtinen

Contents:

Regarding Unbundled Cost of Service, Rate Design, and Calculation of Competitive Transition Charges

Table of Contents to Testimony of James A. Lahtinen

DIRECT TESTIMONY OF JAMES A. LAHTINEN

I. QUALIFICATIONS

Q. Please state your name and business address.

A. My name is James A. Lahtinen and my business address is 411 Seventh Avenue, Pittsburgh, Pennsylvania 15230-1930.

Q. By whom are you employed and what is your position?

A. I am employed by Duquesne Light Company ("Duquesne") as General Manager of the Regulatory and Economic Analysis Unit.

Q. Please describe your responsibilities as General Manager of the Regulatory and Economic Analysis Unit.

A. I am responsible for overseeing the Company's integrated resource plan, retail and wholesale rates, and transmission pricing and policies.

Q. How long have you been employed by Duquesne?

A. I have been employed by Duquesne since 1991.

Q. What was your professional experience prior to joining Duquesne?

A. Prior to joining Duquesne, I was a consulting economist with Bower, Rohr and Associates. Before that I was Manager of Regulatory and Economic Analysis at Central Vermont Public Service Corporation. I have a B.A. and M.A. in economics from the State University of New York at Plattsburgh and Albany, respectively.

Q. Please explain your experience that is pertinent to the testimony you provide in this proceeding.

A. I have worked for 20 years as a consultant or analyst for utility regulators and as a manager for utility companies. My experience has included testimony and analyses with respect to a wide range of matters, including incentive ratemaking, embedded and marginal cost of service studies, electrical load forecasting, prudence of nuclear plant cost and in service schedules, economic evaluation of demand side management programs, financial analysis of cable television franchise areas, economic analysis of nuclear plant abandonment decisions, economic analysis of power purchase arrangements from utility and non-utility generators, leasing arrangements between affiliated interests, cost of service pricing of wholesale transmission service, review of market prices, and evaluation of stranded costs.

Q. Have you testified previously in regulatory or judicial proceedings?

A. Yes. I have testified before the Federal Energy Regulatory Commission ("FERC"), the New York State Public Service Commission, the New Hampshire Public Utilities Commission, the Vermont Public Service Board, the New Jersey Board of Public Utilities Control, the District of Columbia Public Service Commission, and most recently (Docket No. C-00967749) before the Pennsylvania Public Utilities Commission.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the general purpose of your testimony?

A. My testimony addresses four major areas. First, I sponsor the Company's unbundled allocated cost of service study and the unbundled tariffs designed to recover such costs. In doing so, I support the approach the Company has taken in unbundling transmission, distribution, ancillary service and generation costs by customer class. Second, I explain Duquesne's approach to calculating Customer Generation Credits ("CGCs") and Competitive Transition Charges ("CTCs") based on actual market price data. Third, I describe the rationale underlying Duquesne's proposed rate design and how these rates were calculated. Fourth, I provide public data on market prices that corroborate the prices received by Duquesne in its recent request for proposals.

Q. Do you address other subjects in your testimony as well?

A. Yes. My testimony addresses a number of related topics, including:

- Separation of generation into market and above market components
- Customer choice options under Duquesne's plan
- Compliance with the rate cap and other provisions of the Electricity Generation Customer Choice and Competition Act (hereafter referred to as the "Act")
- Modifications to Supplemental and Back-up rates and treatment of other miscellaneous rates and riders.

I also sponsor responses to several of the required data items identified in Appendix A to the Commission's order dated February 13, 1997 at Docket No. M-00960890.

Q. Please summarize your major conclusions?

A. I reach four major conclusions corresponding to the primary purposes of my testimony described earlier. First, I conclude that Duquesne's approach to unbundling costs and designing rates to recover these costs fully complies with the Act. Duquesne has unbundled its costs using methodologies consistent with those used in Duquesne's most recent base rate proceeding, and with the guidance regarding unbundling provided in FERC Order 888. Duquesne's cost allocation and rate design methodologies comply with the Act because allocated costs are not shifted on an inter-class or intra-class basis. Also, Duquesne unbundles existing rates in a manner consistent with the rate cap provisions in the Act. Duquesne's calculation of CTCs based on actual market price data meets the "known and measurable" requirement for stranded cost determination in the Act. Finally, Duquesne's proposed rate design provides Duquesne with a reasonable opportunity to fully recover its stranded costs, consistent with the Act.

Second, I conclude that Duquesne's calculation of CGCs and CTCs based on actual market price information provides customers with the proper incentives and promotes fair competition. Duquesne's market-based methodology insures that customers receive efficient price signals in determining whether to purchase power from alternative suppliers. If the customer generation credit is less than the

actual market price, customers will stay with the host utility for the wrong reason; conversely, if the CGC is higher than actual market prices, customers will have an artificial incentive to choose another supplier. Duquesne's approach to CGC calculation relies on "known and measurable" market evidence as opposed to administratively determined market price forecasts. As Mr. Schnitzer describes, these forecasts of market prices have routinely proven to be materially inaccurate. Instead of such forecasts, Duquesne will conduct an annual solicitation to sell firm power to establish the market value each year for purposes of determining a CGC and CTC that is fair both to customers and shareholders.

Third, I conclude that Duquesne's innovative rate design provides customers with several key benefits and should be approved by the Commission. In addition to rate unbundling, Duquesne proposes to redesign the manner in which it recovers costs from customers. This new rate design will lower usage charges to levels that more closely resemble market levels and will increase economic efficiency. Under most of Duquesne's current tariffs, the rate for incremental consumption significantly exceeds the additional cost of supplying increased usage during most, if not, all hours of the year. Rate redesign will send customers more efficient price signals and encourage economic load growth. Duquesne's proposal reduces rates relative to current levels on average by over 25% for all customer consumption above 1996 levels. Lower usage charges are consistent with the objectives of Sections 2802 (6) and (7) of the Act to increase competitiveness and economic development in Pennsylvania. Equally important,

rate redesign will provide additional stranded cost mitigation. This is because increases in usage due to lower marginal rates will generate additional revenues that, under Duquesne's plan, will be used for stranded cost mitigation. I estimate that the proposed rate redesign provides an opportunity to further mitigate stranded costs by approximately $15 million per year.

Fourth, publicly available data on market prices show that the market price of power in the markets in which Duquesne competes is below 2 cents per kWh. The data support the prices revealed in Duquesne's recent competitive market solicitation, where the weighted average of the winning bids was 1.816 cents per kWh (75% load factor) for firm power sold in 1998.

Q. That summary was helpful. Please also explain whether there is a common philosophy that underlies Duquesne's cost unbundling and rate design proposals.

A. Duquesne's philosophy is to meet, in the context of a restructured environment, the long held ratemaking goals of allocating costs and pricing electric service in an efficient and fair manner while at the same time allowing shareholders a reasonable opportunity to recover prudently incurred costs. To accomplish this, Duquesne has unbundled its tariffs on the basis of embedded costs and traditional allocation principles.

Duquesne's proposal also recognizes that regulation is imperfect and that, wherever possible, the Commission should rely on the market, particularly with respect to the calculation of stranded costs. Duquesne's proposal does so by using a market sale of firm power to establish the Customer Generation Credits that will

be used to establish CTCs. This approach should not only minimize disputes over stranded cost "estimates," but also provide other important public benefits, such as increasing the liquidity and competitiveness of the retail market by making available to potential retail suppliers a portion of Duquesne's firm power.

III. OVERALL APPROACH TO UNBUNDLING

Q. Please describe Duquesne's overall approach to the unbundling of services.

A. As required by the Act and FERC Order No. 888, Duquesne will unbundle and develop separate charges for distribution, transmission, ancillary services and generation-related costs. As both Mr. Marshall and Mr. Clayton describe, the starting point for Duquesne's approach is Section 2804 (4)(v) of the Act, which states:

> "If an electric distribution utility rolls its energy cost rate into base rates at a combined level that does not exceed its combined level of such rates which have been approved by the Commission as of the Effective Date of this chapter, the utility shall not be required to reduce its capped rates below the capped level upon the complaint of any party if the Commission determines that any excess earnings achieved under the cap are being utilized to mitigate transition or stranded costs for the benefit of ratepayers or to offset other known and measurable cost increases that would be recoverable under traditional ratemaking but are not included within the capped rates."

Pursuant to this provision, and as described by Mr. Clayton, Duquesne is rolling into current base rates an energy cost rate ("ECR") that is cost-justified and equal

to the ECR cap approved by the Commission as part of the Ft. Martin plan. In addition, Duquesne is committing to accelerate the depreciation and amortization of stranded costs in an amount that, when added to other test year revenue requirements, will result in a total revenue requirement equal to the rate cap. Mr. Schnitzer provides further support for why Duquesne is entitled to the rate cap during the transition period. As a result, new unbundled rates are designed to be revenue neutral (adjusted for the ECR roll-in). This will insure that customers who purchase power from Duquesne will pay no more than current rates for test year volumes.[1]

The next step after calculating baseline revenue requirements is to develop cost-justified rates for the regulated services of transmission and distribution that Duquesne will continue to provide all customers. Duquesne has developed rates for each of these services on the basis of Mr. O'Brien's functionalized cost of service study for the test year and allocation factors consistent with those used to support current rates. Duquesne also has developed rates for certain transmission-related "ancillary services." While customers are not required to purchase all of these services from Duquesne, the FERC has ordered utilities to file cost-based rates for these services and to offer them on a nondiscriminatory basis.

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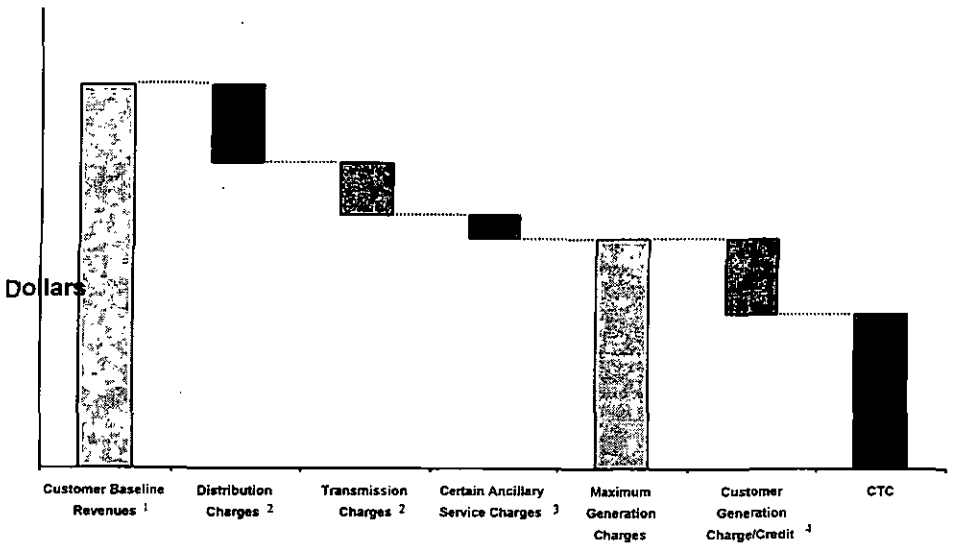
[1] Since loads are expected to grow over time, average revenue per kWh is likely to decline relative to current levels due to Duquesne's proposed lower usage charges.

Q. You have briefly described how Duquesne has unbundled transmission, distribution and ancillary services. Please summarize how Duquesne has unbundled generation costs.

A. Duquesne has unbundled generation costs and provided a calculation of the generation-related revenue requirement allocated to each customer class. Duquesne does not expect, however, to be able to fully recover its generation revenue requirement over the transition period due to the rate cap provisions in the Act. Therefore, generation-related revenues will be capped, and the rates developed using a "residual" calculation method. By this I mean that, once Duquesne has established rates for transmission, distribution and ancillary services, these charges will be deducted from current rates and the remainder will represent the maximum generation costs that can be recovered from customers.

This residual amount will then be divided into two parts -- a market-based generation component ("CGC") and an above market cost component. The CGC will be set using the market values from Duquesne's annual competitive bid solicitation; these market prices will be adjusted to account for differences among customer class consumption patterns, transmission losses, and Pennsylvania gross receipts tax. As adjusted, the market prices will be used to determine customer class CGCs and customer-specific CTCs. Customers will also receive annual credits for certain ancillary service revenues collected from retail suppliers. Duquesne's approach to unbundling is illustrated in the graph below:

Duquesne Unbundling Methodology



1) Current rates at customer 1996 baseline consumption with roll in of ECR and STAS credits.

2) Based on 1996 COS study and customer class allocation methodologies.

3) Certain ancillary services – reactive supply, regulation and frequency control, and spinning reserve – will be charged directly to all retail customers and reduce the CTC.

4) The annual CGC will be determined by Duquesne's market sale of firm power each year. The revealed market price will be adjusted for customer class load shapes, transmission losses, and Pennsylvania gross receipts tax. The customers will also receive an annual credit for certain ancillary service revenues collected directly from retail suppliers.

This unbundling methodology is applied consistently to total Company 1996 revenues as well as to charges for individual customers. I provide more detail on how the CTCs are developed later in my testimony.

Q. Please summarize how these unbundled charges will be applied to customers.

A. The unbundled charges will apply to all customers once the phase-in period begins in 1999. All customers that remain with Duquesne as their power supplier (either by choice or prior to having the option of retail access) will pay unbundled distribution, transmission (including certain ancillary services), market-based CGC and competitive transition charges. Customers that choose an alternative

electricity supplier will pay these same unbundled rates for delivery services (T, D, and CTC). Power charges for these customers will be the result of negotiations with or standard offers from their alternative supplier. Choice customers also will receive an annual credit for ancillary service revenues that Duquesne collects from retail suppliers.

Q. What unbundled charges will be applied to retail suppliers?

A. Retail suppliers will be responsible for supplying or purchasing generation and the associated transmission losses necessary to serve their customers. Losses can be purchased from Duquesne or self-supplied. Suppliers also have the option of purchasing firm power in Duquesne's annual RFP process. In addition, electricity suppliers will be responsible for Pennsylvania gross receipts tax, as required by the Act, as well as certain ancillary services. These services include scheduling, energy imbalance and supplemental reserves. Mr. Irvin (Duquesne Statement No. 7) describes Duquesne's proposal regarding ancillary services in more detail and discusses why the proposal is consistent with FERC Order No. 888.

Q. Does Duquesne's approach to unbundling protect customers from paying twice for current services – once to Duquesne and once to alternative suppliers?

Yes. As shown in the table below, unbundled rates can be separated into two general cost categories – those paid to Duquesne for delivery service and those paid to the customer's supplier:

SUMMARY OF UNBUNDLED CHARGES

Costs in Current Bundled Rates	Unbundled Charges	
	Duquesne Delivery Charges	**Duquesne/Alternative Supplier Responsibilities**[2]
***Generation* Related Costs:** • Market value of electricity • Above market value of electricity • Bundled ancillary services • Bundled average T and D losses	• CTC (variable and fixed) • Certain ancillary services (reactive supply, regulation and frequency control, and spinning reserve)[3]	• Market value of electricity • Certain ancillary services (scheduling, energy imbalance, supplemental reserve)
+ Distribution Costs: • Distribution-related costs	• Average distribution losses[4] • Distribution-related costs	
+ Transmission Costs: • Transmission-related costs	• Transmission-related costs	• Average transmission losses
+ Gross receipts tax	+ Gross receipts tax on the non-electricity supply portion	+ Gross receipts tax on the electricity supply portion
= Total Bundled Customer Bill	= Total Customer Delivery Charges	= Total Supplier Responsibilities

As the table demonstrates, customers will not be charged twice for the same service when rates are unbundled. The next section of my testimony addresses how unbundled costs are allocated to particular rate classes.

[2] It is assumed that suppliers, whether Duquesne or some other entity, will need to recover the costs associated with those listed in the supplier responsibility column.

[3] These costs have been refunctionalized and are included in customer transmission rates.

[4] Distribution losses have been refunctionalized and are included in customer distribution rates.

IV. THE ALLOCATION OF GENERATION, TRANSMISSION AND DISTRIBUTION REVENUE REQUIREMENTS AMONG CUSTOMER CLASSES

A. Guidance from the Act

Q. What guidance does the Act provide regarding cost allocation?

A. The most explicit reference to cost allocation is provided in Section 2808(A) regarding competitive transition charges. This section of the Act states that "The costs to be recovered shall be allocated to customer classes in a manner that does not shift inter-class or intra-class costs and maintains consistency with the allocation methodology for utility production plant accepted by the Commission in the electric utility's most recent base rate proceeding." While there is other language in the Act in Section 2804 regarding the rate cap provisions, these provisions reference charges or rates, not cost allocations.

Q. Has Duquesne complied with this provision of the Act?

A. Yes. As I explain later in my testimony, Duquesne has allocated the functionalized costs reported in the testimony of Mr. O'Brien to the rate classes using methodologies that are generally consistent with those approved in our most recent base rate proceeding.

B. Past Cost Allocation Methodologies

Q. Please explain the way costs historically have been assigned to classes under cost of service regulation in the electric utility industry.

A. Cost allocation has generally followed a three-step process consisting of functionalization, classification and allocation. Functionalization refers to the

process of breaking down the total cost of service among generation, transmission and distribution. Other costs, such as general plant, are more difficult to directly assign to a specific function because they arise as a common cost with the provision of a bundled service. General plant-related costs are often assigned to the three main functions based on gross plant or some other factor. While no one method of assignment is perfect, the idea is to apportion general or common costs in some reasonable proportion to the relative magnitude of costs assigned directly to the three main cost functions. The next step is to classify the costs according to demand, energy, and customer categories. Historically, transmission and generation costs have been classified as either demand or energy-related, while distribution costs generally have been classified as either customer or demand related. Once costs have been functionalized and classified, they are then ready to be allocated to the various rate classifications based on relative contribution to demand, energy, number of customers or some combination of these factors.

Q. What is the result of this process?

A. The result is a fully allocated cost of service study that can be used to design rates to recover Company revenue requirements.

Q. How did Duquesne approach cost allocation in the past?

A. Based on a review of the allocated cost of service study prepared by the Company in its last base rate proceeding, it appears that the Company focused primarily on the classification, as opposed to the functionalization of costs. While some costs were, to a degree, implicitly functionalized in the cost of service allocation

program, the focus of the study is on classification and allocation of costs to classes on the basis of demand, energy and customers. This emphasis on classification is certainly acceptable when you are allocating costs and setting rates on a bundled basis. As such, there was never any need for the Commission to approve functionally unbundled costs for cost allocation and rate setting purposes. Now that rates must be unbundled, the primary focus has shifted to a detailed functionalization of costs because the Act requires functionally unbundled rates for transmission, distribution, and generation.

Q. Please discuss the allocations related to each functional category.

A. First, as to unbundled generation and distribution costs, we have maintained, to the extent feasible, consistency with the allocation methodologies used for generation and distribution costs from our most recent base rate proceeding. Second, while transmission costs were allocated on the basis of the average and excess methodology in Duquesne's last base rate proceeding; in the current study, transmission has been allocated to the classes using the 12 CP methodology. This is the allocation methodology preferred by the FERC. In addition, the costs of ancillary services were allocated using the 12 CP methodology to maintain consistency with the allocation of transmission plant expense. While these small differences exist due to FERC Order 888 requirements, the results from the current study produce results similar to the ones that would otherwise be produced using the traditional average and excess allocation methodology. Finally, as explained in more detail later, Duquesne's approach to cost and rate unbundling

insures that the rate cap provisions of the Act are met without shifting costs within or among rate classes.

Q. What is the basis for these costs?

A. The allocated cost of service results are based on 1996 test year costs. The revenue requirements have been functionalized into generation, transmission, and distribution cost categories. Using a 1996 cost of service study is consistent with the Commission's "Appendix A" requirements, which require unbundled cost of service information on the basis of 1996 test year costs. Using a current cost of service study also is consistent with traditional ratemaking practice.

The remainder of my testimony sets forth how the 1996 functionalized revenue requirements data were used to (i) allocate costs across customer classes, and (ii) design rates to recover these revenue requirements.

C. Transmission Cost Allocation

Q. Please explain how transmission costs were allocated across rate classes.

A. Duquesne has allocated transmission costs across classes on the basis of contribution to monthly coincident peak. This is appropriate because transmission systems must be designed to carry loads occurring during the periods of highest system demands and because the FERC requires a coincident peak demand allocation.

D. Distribution Cost Allocation

Q. Were distribution costs allocated on the same basis as transmission costs?

A. No, because distribution costs are different from transmission costs in three primary respects. First, distribution costs are assigned to customers depending on the voltage level at which customers take service. Duquesne distinguishes between customers served at the 23 KV sub-transmission and 23 KV/13.2 KV primary distribution levels, and the 4 KV secondary distribution system. Second, Duquesne has divided distribution costs into customer-related and demand-related costs. This is because some distribution costs -- like those associated with meters and line drops -- are closely related to the number of customers served, while the size (and cost) of conductors and transformers correlate to local area demand. But neither measure, customer nor demand, can be perfectly correlated to the costs incurred because many components of distribution costs vary with both.

Nevertheless, recognizing the art of embedded cost allocation procedures, the demand-related cost components are allocated to classes on the basis of class non-coincident demand responsibility. Unlike transmission, demand-related distribution costs are incurred to meet maximum demands on local distribution circuits, which do not necessarily occur at the time of maximum system peaks. Depending upon the mix of customers, distribution circuits may experience maximum demand during different seasons and at different times of the day. The customer portion of distribution-related costs are allocated and assigned based on the number of customers. This procedure is consistent with the approach taken by Duquesne in its most recent base rate proceeding.

E. Generation Cost Allocation

Q. Please turn to the allocation of generation-related costs.

A. Plant related generation costs were allocated among classes using the average and excess method. Duquesne classified production plant revenue requirements into energy-related and demand-related components. The energy-related component of plant is allocated to rate classes on the basis of each class' proportion to average system demand, while the demand component is allocated to the classes according to the average and excess demand allocator (the difference between peak and average demands). This methodology recognizes that production plant costs are incurred for two purposes: to achieve lower energy costs and to meet system demands.

Q. Does the current study allocate generation costs using a methodology consistent with that used by the Company in its most recent base rate proceeding?

A. Yes.

Q. Do you have an exhibit which shows the results from your allocated cost of service study?

A. Yes. These are included in Exhibit JAL-1. In addition, this exhibit provides the class allocators used to distribute the costs among the classes.

F. Ancillary Services Cost Allocation

Q. Please describe the ancillary services you have unbundled?

A. I have unbundled the costs associated with the ancillary services that FERC directed transmitting utilities to provide in Order No. 888. Those services are:

1. Scheduling, system control and dispatch

2. Reactive supply and voltage control from generation sources

3. Regulation and frequency response

4. Energy imbalance

5. Operating spinning reserves

6. Operating supplemental reserves.

Q. Has Duquesne filed rates for ancillary services at the FERC?

A. Yes. Duquesne complied with Order No. 888 by filing cost-based rates for ancillary services.

Q. Is Duquesne proposing to use those rates for the unbundled charges to retail customers at issue in this case?

A. Duquesne is using the same functionalization methodology that supports the ancillary service revenue requirements on file with the FERC. This methodology is described in detail in the attached FERC testimony of Peter A. Wybierala, Exhibit JAL-2. With respect to the design of rates from this functionalized revenue requirement, however, Duquesne is proposing certain modifications to tailor ancillary service rate design to accommodate retail choice. Duquesne will seek FERC approval of these modifications.

Q. Please turn to the development of the ancillary service revenue requirements.

A. For purposes of restructuring, the revenue requirements for each of the six ancillary services were based on cost information for the test year 1996. In order to develop revenue requirements for each ancillary service separately, we first conducted a "mini" functionalization study to separate costs currently included in

the FERC system of accounts as either transmission or generation. Using this study we allocated an amount of currently bundled costs to each of the six ancillary services to recognize the associated cost of providing these services on an unbundled basis. While scheduling involves identifying a share of labor expenses already included as a transmission cost, the other services require a refunctionalization of a portion of the generation costs into one of the five remaining ancillary service categories.

Q. Please turn to the functionalization of costs for specific ancillary services.

A. I will first discuss scheduling service. Duquesne allocated the costs from FERC account 556 on the basis of the share of salaries associated with transmission scheduling after adjusting for fringe benefits. The resulting cost per schedule was $113, which Duquesne rounded down to $100.

Q. Please turn to the costs for reactive supply.

A. The cost of reactive supply and voltage control was developed using a four step process. First, four components of gross generation plant equipment were identified with the provision of this ancillary service. These components are generation unit step-up transformers, exciters, voltage regulators, and generators. Second, the reactive component of these costs was determined by multiplying a ratio of reactive output based on rated power factor times the gross plant investment costs for these components. Third, the resulting amount was then divided by gross generation plant investment to derive the percentage of total generation plant used to supply reactive power supply and voltage control.

Finally, this percentage was multiplied by the plant-related revenue requirement (excluding fuel related expenses) for all generation plant to determine the annual revenue requirements.

Q. How were the revenue requirements for the other ancillary services computed for the 1996 test year?

A. The cost for regulation and frequency response was based on a three step process. First, based on the proposed NERC Generation and Control Performance Standards, to be effective Feb. 1, 1998, Control Performance Standard No. 2 (CPS2) defines a method for calculating the factor L_{10} for a particular control area. L_{10} represents the target Megawatt deviation that a control area should be able to operate within, over 90% of the 10 minute intervals for ACE (Area Control Error) in order to comply with CPS2. Duquesne believes that L_{10} which is about 43 MW for the Duquesne control area, represents the amount of generation that has to be set aside in order to follow load. This generation would be supplied from Duquesne's fossil plants. Second, the amount of generation associated with L_{10} was divided by the gross fossil generation plant investment in megawatts, to derive the percentage of total fossil plant to supply regulation and frequency response. Finally, this percentage was multiplied by the fossil plant related revenue requirement to determine the annual revenue requirement associated with providing this ancillary service.

The cost for energy imbalance is based on the hourly deviation between scheduled power and metered load. For on-peak and off-peak deviations within

the band, energy can be paid back in kind or cash settlement at the Duquesne system lambda energy rate. For deviations outside of the band, energy supplied by Duquesne would be at the rate of 110% of, lambda or market price, whichever is greater, and energy taken by Duquesne would be credited at the rate of 90% of lambda.

The cost for operating reserves includes both spinning and supplemental reserves. ECAR requirements mandate that member companies maintain at least 3% spinning reserves and 3% supplemental reserves for a total of 6% reserves in excess of forecast daily peak load.

Spinning reserves relate to generating capacity that is immediately available to respond to deviations in system frequency resulting from load forecast error and/or system disturbances (generator outages) throughout the control areas comprising the eastern interconnection. Duquesne provides spinning reserves exclusively from fossil generation plant. The annual spinning reserve requirement is 3% of the annual forecast peak load in megawatts. This amount is divided by the gross generation fossil plant, in megawatts, to derive a percentage of total fossil generation to supply spinning reserves. Multiplying this percentage by the fossil plant related revenue requirement determines the annual revenue requirement for providing this ancillary service.

Supplemental reserves relate to generating capacity that is available within 10 minutes to respond to deviations in system frequency, resulting from system disturbances (generator outages) throughout the control areas comprising the

eastern interconnection. Duquesne provides supplemental reserves from combustion turbine (CT) generation plant, and fossil plant during times when the reserve requirement exceeds installed CT capacity. The annual supplemental reserve requirement is 3% of the annual forecast peak load. For 1996, the supplemental reserve requirement was 74 MW based on a system peak load of 2463 MW. This amount was satisfied with all 54 MW of Brunot Island capacity and with 20 MW from Duquesne's fossil plants. The revenue requirements associated with these production-based ancillary services are shown in Exhibit JAL-1 (E), Page 1 of 2.

Q. Once you have determined the annual revenue requirements for each of these services, how did you then allocate the costs to each customer class?

A. The costs associated with reactive supply and voltage control, regulation and frequency response, and spinning reserves were allocated to the classes on the basis of contribution to 12 CP. The costs associated with providing other ancillary services were not directly allocated to customer classes because these costs will be recovered primarily from retail suppliers.

Q. Given that you have already allocated generation costs, won't the allocation of ancillary service costs to the classes result in an over-recovery of Duquesne's generation revenue requirement?

A. No. The revenue requirements associated with those portions of generation plant that have been re-functionalized as ancillary service costs were deducted from the generation-related revenue requirement. This was done before those costs were

allocated to the customer classes. Ancillary service costs that will be recovered from suppliers were deducted from the cost of service altogether. Therefore, there will be no double-recovery of Duquesne's revenue requirement.

G. Comparison of Cost Allocations to Revenues

Q. You have now described the relevant cost allocations. Have you also compared the total costs allocated to base year revenues for the customer and rate classes?

A. Yes. Exhibit JAL-3, Page 1 of 2, compares the fully allocated cost of service results with billed revenues generated at current bundled rates for the 12 months ending December 31, 1996. The results from the fully allocated cost of service study indicate that costs exceed 1996 revenues by $48.9 million for PaPUC jurisdictional sales. Based on these results and given the rate cap provision of the Act, Duquesne will be unable to fully recover its allocated cost of service. The results also indicate this difference is almost entirely attributable to the variance between allocated cost ($716.6 million) and revenues ($664.5 million) for the general service customer class. There is little difference for either the residential or lighting service categories. For residential, allocated cost of service is $400.8 million while revenues were $404 million in 1996. Lighting service has allocated cost of $17.3 million and revenues of $17.1 million. The top half of page 2 shows the results for the rate classes. The data reveals that with the exception of RS all the major rate classes have costs that exceed or are close to actual revenues. For RS, revenues ($374.9 million) are about $15 million (4.1%) above the allocated cost of service.

Q. Given these results and the cap provisions of the Act, how do you intend to allocate costs to individual rate classes?

A. For those classes where allocated cost of service exceeds base revenues, I have reduced the generation component of unbundled costs to insure that the rate cap is maintained and to avoid cost shifting among rate classes. Where costs are below revenue levels, I have adjusted the generation component to meet, but not exceed, 1996 revenues. This is consistent with Section 2804(4)(v) of the Act, which provides for the use of any "excess earnings achieved under the cap" to be "utilized to mitigate transition or stranded costs for the benefit of ratepayers." Reconciling costs to rate levels in this way insures that the unbundled rates I have designed will produce revenues from any one class and in total that stay within the confines of the rate cap.

Q. Is there anything else you would like to add about the results from the allocated cost of service study?

A. Yes. The results shown on the top half of pages 1 and 2 are based on an equalized rate of return approach (9.61% as computed by Mr. Clayton). I have made two adjustments to these figures. First, I have adjusted the cost of service study for the differences in rate of return arising from Duquesne's most recent base rate proceeding. This adjustment allocates costs from general service towards the residential and lighting classes and reduces the difference between allocated cost and revenues for general service while increasing the revenues have been adjusted to reflect the roll-in of the ECR into base reates costs assigned to the residential

and lighting customer classes. Second, revenues have been adjusted to reflect the roll-in of the ECR into base rates. The bottom half of page 1 of Exhibit JAL-3 compares the adjusted cost of service results to adjusted 1996 revenues by customer class. All three customer classes have costs in excess of revenues after adjustments. A similar comparison for the rate classes is shown at the bottom of page 2. Again, differences between allocated cost and revenues are on average smaller than they are before adjustments. Finally, it should be pointed out that Duquesne's current rates were based on a cost of service study almost 10 years old. It should come as no surprise to find differences between allocated costs and current revenues given the amount of time that has elapsed. In fact, I find the current relationship between revenues and costs to be surprisingly close.

V. RATE DESIGN

Q. Please turn now to the rate design. How have you organized this portion of your testimony?

A. This portion of my testimony has four major sections. First, I describe the requirements of the Act pertaining to rate design and how Duquesne complies with these requirements. Second, I discuss the rationale for Duquesne's rate design approach. Third, I describe the manner in which rates have been designed to recover from each class the revenue requirement allocated to that class. Specifically, I describe the five major components of rates:

1. Distribution
2. Transmission

3. Ancillary services

4. Customer generation charge/credit ("CGC")

5. Competitive transition charges ("CTC") – both class-specific variable CTCs and customer-specific fixed CTCs.

Fourth, I address customer choice options under Duquesne's plan. Each is discussed in turn.

A. Compliance with the Requirements of the Act

Q. Please summarize the provisions of the Act related to rate design.

A. There are several. The key provisions are summarized below:

- Section 2804 (3) of the Act instructs the Commission to "require the unbundling of electric utility services, tariffs and customer bills to separate the charges for generation, transmission, and distribution."
- Section 2808 (A) states that "the costs to be recovered shall be allocated to customer classes in a manner that does not shift inter-class or intra-class costs and maintains consistency with the allocation methodology for utility production plant accepted by the Commission in the electric utility's most recent base rate proceeding."
- Section 2804 (4) contains subsections (I) and (II) that set rate caps on electric utility rates and the term over which these caps shall apply. Specifically, the Act sets a cap on total charges of an electric distribution utility for service to any customer who continues to purchase electricity from the utility ("full requirements customers") at a level not to exceed the total charges previously

approved by the Commission. This rate cap on total charges is effective through June 2001. In addition, the Act provides for a cap on the generation component of the charges (including the CTC) for full requirements customers for a period of 9 years from the effective date of the Act or until the utility is no longer charging a CTC, whichever is shorter. Finally, for those customers who purchase generation from a supplier other than the distribution utility, the Act imposes a cap on the non-generation charges (excluding the CTC) through June 2001.

- As described earlier in my testimony, Section 2804 (4) (v) allows utilities to collect its capped rates if it rolls its energy cost rate into base rates and if any excess earnings achieved under the cap are used to mitigate stranded costs or to offset other known and measurable cost increases that would be recoverable under traditional ratemaking.
- Section 2808 (4) pertaining to the recovery of the CTC states that "During the transition period, electric utilities shall have the duty to mitigate generation related transition or stranded costs to the extent practicable."

The remainder of this section details how Duquesne's rate design proposal complies with these requirements.

Q. Has Duquesne unbundled its charges as the Act requires?

A. Yes, Duquesne is proposing unbundled tariffs that separately charge for transmission and distribution service. In addition, Duquesne has unbundled its generation costs into two primary components: a market-based CGC and CTC.

The CGC will be based on the market price established through an annual competitive solicitation for those customers who continue to purchase power from Duquesne. The CGC, along with unbundled charges for transmission, distribution and ancillary services, will be subtracted from current rates to develop CTCs.

Q. Does Duquesne's proposed rate design shift inter-class or intra-class costs?

A. No. Duquesne's rate design utilizes customer-specific CTCs in order to prevent cost shifting within and among customer classes. For those customers who continue to purchase electricity from Duquesne, the unbundled rates will result in the same bill the customer would otherwise pay under current bundled rates (adjusted for the ECR roll-in) assuming 1996 sales levels. This is verified through sample calculations in Exhibit JAL-4. In addition, Duquesne's non-bypassable fixed CTC will help to insure that all customers pay their fair share of stranded costs. And Duquesne's approach to determining CGCs based on actual market prices also maintains fairness and efficiency by limiting the ability of customers that have access to retail choice to shift costs onto those that do not yet have retail choice. Finally, as the Act requires, Duquesne has maintained consistency with the cost allocation methodology for utility production plant accepted by the Commission in Duquesne's most recent base rate proceeding.

Q. Please explain how Duquesne complies with the Act's rate cap on generation and total charges for customers that continue to purchase electricity from Duquesne.

A. Generation-related revenue requirements have been allocated to the classes using a methodology that is consistent with the one used in Duquesne's most recent

base rate proceeding. However, the total rate cap provision of the Act prevents the Company from fully recovering these costs from customers through CTCs. CTCs were therefore designed as a residual component starting with total revenues at current bundled tariff rates, subtracting transmission and distribution charges and applying credits based on the actual market price of power. As a result, total unbundled charges will exactly equal bundled charges at current rates based on 1996 sales.

Q. You mentioned that the Act imposes a rate cap for the non-generation services for those customers who purchase generation from an alternative supplier. How does Duquesne satisfy this requirement?

A. While the wording in the Act is straightforward, its application is not. This is because the PaPUC never approved unbundled charges before. In the past, the Commission approved revenue requirements and rates designed to raise the approved level of revenue requirements on a bundled basis. Therefore, Duquesne has designed unbundled transmission and distribution rates based on the 1996 allocated cost of service using, to the extent feasible, allocations that are consistent with those used in our last base rate proceeding (rate year ending March 31, 1988). This rate cap on non-generation charges, based on the 1996 cost of service, will remain in effect through June 2001.

Q. Please turn to Section 2804(4)(v).

A. Yes. As Mr. Clayton describes, Duquesne is rolling into current base rates an energy cost rate that is cost-justified and equal to the ECR cap approved by the

Commission as part of the Ft. Martin agreement. In addition, Duquesne is committing to accelerate the depreciation and amortization of stranded costs in an amount that, when added to test year revenue requirements, will result in a total revenue requirement equal to the total revenues produced by current rate levels. Mr. Schnitzer provides further support for Duquesne's proposal to comply with this section of the Act.

Q. How does Duquesne comply with the "known and measurable" requirement in the Act for calculating CTCs over the transition period?

A. This requirement is discussed in detail in the testimony of Mr. Schnitzer.

Q. How has the Act's requirement to mitigate stranded costs affected Duquesne's proposed rate design?

A. It has had a significant impact on Duquesne's proposed rate design. As I demonstrate later in my testimony, Duquesne's rate design will lower usage charges to levels that more closely resemble market. This not only increases economic efficiency; but relevant here, contributes to stranded cost mitigation. To explain, the rate for incremental consumption under most of Duquesne's current tarrifs significantly exceeds the additional cost of supplying increased usage during most, if not, all hours of the year. Rate redesign will send customers more efficient price signals and encourage economic load growth. Duquesne's proposal reduces rates relative to current levels by over 25% on average for customer consumption above 1996 levels. Lower usage charges are consistent with the stated objectives of the Act in Section 2802 (6) and (7) to increase

competitiveness and economic development in Pennsylvania. Equally important, rate redesign will allow Duquesne to significantly mitigate stranded costs. This is because increases in usage due to lower marginal rates will generate revenues that would not otherwise be generated under the current rate design. I estimate that rate redesign provides an opportunity to mitigate stranded costs by approximately $15 million per year. (See Exhibit JAL-5). Under Duquesne's proposal, as set forth in Mr. Clayton's testimony, these additional revenues will be used to further accelerate the depreciation and amortization of stranded costs.

B. Rationale for Duquesne's Rate Design

Q. What is the rationale underlying Duquesne's unbundled rate design?

A. Consistent with Section 2808(4), the critical objective of Duquesne's unbundled rate design is to mitigate stranded costs to the maximum extent practicable. While Duquesne could simply unbundle current rates into transmission, distribution and generation components and leave the existing rate structure intact, rate redesign is necessary to further mitigate stranded costs.

Q. You have stated that Duquesne's rate redesign proposal involves lowering usage charges. Why won't this reduce revenues rather than increase revenues?

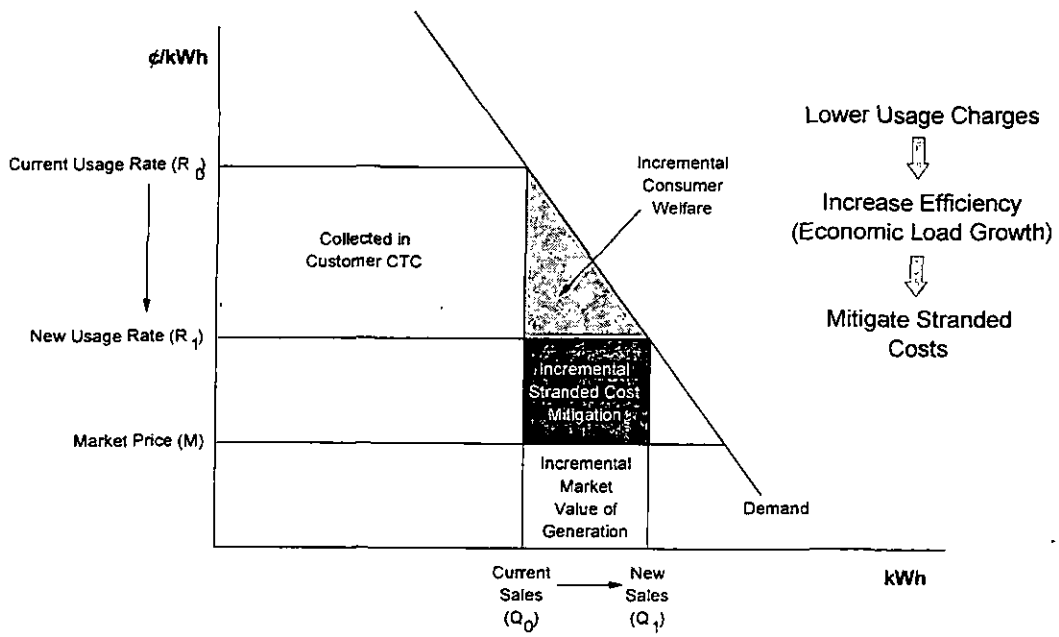
A. The reason is in the nature of the redesigned rates. The CTC will have two components: a fixed customer charge and a variable charge. The fixed charge is customer-specific and designed such that, when combined with the variable charge and assuming consumption at existing levels, no customer will pay more than he does today. The variable charge is designed to a level that will encourage

stranded cost mitigation by significantly lowering the charge associated with each kilowatt-hour of consumption. The variable charges contained in today's rates are significantly above market prices and the level that would maximize revenue recovery. For example, Duquesne currently charges a flat rate of 11.66 ¢/kWh to RS customers. This rate is in excess of the market rate of power and, equally important here, in excess of the rate that would maximize stranded cost mitigation.

Q. Why should the Commission approve this new rate design now?

A This rate design is mutually beneficial to consumers and investors. Customers will have an opportunity to save money by substituting electricity for more costly

Rate Redesign Approach



forms of energy, and improve their quality of life by increasing their use of other electricity consuming goods and services. Customers and investors alike will

benefit from increased sales revenue because these revenues will be used to mitigate stranded costs. The simplified graph below illustrates this concept more fully:

In the illustration, Duquesne's proposal is to lower usage charges from R_o to R_1 and recover the lost revenues through a CTC (equal to $[R_o-R_1]*Q_o$) over 1996 customer baseline consumption. Lower usage charges will improve resource allocation, as well as stimulate economic development, load growth and jobs in the region. Residential, commercial and industrial customers will benefit from the lower prices for consumption above baseline amounts. Meanwhile, Duquesne will earn a contribution (R_1-M) on these increased sales (Q_1-Q_o) which will be available to further mitigate stranded costs and possibly shorten the CTC recovery period for all retail customers in Duquesne's service area.

The benefits that arise from a more efficient rate design could be significant. For instance, Duquesne's proposal will effectively reduce marginal rates on average by over 25% on customer consumption above 1996 levels, as indicated in Exhibit JAL-6. Residential customers will receive a marginal rate reduction of 50%. Equally important, Duquesne's rate design could mitigate stranded costs by approximately $15 million annually, depending on customer load response to large decreases in marginal price signals. The more responsive customers are to price changes, the larger the benefits will be. Exhibit JAL-7 illustrates that the potential annual mitigation could be significantly larger than the $15 million figure if customers respond more than expected.

Q. If moving rates closer to market levels increases economic efficiency, why doesn't Duquesne lower its rates all the way to incremental costs or market prices?

A. It is possible to reduce usage rates all the way down to market price levels through time-of-use pricing or a real-time pricing program and achieve even greater efficiency gains. However, most if not all of the fixed cost contribution and stranded cost mitigation benefits would be lost as a consequence. Duquesne has designed rates to enhance stranded cost mitigation to the maximum extent practicable, as required by the Act.

Q. Electricity is generally thought to be an essential item with very little customer sensitivity to changes in price. Why does Duquesne assume that customers will increase consumption in response to lower usage rates?

A. While customer response is hard to measure precisely, a large body of economic research in the industry and growing empirical results from real-time pricing programs convincingly demonstrate that customers do respond to changes in electricity prices. And while it may be true that customers do not respond as much to price signals for electricity as they do for other commodities, it is important to remember that relatively low customer response can still result in significant stranded cost mitigation.

Q. How much customer response can be expected from lower electricity prices?

A. Customer response to price changes depends on many factors, so it is difficult to generalize. However, three primary tools have been used by analysts to better

understand how customers might alter their consumption with changing prices. These include econometric studies, simulation models, and consumer surveys. Results from these studies vary, but general conclusions are possible. Most evidence suggests that customer response could be large. Short term price elasticities have been estimated to be in the range of -0.1 to -0.4. Price elasticity is a ratio that measures the percent change in consumption per percent change in price. These elasticities suggest that a 10 percent reduction in price will result in roughly a one to four percent increase in consumption. Customer response tends to be even higher (up to a –1.0 price elasticity) over longer periods since customers are then able to more readily adjust appliance stocks and consumption patterns over time. Therefore, as a result of Duquesne's proposed marginal rate reduction of more than 25%, it is not unreasonable to expect that consumption could increase above what it would otherwise be in the absence of rate redesign.

Q. What if there is no customer load response?

A. Very little would be lost. Even though Duquesne would not mitigate its stranded costs from the proposed rate design, customers would be unharmed. In any event, customers would still benefit from lower usage charges on new consumption.

Q. How important is it that the Commission approve this rate redesign now?

A. The potential benefits of rate redesign are both real and substantial. Duquesne's proposed rate redesign represents one of the largest opportunities for Duquesne to mitigate its stranded cost exposure over the transition period. And given the rapidity of the move towards competition in the industry, the public interest

arguments in favor of rate redesign have never been stronger. Rate redesign provides this Commission a golden opportunity to improve efficiency, increase consumer welfare and enhance mitigation of stranded costs during the transition to retail competition.

Q. Won't rate redesign be difficult to implement?

A. It is likely to be somewhat more difficult than a simple unbundling of rates, but the benefits far outweigh any difference in administrative cost.

Q. Besides stranded cost mitigation, did you consider other criteria in developing Duquesne's unbundled tariffs?

A. Yes, there are many criteria analysts use in the design of rates but three of them -- efficiency, fairness and adequacy -- stand out as primary under cost-of-service based regulation. These criteria were first articulated by James C. Bonbright in his book, Principles of Public Utility Rates (Page 292). Efficiency, which I have already addressed, means that prices should reflect the added resource cost of meeting incremental demand or, conversely, the resources saved when demand is reduced. This criterion simply requires that prices be set on the basis of incremental or marginal cost to avoid wasting society's resources. Fairness calls for the benefits to follow costs so that the users who are responsible for costs being incurred provide the revenue necessary to cover those costs. Adequacy is necessary in order to insure that the utility investment devoted to the provision of public service is not confiscated. Allowable charges must provide utility investors the opportunity to recover their investment and to earn a fair return on it.

While Bonbright discusses other criteria, many are corollary to these three primary criteria.

Q. Are these criteria consistent with the provisions of the restructuring Act?

A. I think they are. The Act provides for an orderly transition to competition towards a deregulated generation market in a way that is fair to consumers, electric utilities and their investors, and competitive suppliers. By adopting an orderly transition process, the Legislature adopted a plan that recognizes the substantial financial commitment made by utility investors under historical obligation-to-serve requirements. In addition, the transition period allows utilities time to put into place the necessary infra-structure to accommodate the creation of a competitive generation market while maintaining a reliable electric system. The rate cap provisions of the Act protect consumers who choose to continue taking electricity from the distribution utility, while providing investors the opportunity to accelerate amortization of above-market generation costs.

Q. Explain how Duquesne has attempted to meet the efficiency, fairness and adequacy criteria?

A. Duquesne's redesigned rates improve efficiency since all consumers, including those who remain as full requirements customers during the transition period, will face prices for incremental changes in consumption that are much closer to market levels. Duquesne's unbundled rate design is fair since it meets the rate cap provisions of the Act, maintains current inter- and intra-class cost allocations, gives customers credits based on actual market prices, and reduces the ability of

some customers to bypass their fair share of stranded costs. Duquesne's unbundling of current rates also provides investors with an opportunity, not a guarantee, to recover prudently incurred costs up to the rate cap.

Q. When will these unbundled and redesigned rates become effective?

A. The unbundled, redesigned rates will apply to all customers at the start of the initial phase of retail access in 1999. Presenting all customers with the same rate design makes sense for several reasons. First, it establishes rate comparability. Second, Duquesne's rate redesign will provide customers the benefits of more efficient prices for incremental usage sooner rather than having to wait until the phase-in is complete. Finally, expanding this rate design to all customers immediately will allow Duquesne to maximize mitigation of stranded costs by encouraging worthwhile increases in electrical consumption.

Q. Are you saying that the Duquesne proposal is worthwhile even in the absence of restructuring?

A. Yes. Any time rates can be redesigned to improve economic efficiency without compromising the criteria of fairness and revenue adequacy, there is an improvement in societal welfare, and this is exactly what the Duquesne proposal is intended to do. There is no shifting of revenues to other classes or individual customers because each customer will pay an amount equal to what he or she would have paid under bundled rates for baseline consumption measured during the base year (1996). Indeed, it is the same type of rate design Duquesne has used for several years to encourage additional revenue growth from existing industrial

customers and new customers to move into Duquesne's service territory under Rule 4.

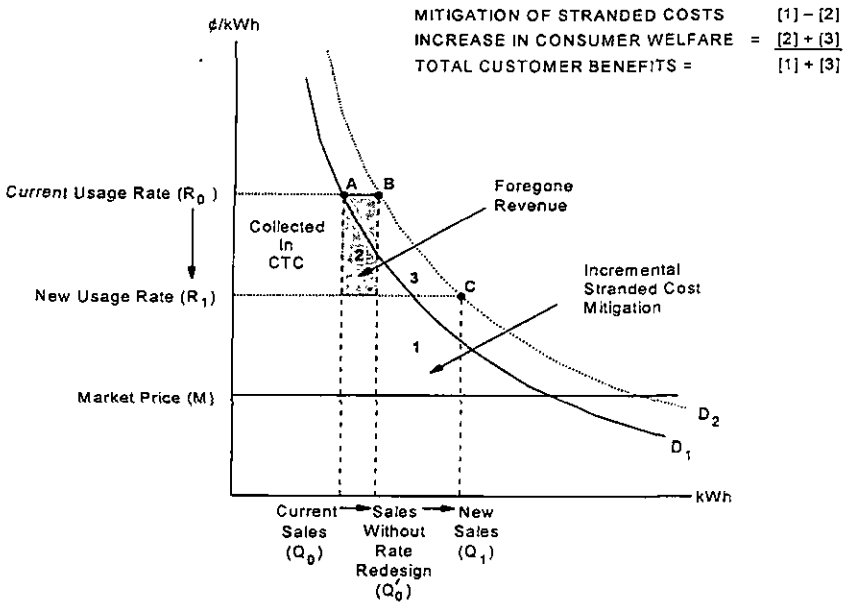
Q. You mentioned earlier that your primary rate design objective is to mitigate stranded costs, and that you accomplished this objective by lowering current usage charges (energy or demand). Please describe how you determined how much to lower current usage charges.

A. Duquesne considered four factors to establish usage rate levels that mitigate stranded costs:

- The market price
- Expected foregone revenue from load growth of existing customers without rate redesign
- Customer load response to lower usage charges
- Current usage rate levels.

Each of these factors are illustrated in the graph below:

Determining Usage Rate Levels That Mitigate Stranded Costs



Q. Please describe how the first factor, the market price, was considered in determining the appropriate usage price.

A. The market price serves as the benchmark for determining usage rates. As a general rule, usage rates should not be set below the marginal cost of service, of which the market price is a key component. The contribution to stranded costs is measured relative to market prices. Incremental sales priced at usage rates above market levels (adjusted for other incremental costs such as losses) represent an opportunity to enhance stranded cost recovery (rectangle 1 above). Duquesne proposes to establish the market price through an annual RFP process. Pro-forma rates have been developed on the basis of Duquesne's recent RFP described in Mr. Irvin's testimony.

Q. Please explain the second factor – expected foregone revenue from load growth of existing customers without rate design.

A. Some existing customers would increase their load without rate redesign as a result of changes in other factors unrelated to price. This is illustrated in the above graph as a shift in the demand curve from point A to point B or an increase in consumption from Q_o to Q'_o. Lower usage charges provide existing customers with a rate cut for new consumption. This results in foregone revenues for Duquesne (rectangle 2). Exactly how much revenue is lost depends on how much usage rates are lowered, as well as expected load growth from existing customers without any rate redesign. As a result, the net mitigation of stranded costs is equal to the area of rectangle 1 less rectangle 2.

Q. How was customer load response to lower usage rates (price elasticity) considered (represented in the graph as the difference in consumption between point C and point B)?

A. In estimating the price elasticity, an extensive body of research was reviewed. This research suggests that electricity is similar to most other commodities, whereby decreasing prices tends to lead to greater consumption and increasing prices tends to lead to less consumption, all other things being equal. In addition, the Pennsylvania Legislature, the Governor and several intervenors have highlighted the importance of lower rates for economic development and job creation in Pennsylvania. For purposes of determining usage charges in this proceeding, Duquesne assumed a conservatively low level of customer response (i.e., a price elasticity of –0.1 for energy and –0.05 for demand). While Duquesne recognizes the uncertainty regarding the exact level of customer response, the

potential benefits associated with even very low levels of customer response can be significant.

Q. Did *Duquesne* perform any sensitivity analysis on its energy and demand elasticity assumptions?

A. Yes. Exhibit JAL-7 shows that even with very low price elasticities, rate redesign could yield $5 million annually in stranded cost mitigation, while it would not be unrealistic to achieve significantly higher benefits (above $30 million) with larger customer response.

Q. How did Duquesne consider current usage rate levels and determine what rates to reduce?

A. Duquesne compared the existing effective usage charges (energy and demand) in each of its rate classes with market prices. Where there was a significant difference, these charges were lowered. For example, most residential customers take service under rate RS. The current bundled rate schedule is a simple one comprised of a fixed monthly customer charge of $6.38 and an energy charge of 11.66 ¢/kWh for each kWh of consumption.[5] Under Duquesne's new unbundled tariff, customers who continue to take full requirements service will realize a 50% reduction in the total usage (cents per kWh) charges, assuming a market price for 1999 of 1.86 ¢/kWh. Customers that can purchase electricity from alternative

[5] These rates became effective July 26, 1997 reflecting the roll-in of the STAS credit into base rates.

suppliers for less than Duquesne's CGC could realize even greater savings on new consumption.

Q. Is this situation different for commercial and industrial customers?

A. Yes. Many commercial and industrial customers take demand metered service. For customers in these classes the energy charges are significantly lower than the kWh charges for RS. Since these charges are much closer to efficient price levels, they were not adjusted from current levels[6]. However, in a rate class like GL the impediment to efficient electric consumption is high demand charges.

For example, Duquesne's current bundled rate for a GL customer is comprised of demand and energy charges. The energy charge is 3.80 ¢/kWh for all kilowatt-hour consumption. Demand charges are recovered on a declining basis where the first 300 kW of demand is priced on a monthly basis at $5,527. For each kW of demand beyond 300 kW, the per kW charge is set at $13.98. While the energy rate is substantially below the comparable charge for an RS customer, that is only part of the story. Because of the demand charge, a GL customer's effective cost per kWh for incremental consumption is much higher than 3.80 ¢/kWh. For example, assume that a GL customer with 1000 kW of billed demand and monthly consumption of 380,000 kWh is considering increasing demand by 1 kW. If the incremental demand is consumed at the customers average load factor of 52.055% [(380,000/730 hrs.)/1,000 kW], the

[6] It should be noted that high energy rates in initial blocks were reduced significantly for these customers as well, so that small commercial and industrial customers could benefit from lower usage charges.

effective price per kWh is 7.48 cents per kWh.[7] The demand charge in this case increases the effective kWh charge by almost 100%. This results in a usage charge for incremental consumption that is significantly above market price levels for a customer in this class of service. As a remedy, Duquesne reduced the demand rates in this rate class by 50% from $13.98 to $6.99. This results in an incremental usage charge (combined demand and energy) that more closely approximates market prices. At this rate, the effective price per kWh is now 5.64 ¢/kWh, 25% lower than the current effective charge of 7.48 ¢/kWh.

Q. Please describe how the four factors mentioned above are interrelated and the tradeoffs Duquesne faced in setting usage rates.

A. Determining appropriate usage rate levels is not an exact science. On the one hand, the more you lower usage rates, the greater customer load response you achieve. On the other hand, the more you lower usage rates, the lower is the contribution on each additional kilowatt-hour you sell and the greater the foregone lost revenue. Thus, there is a tradeoff between stimulating consumption and reducing the contribution on increased sales. Duquesne's primary objective was to mitigate stranded costs to the maximum extent practicable. This net revenue would be available to shorten the CTC recovery period for all customers in Duquesne's service area.

Q. Have you reflected the results of your analysis in your rate redesign proposal?

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[7] The effective price per kWh is computed by dividing the demand charge rate of $13.98 by the associated monthly consumption, which is equal to the load factor (52.055 %) times the number of hours in the month (730).

A. Yes, by substantially reducing kWh and kW usage charges (approximately 50%) for those classes where current rates are high relative to market value.

Q. Did Duquesne consider lowering certain energy and demand charges by more or less than 50%?

A. Yes. However, this resulted in lower stranded cost mitigation due to the tradeoffs just described. See Exhibit JAL-8.

Q. Does this mitigation of stranded cost represent the total efficiency benefits to society?

A. No, consumers who increase consumption above 1996 baseline levels will receive a welfare gain due to the lower usage rates, as represented by areas 2 and 3 in the graph. This welfare gain, attributable to customers who value electricity more than the usage rates being charged, could be large. Preliminary estimates indicate that this consumer benefit is worth another $15 million per year. As a result, the efficiency gains from rate redesign could yield a total benefit to society of approximately $30 million (represented by the sum of areas 1 and 3 in the graph above). About half of this figure is associated with the increase in consumer welfare, while the other half represents stranded cost mitigation.

Q. What about customers that reduce their consumption below 1996 levels?

A. While these customers could avoid variable CTC charges, they would still be responsible for paying their fair share of stranded costs through the fixed, customer-specific CTC. These amounts are truly non-bypassable, as the Act allows, and are based on 1996 consumption levels in order to prevent gaming.

Nevertheless, customers that reduce consumption will be able to benefit to the extent that rate design allows the Company to mitigage stranded costs more quickly.

C. Design of Duquesne's Rates

Q. Please turn to the design of rates for each of the unbundled services.

A. As I indicated earlier, current kWh and kW rates in many classes are significantly above efficient price levels. Where this is the case usage sensitive rates were reduced to "target" levels based on the stranded cost mitigation analysis just described. These target levels represent the sum of the unbundled usage charges. Target rate components were then functionally unbundled into distribution, transmission, CGC and variable CTC components to recover the appropriate amount of costs as indicated by the allocated cost of service study and market valuation. The derivation of these unbundled rates is summarized in Exhibit JAL-9.

1. Distribution Rate Design

Q. Could you please begin with distribution costs?

A. I will begin by developing the unbundled distribution charge for rate class RS. Customers who take service under this tariff currently pay $6.38 /mo. and 11.66 ¢/kWh for all consumption. Duquesne is proposing to reduce the delivered price for power by 50% to 5.83 ¢/kWh under the redesigned and unbundled tariffs. Backing out a CGC (market price of power) of 1.86 ¢/kWh, a customer will pay a

target delivery charge (T,D, and CTC) equal to 3.97 ¢/kWh. The distribution portion of this delivery rate is determined by taking the distribution-related revenue requirements (net of current customer charges) and dividing by total target usage revenues. This ratio is then applied to the delivery rate. For example, the allocated cost of service indicates that RS is responsible for $83.6 million of distribution-related revenue requirements (net of current customer charges). Meanwhile, the target delivery rate of 3.97 ¢/kWh will produce revenues of $118.3 million based on 1996 test year sales of 2,977,269 MWH. The ratio of these two dollar amounts (approximately 71%) is multiplied by 3.97 ¢/kWh to determine the unbundled distribution charge of 2.81 ¢/kWh. This rate when multiplied by the 1996 sales volume exactly recovers the allocated distribution costs for RS, no more, no less.

Q. Did you follow the same procedure for the other rate classes?

A. Yes, however the mechanics are more involved because other classes currently either have seasonally differentiated rates, block structures, demand charges or a combination of all three features. For example, residential RAE and RAH tariff customers have rates that vary by season for consumption in excess of 500 kWh per month. During the summer months, all consumption is priced at 11.66 ¢/kWh, while in the winter only the first 500 kWh of consumption is priced at this rate. Consumption in excess of 500 kWh is priced at 4.49 ¢/kWh.

Q. Can you demonstrate how distribution rates were unbundled for rate class RAH?

A. Yes. Rates were unbundled to preserve the seasonal blocking of the current tariffs. Just like RS, RH customers face usage rates that are high. Therefore, Duquesne has moved the summer kWh rate to 5.83 ¢/kWh (including the CGC) to encourage more efficient consumption. The tail block rate for usage in excess of 500 kWh during the winter has been maintained at 4.49 ¢/kWh including the CGC (2.65 net of the CGC). During 1996, Duquesne billed 155,535 MWH at 11.66 ¢/kWh and 153,666 at 4.49 ¢/kWh for usage in excess of 500 kWh during the winter months. The results from the allocated cost of service study indicate that RH is responsible for $8.1 million of distribution-related costs. Dividing the distribution-related revenue requirements by the amount of revenue that would be derived at the target rate ($10.3 million net of CGC and customer charge revenues) yields a ratio of approximately 79%. This percentage is then applied to the target rates to determine the unbundled distribution charges shown below:

Block	Target Rate (Net of CGC)	Percent	Distribution
1st 500 kWh	3.99 ¢/kWh	79%	3.16 ¢/kWh
> 500 kWh	2.65 ¢/kWh	79%	2.10 ¢/kWh

Q. Do these unbundled rates recover the distribution-related revenue requirements for class RH?

A. Yes. These rates when multiplied by the 1996 billing determinants collect the exact amount assigned to rate class RH from the allocated cost of service study.

Q. Could you now describe how the distribution rates were unbundled for demand metered customers?

A. Yes. I will demonstrate how this was done using information for rate class GL. The currently effective rate structure charges $5,527 per month for demand of 300 kW or less, $13.98 per kW for demand in excess of 300 kW per month, and 3.80 ¢/kWh for all kWh consumption. Duquesne's rate redesign reduces the usage sensitive per kW charge 50% to $6.99 and maintains the kWh charge at 3.80 ¢/kWh including the CGC. Backing out the unbundled market price credit of 1.85 ¢/kWh results in a target delivery charge of 1.95 ¢/kWh. Finally, Duquesne is retaining the monthly demand charge at $5,527. A comparison of the current and proposed GL rate structures are shown below:

Block/Component	Current	Proposed
1ST 300 kW	$5,527/mo.	$5,527/mo.
> 300 kW	$13.98/kW	$6.99/kW
kWh	3.80 ¢/kWh	1.95 ¢/kWh plus market price or CGC

Q. Please explain how you unbundled the distribution charges for rate class GL.

A. As with the other classes, target delivery rates for each rate block were multiplied by the respective billing determinants to determine the amount of revenue recovery. Based on 1996 sales, these rate components recover $128.8 million from GL customers. Distribution-related revenue requirements ($36.0 million) are then divided by this amount to establish the percentage of distribution-related

costs recovered from each rate component. For rate class GL, that percentage is equal to approximately 28%. Applying this percentage to the target delivery rate components above yields the unbundled distribution-related rates by block and type of charge:

Block	Target Rate (net of CGC)	Percentage	Distribution
1st 300 kW	$5,527	28.0%	$1,546.19
> 300 kW	$6.99/kW	28.0%	$1.96/kW
kWh	1.95 ¢/kWh	28.0%	0.54 ¢/kWh

These unbundled rates exactly recover the allocated distribution-related revenue requirement allocated to rate class GL.

2. Transmission Rate Design

Q. Please now describe how transmission rates were set for the various classes?

A. The approach for transmission is the same as described above for distribution. For rate class RS, the transmission-related revenue requirement, $13.4 million, was divided by $118.3 million (the product of the target delivery rate of 3.97 ¢/kWh and kWh sales for 1996) to determine the percentage of transmission-related revenue requirements to total usage-related revenues. This percentage, (about 11%) is then multiplied by the target delivery rate of 3.97 ¢/kWh in order to establish the unbundled transmission charge of 0.45 ¢/kWh. This rate when multiplied by the test year sales recovers the appropriate amount of transmission-related costs from RS customers.

Q. Are the calculations more involved for the other classes?

A. Yes, as with distribution, but the approach employed is the same. For example, the allocated cost of service study assigns $1.4 million of transmission-related revenue requirements to rate class RH. From above we know that the amount of revenues recovered under the target delivery rate generates usage-related revenue of $10.3 million. The ratio of these two numbers (about 14%) multiplied times the target rate levels produces the unbundled transmission rates by block as depicted below:

Block	Target Rate (net of CGC)	Percentage	Transmission
1st 500	3.99 ¢/kWh	14%	0.52 ¢/kWh
> 500 (Winter)	2.65 ¢/kWh	14%	0.35 ¢/kWh

Q. How were transmission-related revenue requirements recovered from rate class GL?

A. First, the share of transmission-related revenue requirements to total usage revenues was computed. This ratio was then multiplied by the block-specific target rate levels to determine the unbundled transmission rates by block and by component. For transmission, the percentage is about 8%. This results in the unbundled transmission rates depicted below:

Block	Target Rate (net of CGC)	Percentage	Transmission
1st 300 kW	$5,527/mo.	8%	$429.56/mo.
> 300 kW	$13.98/kW	8%	$0.54/kW
kWh	1.95 ¢/kWh	8%	0.15 ¢/kWh

Q. Is this rate design for transmission the same as discussed in FERC Order 888 and included in the pro forma tariff?

A. Not exactly, but it is consistent with traditional ratemaking practices, including those utilized by FERC. The primary difference is that it recognizes certain limitations on the metering of customer demands of residential customers.

Q. Please explain.

A. FERC's pro forma tariff uses two basic methodologies for allocating costs and designing rates. The first is the methodology applicable to network service. Under the network tariff, the utility's test year transmission revenue requirement is allocated on a rolling twelve-month basis among network customers on the basis of their contribution to monthly coincident peak demands. In essence, this is a direct allocation of costs that avoids the need to develop unit rates based on current or forecast usage.

The second methodology is that for point-to-point transmission service. For this service, the utility divides its test year transmission revenue requirement by some measure of coincident peak demand (annual CP, 4 CP or 12 CP). This produces a unit rate per MW of demand. This rate is then billed to the customer, on a take or pay basis, on the amount of its "reservation" of capacity.

Duquesne's proposed methodology is consistent with, but not the same as, the FERC methodology. For example, Duquesne is proposing to allocate transmission costs to customer classes using class contributions to monthly

coincident peak demands which is consistent with FERC use of CPs to allocate costs to wholesale transmission customers. The only real difference is in the design of the rates. With the exception of the rate redesign discussed previously, Duquesne has designed customer transmission rates on a basis consistent with the traditional methodologies used for these customers. For example, residential customers are charged for transmission service on the basis of a per kWh charge, rather than a kW charge, given that Duquesne at present has no demand meters with which to measure their maximum hourly demands.

3. Ancillary Services Rate Design

Q. Please explain the rate design for ancillary services.

A. I will discuss each service in turn, with certain of the services grouped together for convenience. The first group of services is reactive power, frequency regulation, and spinning reserve. Consistent with FERC Order No. 888, and as described by Mr. Irvin, these services must be provided by Duquesne unless, as to the latter two services, dynamic scheduling is arranged. Given that the services are a necessary adjunct to transmission service, and that most, if not all, customers will be purchasing them from Duquesne, I have used the same rate design methods for recovering the allocated costs of these services as I used to recover the allocated cost of transmission service.

The remaining ancillary service rates for scheduling, energy imbalance and supplemental reserves will be charged to suppliers who use these services. The scheduling charge is a per unit charge applicable to all suppliers, as is the

energy imbalance charges and supplemental reserve charge. Using a single per unit supplier charge for these services is appropriate because of the nature of the services. The scheduling charge will vary with the scheduling practices of each supplier, not the characteristics of any customer class. The same is true for energy imbalance charge. Finally, suppliers have the option of supplying or purchasing supplemental reserves from the market. A unit charge applicable to any supplier taking the service is therefore appropriate. The per MW rate for this service is developed by dividing the annual revenue requirement ($9.9 million) associated with providing this service by the MW (74) of capacity associated with providing it.

Q. Does the provision of any of these ancillary services raise stranded cost issues?

A. Yes. The ability of electric suppliers to compete to provide supplemental reserve service may cause Duquesne to fail to fully recover the revenue requirement associated with the service. Duquesne has addressed this issue by recovering these costs in the CTC. To ensure, however, that Duquesne does not overrecover its revenue requirement associated with this service, Duquesne will flow through to retail Choice Customers, on an annual basis, any revenues received from electric retail suppliers that purchase this service from Duquesne (as opposed to providing the service themselves). To the extent other ancillary services become subject to competition, a similar approach to stranded cost recovery would be adopted.

4. Customer Generation Credit/Charge ("CGC")

Q. Please summarize the purpose of the CGC.

A. The CGC represents the competitive market value of a customer's electricity consumption, that is, the portion of the customer bill that a customer can avoid when selecting an alternative electricity supplier. Duquesne's CGC will be based on actual market price information each year and therefore will provide consumers with the proper price signals. This allows customers to decide on the basis of unbiased information whether or not to leave Duquesne for an alternative supplier. If the CGC is set below the actual market price, customers will have an artifical incentive to stay with Duquesne. This result, could hinder competition and retard the development of a competitive retail electricity market. If the CGC is set above the actual market price, customers will have an artificial incentive to leave Duquesne for another supplier, exacerbating efforts to mitigate stranded costs. This is because when customers leave, Duquesne will be unable to sell power at a price above market. This is why it is important that the CGC be based on actual "known and measurable" market evidence as opposed to administratively determined market price forecasts. Duquesne's proposal to base its CGC on an annual competitive market sale of firm power will allow Duquesne to determine a CGC and CTC that sends efficient price signals and is fair both to customers and shareholders.

Q. How is the CGC calculated?

A. The computation of the CGC involves four basic steps:

1. Establish the market value through the RFP process,
2. Determine hourly market values from winning bid prices using hourly price shapes,
3. Calculate the market value for each class using customer class load shapes, and
4. Adjust the class-specific market values for transmission losses and Pennsylvania gross receipts tax.

Q. Why is it necessary to make adjustments for hourly price and customer class load shapes?

A. The market value of the power contract may not provide an exact measure of the market value of the customer's consumption since the customer and bidder may consume (take delivery of) electricity during different hours in the year. Therefore, in order to use the RFP contract price to estimate the market price associated with a specific customer class consumption pattern, it is first necessary to disaggregate the contract price into hourly market prices. This is necessary because classes consume power at different times in varying amounts during the course of the year. And since market prices depend on time-of-use, the value Duquesne will realize by selling power that is released by departing load will differ based on the characteristics of that load. Accounting for the difference in market values enables Duquesne to appropriately credit the RFP market price to each class.

Q. Could you provide an example?

A. Yes. Power is generally more valuable during the peak hours (daytime) than at night and is similarly more valuable during the summer months than in either the fall or spring. Therefore, a rate class that consumes a relatively greater proportion of its total requirements during peak (high cost) periods will receive a higher credit than classes that do not. This higher market price credit is appropriate since these customers are more expensive to serve, and this market-based approach will ensure that customers in all classes will have an equal opportunity to participate in competitive markets.

Q. How is the hourly price shape information used?

A. The price shape defines the relationship of the price in each hour to the average price for all hours in the year. When applied to the RFP contract price - along with the contract minimum and maximum take provisions - the price shape gives a market-based estimate of hourly market prices for the term of the contract. For illustrative purposes, assume a simplified market where every hour has either "the on-peak price" or "the off-peak price" and the competitive RFP contract reveals a market price of $18 per MWH for a 1 MW contract:

- Further assume that the purchaser takes the maximum amount during on-peak periods and the remainder during off-peak hours in order to satisfy the 75% annual capacity factor requirement in the RFP and to maximize value.
- Also assume that the price shape data indicates that the relationship of on-peak to off-peak prices is 1.1976 to 1.

Given this information, the values for on- and off-peak prices can be determined as follows:

Period	Avg. MW Load[8]	Hours	RFP Purchaser Load (MWHs)	Ratio to Off-Peak Price	Revealed Bid Price in $/MWH
On-peak (5 x 16)	1.000	**4,160**	**4,160.0**	**1.1976:1**	19.160
Off-Peak	0.524	**4,600**	**2,410.4**	**1:1**	15.998
Total	0.750	**8,760**	**6,570.4**	--	**18.000**[9]
(Note: Bold numbers are given.)					

Q. How will Duquesne determine the hourly price shape for the year?

A. Duquesne's price shape data will be based on actual marginal cost data in each hour for Duquesne for the most recent calendar year. These historical figures will be known and measurable. Mr. Karl explains how the price shape will be determined in his testimony in greater detail. While price shapes could vary in the future, Duquesne does not expect the hourly price pattern to change significantly, particularly in the near term. Currently, Duquesne is using actual 1996 marginal cost data. However, Duquesne will update these price shapes annually to reflect significant changes in actual hourly price patterns.

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[8] Based on the RFP's annual 75% capacity factor and an hourly minimum take of 50% of the contract amount.

[9] This represents the bid for a 75% capacity factor contract. A comparable market price for a 100% baseload contract would be lower ($17.3/MWH).

Q. How are the customer class load shapes used?

A. The third step in computing a CGC is to apply the derived hourly market prices to customer class load shape data. This results in a single ¢/kWh credit for each customer class. In the above example, if residential customers consume 70 percent of their energy requirements during on-peak hours and 30 percent during off-peak hours, the credit for residential customers would equal 1.821 cents per kWh (70% * 1.9160 + 30% * 1.5998). By comparison, if industrial customers on average consume 50 percent of their energy requirements during on-peak hours and 50 percent during off-peak hours, the credit for that class would be 1.758 cents per kWh (50% * 1.9160 + 50% * 1.5998).

Q. How are the customer class load shapes determined?

A. Due to the absence of hourly interval meters for all customers, Duquesne proposes to employ hourly 1996 customer class load profiles based on sample metering data. Hourly load profile meters have been collecting hourly load data on the Duquesne system for several years from a sample of residential, commercial, and industrial customers. The resulting load profiles are known and measurable and will be used to calculate class-specific credits.

Q. What other adjustments are made to calculate CGCs?

A. The customer class market credits are adjusted for transmission losses and Pennsylvania gross receipts tax.

Q. You mentioned an adjustment related to transmission losses. Would an adjustment for embedded transmission costs also be appropriate?

A. No. These embedded cost charges are unlike the costs associated with transmission losses, which can be competitively supplied. Under Duquesne's tariff, electric suppliers must only purchase or supply transmission losses not transmission service in order to sell at retail. Embedded transmission costs will be collected from retail customers through unbundled transmission rates. Therefore, it is appropriate to only credit transmission losses.

Q. You have discussed transmission losses. Would a similar adjustment be made for distribution losses?

A. No. The cost of distribution losses is recovered as part of Duquesne's unbundled distribution rate for all customers. Electric suppliers serving retail customers will not be required to supply distribution losses.

Q. Some parties have suggested that an adjustment should be made to reflect avoided retail marketing costs. Do you agree with that suggestion?

A. No. Duquesne has no material "marketing" costs that it would avoid with a loss of retail load. Duquesne currently has an exclusive franchise to serve its electric customers and thus does not "market" the sale of electricity to them in the manner that will occur in a competitive market. In any event, if there were avoidable marketing costs, a better approach would be to adjust the cost of service directly as an offset to informational and educational costs incurred by Duquesne for implementing retail choice, not through an ad hoc adjustment to market price.

Q. Is there any evidence that electricity suppliers need such ad hoc adjustments to wholesale market prices?

A. No, not that I am aware of. In fact, most market evidence that I have seen from retail access pilots to date indicates that suppliers are more than willing to serve retail customers at levels very close to (or even below) wholesale market prices. For example, a report filed in the Massachusetts pilot shows that the weighted average retail price offered to residential customers was 2.22 ¢/kWh. Meanwhile, the wholesale market price for NEPOOL in 1996 was higher at 2.41 ¢/kWh (based on reported data in Power Markets Week). See Exhibit JAL-10.

Q. Do you make any other adjustments?

A. Yes. I adjust the credit for Pennsylvania gross receipts tax since suppliers will be responsible for collecting this tax from their customers.

Q. How will the CGC be applied to individual customers?

A. The class-specific CGC will be multiplied by each customer's 1996 baseline consumption. Thus, each customer electing retail choice will have a dollar credit tailored to his or her historic baseline consumption. The size of the credit will remain fixed during the rate year. The CGC will be recomputed each year based on the results from the sale of firm power under Duquesne's RFP process. Therefore, if market prices increase over the transition period, the CGC will increase and the related CTC will decrease. Sample pro-forma CGCs are shown in Exhibit JAL-11 for each rate class based on the most recent RFP sale of firm power for deliveries in 1998.

5. Competitive Transition Charges (CTCs)

Q. You have discussed the rate design for distribution, transmission, ancillary services and CGCs. Please describe your rate design proposal for the CTC.

A. The Act provides Duquesne with a reasonable opportunity to recover the stranded costs associated with the transition to competition by allowing the Company to charge customers in its service area for CTC revenue requirements whether or not they continue to take electricity from Duquesne. CTC revenue requirements are separately calculated and unbundled from other delivery costs. Duquesne is proposing to recover CTC-related revenue requirements through two types of charges: (i) rate class usage-sensitive CTCs (¢/kWh and $/kW) and (ii) customer-specific CTCs ($/month). The total amount collected through the CTC is calculated as a residual for each customer. The starting point is the customer's baseline level of consumption in 1996 priced at current rates. These baseline revenues are reduced, for distribution and transmission charges (including certain ancillary services), and reduced by the CGC. The remaining amount is collected through CTCs. (This approach was illustrated graphically earlier in my testimony on page 10.)

a) Class-Specific Competitive Transition Charges

Q. Please describe how the class-specific usage-related CTCs were calculated.

A. The class-specific CTC charges (¢/kWh and $/kW) were calculated as a residual from the target usage rates designed for each rate class. Total target usage rates were designed to enhance stranded cost mitigation as discussed earlier in my

testimony. These target rate levels (net of CGCs) are reduced by the usage rates for distribution and transmission service. The remainder is the variable or usage-related CTC charge.

Q. Can you illustrate this approach with some examples for the various rate classes?

A. Yes. For rate class RS, the class-specific CTC is computed by subtracting the unbundled transmission and distribution rates from the target delivery rate of 3.97 ¢/kWh (net of the CGC). In this case the result is a class-specific CTC rate of 0.72 ¢/kWh as derived below:

Target rate (net of CGC)	Distribution rate	Transmission rate	Variable CTC rate[(1)]
3.97 ¢/kWh	(2.81 ¢/kWh)	(0.45 ¢/kWh)	0.72 ¢/kWh

[(1)] Numbers may not add due to rounding.

Q. How were these rates developed for rate class RH?

A. In the same fashion, by subtracting the unbundled transmission and distribution rates from the target rate components. Set forth below are the variable CTC rates for rate class RH:

Block	Target rate (net of CGC)	Distribution	Transmission	Variable CTC rate[(1)]
1st 500 kWh	3.99 ¢/kWh	(3.16 ¢/kWh)	(0.52 ¢/kWh)	0.30 ¢/kWh
> 500 kWh (Winter)	2.65 ¢/kWh	(2.10 ¢/kWh)	(0.35 ¢/kWh)	0.20 ¢/kWh

[(1)] Numbers may not add due to rounding.

Q. Can you show the calculations for a rate class with demand meters, such as GL?

A. These are provided in the table below:

Block	Target rate (net of CGC)	Distribution	Transmission	Variable CTC rate[1]
1st 300 kW	$5,527/mo.	($1,546.19/mo.)	($429.56/mo.)	$3,551.25
> 300 kW	$6.99/kW	($1.96/kW)	(0.54/kW)	$4.49/kW
kWh	1.95 ¢/kWh	(0.54 ¢/kWh)	(0.15 ¢/kWh)	1.25 ¢/kWh

[1] Numbers may not add due to rounding.

Q. Were the class-specific CTC rates developed similarly for the remaining rate classes?

A. Yes, Exhibit JAL-9 shows the variable class-specific CTC rates and the data supporting these calculations.

b) Customer-Specific Competitive Transition Charges

Q. Please describe how the customer-specific CTC is calculated?

A. The customer-specific charge is also computed as a residual component. It is designed to insure that customers who remain as full requirements customers pay no more than current rates assuming 1996 test year sales.[10] The customer-specific CTC is determined by subtracting the variable CTC charges at customer-specific baseline usage levels from the total CTC-related revenue requirement discussed above.

Q. Please derive the customer-specific CTC charge for a typical RS customer?

A. I will do so for a customer with a monthly baseline consumption of 500 kWh. At this consumption level the customer would pay the following monthly charges:

[10] Customers that can shop for electricity from alternative suppliers may pay less in total if they can purchase electricity for less than the CGC.

Customer charge	$6.38/mo.
Energy charge (500kWh @ 11.66 ¢/kWh)	$58.30
ECR credit (500kWh @ .1831 ¢/kWh)	($0.92)
Total Bundled bill	$63.76

The next step is to reduce the baseline bill by the sum of the transmission, distribution, and class-specific variable CTC delivery charges derived earlier:

Total bundled bill	$63.76
less: distribution customer charge	($6.38)
less: distribution charge @ 2.81 ¢/kWh	($14.03)
less: transmission charge @ 0.45 ¢/kWh	($2.25)
Less variable CTC @ 0.72 ¢/kWh	($ 3.58)
Generation-related cost	$37.52

The final step is to compute the fixed CTC component by subtracting the CGC from the generation-related cost:

Generation-related costs	$37.52
CGC @ 1.856 ¢/kWh	($9.28)
Customer-specific CTC	$28.24

In this example, I have used a CGC of 1.856 ¢/kWh based on the most recent RFP. The actual CGC for rates effective January 1, 1999, will be determined through a competitive solicitation prior to the start of the phase-in period.

Q. Did you compute the customer-specific CTC for customers in the other rate classes in the same way?

A. Yes. Exhibit JAL-4 introduced earlier in my testimony provides sample calculations of customer-specific CTCs for typical customers in all other rate classes.

c) Customer Baselines

Q. You mention customer baseline information in your rate design proposal. Please explain how you propose to establish these baselines.

A. Historical monthly billing records for 1996 will be used to establish baselines for each existing premise in Duquesne's service territory. This is consistent with the cost of service study and the rate design. For those premises where monthly data is unavailable, missing data for those particular month(s) will be filled in with premise-specific data using billing information from 1995. If this process fails to produce a complete year of billing information, Duquesne will then estimate missing monthly data for each premise by using the ratio of premise-specific to class average data for the months data are available.

Q. Will these baselines be re-computed over the transition period?

A. No. The baselines established for existing premises based on 1996 data will remain fixed throughout the transition period. Fixing the baseline levels has several advantages for customers. First, the benefits of lower charges for incremental consumption will not be partially offset by increased customer-specific CTCs that would otherwise result by re-computing baselines at higher future sales levels. This will prevent dissuading customers from making socially beneficial consumption decisions now. More importantly, all customers will be

treated on a comparable basis thereby minimizing concerns that some individual or customer group is being treated unfairly. Use of historical customer baselines will prevent gaming and insure that all customers pay their fair share of stranded costs consistent with the intent of the Act.

Q. How will baselines be estimated for new premises that connect to the Duquesne system during the transition period?

A. Duquesne will estimate customer baselines using the best customer usage information available. Currently, based on existing procedures, Duquesne's New Business Managers and Account Representatives (reporting to Mr. Frank Hoffmann, General Manager of Marketing) receive information provided by each new customer regarding installation of new electrical equipment from which expected billed demand is computed. Electrical energy consumption is then computed based upon the estimated billed demand times the expected number of hours the customer operates in the month. With this information customer-specific CTCs can be established for each new premise. For existing Duquesne customers that move into another premise during the transition period, the Company will use the baseline established for that residence. For residential customers moving into a new premise, the Company will use similar premises in similar neighborhoods to determine a baseline proxy for the new premise. Once 12 months of billing history has been recorded, Duquesne will compare estimated and actual consumption and make adjustments to the baseline levels if a significant difference exists (either upward or downward).

D. Customer Choice Options Under Duquesne's Plan

Q. What rate options will customers have under Duquesne's restructured tariff offerings?

A. A customer who is eligible to exercise choice of supplier will have the option of contracting for electricity directly with a PaPUC-approved electricity supplier or remaining as a Duquesne full requirements customer on an unbundled basis. Customers that choose an alternative supplier will be responsible for paying Duquesne delivery charges for distribution, transmission and CTC.[11] A customer who initially decides to take power service from an alternative supplier will be able to return to Duquesne's full requirements service (under the rate cap provisions of the Act) anytime after a 30 day notification period. However, customers who return to Duquesne will be restricted from switching again to another supplier within a 12 month period from the date of their return. This restriction will also apply to new customers to insure that returning and new customers are treated similarly, as the Act requires. This restriction is necessary to protect the Company against opportunities for "gaming". In the absence of this safeguard, gaming opportunities would be present for marketers to aggressively encourage customers to take power from them during low cost periods and then switch back to Duquesne during high cost periods. Since Duquesne's rates would be subject to the rate cap provisions of the Act, the Company would potentially be

[11] Duquene will also collect electricity charges for the supplier unless the customer elects a separate bill.

unable to fully recover the costs incurred to supply service to these customers. In the PECO restructuring case, the OCA objected to the one-year stay-out provision and has suggested allowing utilities to charge returning customers a short-term market price in order to avoid the "gaming" problem. This would be acceptable to Duquesne only if the short-term market price was not subject to the rate cap provisions in the Act. Otherwise, the OCA's proposal would not solve the problem.

Q. What will customers who remain with Duquesne pay?

A. These customers would pay the delivery charges discussed above plus the CGC.

Q. Please explain the relationship between the annual competitive bid solicitations and the CGCs over time.

A. Duquesne will conduct a one year solicitation prior to the beginning of each year during the transition period to determine the competitive market price. The resulting market prices will then be the basis for setting CGCs for each year of the transition period. As such, the CGCs will change during the transition period based on the results from the annual solicitations. In addition, the CTCs will be re-computed each year to insure that Duquesne remains within the confines of the rate cap provisions of the Act. Therefore, if market prices rise over time, the CTCs will fall and vice versa. Finally, the market prices from the RFP will be used to establish Duquesne's retail generation charges over the transition period.

VI. MARKET PRICES IN DUQUESNE'S MARKET

Q. Please turn to the issue of market prices for electricity. What is the scope of your testimony on this subject.

A. I discuss two issues relating to the market price of power. First, I discuss the nature of the market in which Duquesne competes and in particular the difference between power markets in ECAR and power markets in PJM. Second, I provide public data on market prices and show that these data are consistent with the market prices revealed in Duquesne's recent RFP.

Q. Please turn to the first issue, markets for electricity, and explain why you are discussing this issue.

A. I address this issue because of the Commission's preliminary ruling in the pilot program orders. In those orders, the Commission set a single state-wide market price of power. Duquesne is proposing here, however, to calculate CGCs on the basis of market prices relevant to Duquesne, not all the other Pennsylvania utilities.

The principal flaw in the Commission's approach in the pilot orders was its recommendation that a single market price of power be used for all Pennsylvania utilities, thereby failing to recognize that Pennsylvania utilities may face differing market conditions. As I show below, the market prices prevailing in western Pennsylvania are materially lower than the market prices in eastern Pennsylvania. The reason is that eastern Pennsylvania (consisting of service territories for

Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power & Light, and PECO Energy) is located within PJM, an electrically constrained regional market.

Q. Please explain.

A. PJM is an electric "island," having only limited transmission import capability to the west (ECAR) and to the north (New York). This is important because, during certain hours of the year, PJM utilities cannot rely on the same low-cost sources of power (principally coal-fired units) available to utilities in ECAR, including Duquesne. Rather, during these hours PJM must operate gas-fired generating units that have a higher marginal running cost. Hence, the market rate for power in PJM will be higher in these hours than it is in ECAR.

More specifically, the peak load in PJM is approximately 50,000 MW, but PJM's total transmission import capability is 5,000 MW or less. As a result, PJM, unlike other regions of the country, cannot rely on its transmission ties to other areas to import substantial amounts of energy for economic purposes, or in the case of an emergency such as the unexpected outage of several large generating units. Not only is the ECAR region much larger (85,000 MW), but ECAR has strong transmission ties to neighboring regions. This, when coupled with other factors, such as an excess of generating capacity over the amount needed to reliably supply customers, has resulted in there being very little, if any, value to "capacity" within ECAR today. This conclusion is supported by Mr. Irvin in his testimony.

Q. Please turn to the second issue, the presentation of public data on market prices.

A. I present this public data because it is useful in confirming the prices produced in Duquesne's recent RFP for the one-year sale of power.[12]

The first such public data source I use is the FERC Form No. 714, which provides data on a utility's "system lambda." System lambda refers to the incremental cost to a utility of supplying the last megawatt of energy each hour of the year. It thus represents the "marginal" cost of supplying electricity t+o customers. This marginal cost could represent the cost of producing energy from the utility's own generation or the cost of purchasing power from others. I view this information as particularly useful in estimating prices in a competitive market because, in a competitive market, prices will be driven close to marginal cost. It is thus likely that, at least in the near term, the market price of power will be close to each utility's control area lambda as reported on the FERC Form No. 714.

Q. Please explain what this data shows.

A. I will summarize system lambda data both for Duquesne and for PJM as a whole. I provide the latter calculation for the purpose of illustrating the difference in prices (costs) in the two market areas. The reason I have treated PJM as an entity is because PJM operates economically as a single "control area" (which means all generation within the pool is dispatched in economic merit order) and therefore PJM reports a single pool-wide system lambda in its FERC Form 714. I have

[12] As to the eight-year sale of power, however, there is no comparable public data of which I am aware.

taken the system lambda for each of the 8760 hours of the year and calculated a numerical average price, which is as follows:

Year	Duquesne	PJM
1995	$17.56/MWH	$20.56/MWH
1996	$17.99/MWH	[N/A]

This information corresponds, as one would expect, to public data on actual market prices within the respective regions, including the results of Duquesne's recent RFP. This close correlation suggests that short-term power markets are workably competitive such that prices are being driven close to the marginal cost of production, as economic theory would suggest. Indeed, the FERC recently held that system lambda data is a good proxy for market clearing prices. Ohio Edison et al., Docket No. EC97-5-000 (July 16, 1997).

Q. What other data sources have you used?

A. The other source of data is Power Markets Week, which is published by McGraw-Hill. According to the editors of Power Markets Week, the publication conducts confidential surveys of buyers and sellers of the prices charged in wholesale power transactions in different regions. Using this information, Power Markets Week constructs a weekly weighted average power price index for peak periods and a weekly price range for off peak periods for several regions of the country, including ECAR and PJM. I have included data from the years

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1996 and 1997 in Exhibit JAL-13, the results of which are summarized in the following the table:

ELECTRICITY PRICES IN ECAR AND PJM ($/MWH)

	ECAR	PJM	Price Difference
Jan-July 1997			
On-Peak	21.17	24.56	16%
Off-Peak	13.60	16.55	17%
Wtd. Average	$17.47	$20.36	17%
1996			
On-Peak	22.52	25.29	12%
Off-Peak	14.30	15.46	8%
Wtd. Average	$18.20	$20.13	11%

As the table indicates, the weighted average market price of power in ECAR was below $0.02/kWh ($20/MWH) in both years and for the year 1996 it was approximately $18/MWH. That data is consistent with the prices resulting from the RFP and the system lambda data. The Power Markets Week data also confirms the proposition that power prices in PJM tend to be materially higher than in ECAR.

VII. OTHER RATES AND RIDERS

A. Treatment of Supplemental and Back-Up Rates for Self-Generators

Q. Does Duquesne plan to eliminate Rider 16 for backup or partial requirements service for customers that have access to self-generation?

A. Yes, but only for new customers and existing retail customers that install self-generation in the future.

Q. Please explain.

A. Existing customers with self-generation will continue to pay the current rates in effect under the current rider provisions and charges. However, consistent with the Act, Duquesne proposes to eliminate Rider 16 for existing retail customers and new customers moving into its service territory that install new generating capacity in the future. These changes will take place upon Commission approval.

Q. Describe the requirements of the Act pertaining to customer self-generation.

A. Section 2808 (A) of the Act states that:

"If a customer installs on-site generation which operates in parallel with other generation on the public utility's system and which significantly reduces the customer's purchases of electricity through the transmission and distribution network, the customer's fully allocated share of transition or stranded costs shall be recovered from the customer through a competitive transition charge."

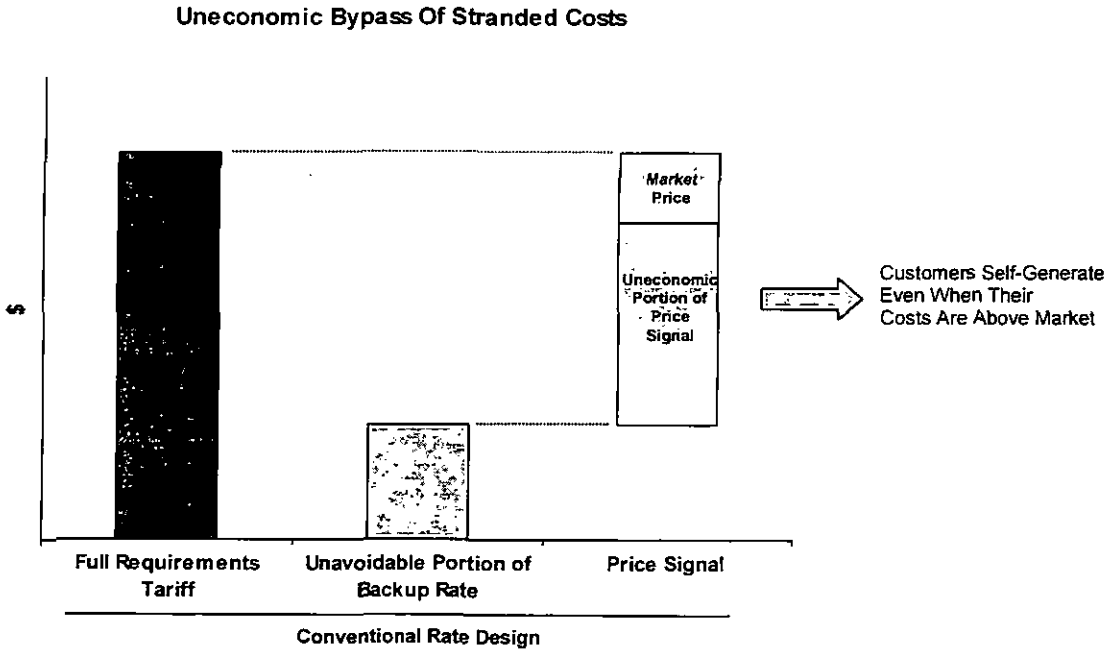
This section of the Act is based on sound public policy principles by effectively preventing such customers from bypassing their fully allocated share of transition costs.

Q. If kept in place, would Duquesne's Rider 16 allow customers that install self-generation in the future to bypass paying for their fair share of transition costs?

A. Yes. The prospect of uneconomic bypass arises because potential self-generation projects "compete" not against the market price of power but rather against Duquesne's embedded cost tariffs, which are currently much higher than the market price for power. Duquesne's current Rider 16 encourages inefficient by-

pass because a customer installing self-generation equipment could avoid paying for a large portion of fixed costs currently recovered through retail tariffs. This sends an uneconomic price signal to potential self-generators as shown below:

Customers that install self-generation equipment would realize savings equal to



the difference between the total full requirements rate and the unavoidable charges under Rider 16. This difference is the amount by which their utility bill would go down if they decide to install self-generation equipment. If they can install and operate self-generation equipment at a cost below this bill differential they will have a financial incentive to self-generate. However, the problem with Rider 16 is that it may encourage some customers to install self-generation equipment even when the cost of self-generation exceeds the market price of power. This incentive to install self-generation raises the potential for inefficient entry into the

generation market and could frustrate Company efforts to recover its stranded costs over the transition period.

Q. What are the implications of this?

A. Uneconomic bypass of Duquesne's electric system will result in inefficient use of society's resources, and unnecessarily shift costs from the customer who installs self-generation to remaining customers and/or Duquesne shareholders.

Q. How can this problem be solved?

A. The solution is found in the provisions of the Act by allowing utilities to assess a Competitive Transition Charge against such customers. This can be accomplished by redesigning rates for partial requirements service in the same manner Duquesne redesigned rates for its other services.

Q. How would charges be calculated for new self-generators?

A. Duquesne would use the same applicable tariff as the customer would have faced prior to self-generation. Duquesne would calculate baseline revenues for existing and new retail customers according to the appropriate full requirements tariff. From this amount, we would subtract transmission and distribution charges, and a competitive generation credit based on the results from the most recent RFP, in order to determine a customer-specific CTC. The customer would be responsible for the customer-specific CTC whether or not he chooses to install self-generation in the future. When the self-generation customer purchases power from Duquesne, he will pay the market price of power and any related transmission and distribution delivery charges.

Q. Will the use of these tariffs allow Duquesne to totally eliminate uneconomic price signals to install self-generation?

A. No. To do this, Duquesne would have to increase the fixed charges contained in the retail rates. As it is, customers considering self-generation will be able to avoid paying Duquesne's CGC, variable CTC, usage-related distribution and transmission charges. The sum of these charges will clearly exceed market levels.

Q. Will Duquesne's proposal prevent customers from installing self-generation when it is economic?

A. No. Uneconomic entry and the creation of stranded costs are discouraged, but economic entry is not. Customers will continue to have the correct incentive to install self-generation whenever the costs of self-generation are less than market prices. Moreover, this is consistent with Duquesne's resource planning criteria in a competitive market. Duquesne would only consider development of new generation resources if all the costs of such a facility could be recovered in the competitive market. This is the same standard that should be applied to customer-developed generation going forward. In addition, Duquesne's proposal to lower usage charges (energy and/or demand related) closer to market levels will encourage more efficient customer dispatch of self-generation units. Thus, Duquesne's revised tariff will not only improve efficiency with respect to customer investment decisions, but also improve customer operating decisions.

Q. Would the revised rider violate the total rate cap specified in the Act?

A. No. The sum of all the charges would never exceed charges under the current applicable full requirements tariff.

Q. Can self-generation customers purchase back-up service from alternative suppliers?

A. Yes. The new rider is designed to be competitively neutral. Customers could choose to purchase backup supplies from either Duquesne or a competitive supplier.

Q. Why does Duquesne propose to "grandfather" existing customers with self-generation on Rider 16?

A. These customers chose to install self-generation based on the economics at the time of their decisions. And while some of these decisions may have been uneconomic measured by competitive power market standards, Duquesne recognizes that it would be unfair to retroactively change the rules of the game. Duquesne's *intent is* to provide proper pricing signals for future decision-making and not to penalize customers for decisions made under the old regulatory environment.

B. Treatment of Service Rates and Other Riders

Q. Are there some rates that you did not unbundle?

A. Yes, there are some rates which provide a service in addition to providing electric service.

Rate SM provides a street lighting service to municipalities that do not want to own and operate their own street lighting equipment. The major cost

components of this rate are related to the cost of providing the lighting equipment and its maintenance. Therefore, Duquesne will continue to provide this service under a bundled rate.

Rate SH provides a lighting service for state highways that have turned ownership of the lighting system to Duquesne, where Duquesne is responsible for future replacement and maintenance of the system. Similar to Rate SM, the major cost components of this rate are related to the cost of replacing and maintaining the lighting equipment. Therefore, Duquesne will continue to provide this service under a bundled rate.

Rate SE provides street lighting energy to municipalities that have at least 15,000 street lamp installations, where the municipality owns and operates its own street lamp installations. Currently the only customer is the City of Pittsburgh. The kWh energy charge in this rate will be unbundled into its transmission, distribution, generation CGC and CTC components. This will allow the city to shop for its electricity supply like any other retail choice customer. Rate SE also includes pricing for Special Facilities such as conduit, cable, ballasts, etc., that were designed to directly recover their costs. Therefore, charges for Special Facilities will remain bundled.

Rate PAL provides both a private area lighting service to residential, commercial and industrial customers who do not want to own, install, and operate their own lighting equipment, and unmetered energy to serve customers who want to own, install, and maintain their own equipment. Duquesne will continue to

provide the service for Company-owned and maintained equipment at the current bundled prices since the major cost components of this service are related to the cost of providing the lighting equipment and its maintenance, similar to Rate SM. For customer-owned and maintained equipment the kWh energy charges of the rate will be unbundled into their transmission, distribution, generation CGC and CTC components, similar to Rate SE.

Q. Does the unbundling of Duquesne's tariff impact any of the riders?

A. Yes, some riders will be affected. Duquesne's current tariff has 20 riders. Ten of the existing riders are related to the timing of payments and billing options for customer convenience and are not related to rate unbundling. These riders will remain largely unmodified except for references to renamed unbundled rates and the applicability of the rider to Duquesne delivery charges. The riders (as they are currently numbered) which fall into this category are as follows:

Rider No. 1 - Direct Current Service

Rider No. 2 - Untransformed Service

Rider No. 3 - School and Governmental Service Discount Period

Rider No. 4 - HUD Financed Multi-Family Housing

Rider No. 6 - Temporary Service

Rider No. 11 - Street Railway Service

Rider No. 10 - State Tax Adjustment

Rider No. 12 - Billing Option for Volunteer Fire Companies and Non-Profit Senior Citizen Centers

Rider No. 17 - Emergency Energy Conservation

Rider No. 18 - Rate for Purchase of Electric Energy from Customer-Owned Renewable Resources Generating Facilities.

Q. Please describe the modifications that were made to the remaining riders.

A. Of the remaining ten riders, some were revised to reflect supplier choice and others were deleted.

Rider No. 7, Interruptible Service will be revised to apply to existing full requirements customers only. It is not meaningful for Duquesne to provide a generation related discount for customers who purchase power supplied by others. The customers' discounts from the current level of interruptible service will be maintained if they take electricity from Duquesne. Customers that choose alternative supplies can negotiate market based-discounts for interruptible service.

Rider No. 13, General Service Separately Metered Electric Space Heating Service, Rider No. 14, Residential Service Separately Metered Electric Space and Water Heating, and Rider 19 Off-Peak Water Heating Service were eliminated. These riders provide pricing for incremental energy used for specific space and water heating services to customers already taking the bulk of their service at full service rates. Under Duquesne's proposed rate redesign, customers will be able to purchase incremental energy at market-based rates eliminating the need for these riders. Existing customers taking service will continue to receive the benefits of the riders at their baseline energy consumption through the customer-specific CTC calculation.

Rider 15, Energy Cost Rate, is affected only by variable generation costs and was rolled into rates at a cost justified level, as described by Mr. Clayton. The effect of the Energy Cost Rate roll-in will be captured in the fixed CTC calculations.

Q. Do you still plan to have economic development riders as part of the tariff?

A. Yes. As explained in Mr. Hoffman's testimony, Duquesne will provide rates to encourage economic development at new service locations. Economic development at existing locations will be provided through Duquesne's redesigned and unbundled tariffs.

Q. Would you please explain this in more detail.

A. Certainly. Rider No. 8, Industrial Economic Development Rider for Customers at Existing Service Locations will be phased-out as existing contracts expire. The rider will be unavailable to new customers after December 31, 1998. This should have little customer impact because incremental usage above the baseline will be priced at lower usage charges under Duquesne's unbundled rate design. Customers who are taking service with the Rider No. 8 discount as of December 31, 1998 will continue to receive their discount according to the contract schedule through the remainder of their 5 year contract. The discounts will be reflected in calculating the customer's fixed CTC.

Rider No. 9, Industrial Economic Development Rider for Customers at New Service Locations, and Rider No. 20, Small Business Development Rider applied to new locations, remain unchanged except for modifications in the tariff language to reflect the fact that the discount will be recognized in calculating the customer-

specific CTC. Industrial customers at new service locations will still be eligible for the applicable economic development discounts regardless of the supplier. Duquesne still believes that economic development is very important for its customers and is consistent with the Act, the PaPUC guidelines, Governor Ridge's expressed interest in economic development, and the PaPUC Working Group's current approach to the transition into retail access.

Q. Please explain the effect of the proposed modifications to existing customers on Rider No. 5 Time of Day Discounts.

A. Rider No. 5 was revised to apply to existing customers as of December 31, 1998 who have changed their operations to benefit from Duquesne's on-peak and off-peak period rate. Retaining the rider will ensure that these customers will not see an increase in their bill. Rider No. 5 will not be available for new customers because it was designed to encourage off-peak usage thereby relieving system generation load (and costs) during peak periods. It is not meaningful for Duquesne to provide a generation discount for customers who purchase power supplied by others. For customers desiring to revise their operating schedules after December 31, 1998, any benefits derived from off-peak operation will be realized between the customer and the supplier.

Q. Will customers taking service with Rider 5 on December 31, 1998 see an increase on January 1, 1999?

A. No. Their billing demand will continue to be established through the Rider No. 5 criteria, that is, the greater of on-peak demand or one-third off-peak demand.

Existing Rider No. 5 customers, whether they choose a new supplier or receive energy from the Company, will receive the same time of day discount at their 1996 usage level through the CTC calculation.

Q. Will this customer receive any additional off-peak discounts on load levels which exceed its baseline usage?

A. No. All existing discounts will be retained at the baseline usage level through the CTC calculation. All incremental load will be delivered at the appropriate delivery rate at the chosen supplier prices. The customer could benefit from shifting load to off-peak periods if its supplier provides time of day discounts.

Q. What modifications were made to accommodate the back-up power customers currently billed under rider 16?

A. Rider 16 was renumbered as Rider 10, Service to Non-Utility Generating Facilities, and will remain largely unchanged for existing customers. The sole change for existing customers will be a change from a bundled to an unbundled bill for supplementary power. All other charges, terms and conditions for Firm Back-up Power, Interruptible Back-up Power and Maintenance Power will be unchanged and frozen for existing customers. The changes for new customers and existing customers considering self-generation were discussed earlier in my testimony.

C. Appendix A Responses

Q. What data items identified in Appendix A to the Commission's order are you sponsoring?

A. I am sponsoring the responses to the following data requests:

- A1
- I1-I18
- J1-J3
- K1-K2
- L12-13, L15
- M2

Q. Does this conclude your testimony?

A Yes, it does.

List of Exhibits for James A. Lahtinen

Exhibit JAL-1	Allocated Cost of Service
Schedule A	Cost of Service Study Results
Schedule B	Cost of Service Study Results (By FERC Account)
Schedule C	Cost of Service Study Results (Basis for Rates)
Schedule D	Cost Allocation Table
Schedule E	Derivation of Production Based Ancillary Services
Exhibit JAL-2	FERC Testimony of Peter A. Wybierala
Exhibit JAL-3	Comparison of Cost Allocations to Company Revenues
Exhibit JAL-4	Comparison of Bundled Versus Unbundled Charges for Sample Customers
Exhibit JAL-5	Potential Stranded Cost Mitigation Resulting from Rate Redesign
Exhibit JAL-6	Rate Reduction on Incremental Usage – Comparison of Bundled and Unbundled Usage Rates
Exhibit JAL-7	Mitigation Sensitivity Analysis: Changes in Energy and Demand Price Elasticities
Exhibit JAL-8	Mitigation Sensitivity Analysis: Changes in Percentage Reduction in Most Energy and Demand Charges
Exhibit JAL-9	Comparison of Current Bundled and Proposed Unbundled Usage Rates
Exhibit JAL-10	Retail Versus Wholesale prices in Massachusetts
Exhibit JAL-11	Sample Customer Generation Charges/Credits Based on Recent RFP
Exhibit JAL-12	Sample Tariff Sheets by Rate Schedule
Exhibit JAL-13	Market Prices in ECAR and PJM

Exhibit JAL-1

Schedule A

Schedule B

Schedule C

Schedule D

Schedule E

Schedule A

Cost of Service Study Results

(Pages 1-10)

COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Electric Plant In Service																	
(1) Production Plant	$2,366,398,721	$2,309,085	$2,364,089,636	$8,371,583	$668,592,339	$62,849,038	$595,660,714	$69,243,606	$464,055,186	$60,869,437	$195,238,257	$185,071,708	$3,259	$5,987,865	$6,580,681	$175,045	$1,380,915
(2) Transmission Plant	312,186,756	294,078	311,892,678	647,900	73,091,533	6,359,087	61,814,022	7,900,816	64,336,635	11,324,125	40,848,332	24,769,158	90	173,099	190,218	5,061	212,303
(3) Distribution Plant	1,233,225,730	359,992	1,232,865,738	4,411,052	475,848,589	42,042,559	313,302,916	37,819,335	175,090,817	26,820,438	85,275,511	11,275,923	1,798	18,984,998	41,298,085	269,165	906,618
Total	$3,911,811,207	$2,963,155	$3,908,848,052	$13,430,535	$1,217,520,471	$131,250,685	$990,777,651	$115,063,757	$703,482,638	$119,014,000	$321,362,100	$221,116,789	$5,098	$24,545,960	$48,068,984	$449,271	$2,499,834
General & Intangible Plant																	
Production Plant	174,057,999	169,842	173,888,156	615,763	49,176,879	6,093,875	43,813,205	5,093,141	34,133,097	5,949,739	14,360,547	13,612,757	240	440,431	484,035	12,875	101,572
Transmission Plant	6,865,279	6,467	6,858,812	18,046	1,607,351	139,842	1,799,174	173,746	1,414,823	249,028	898,293	545,137	2	3,807	4,183	111	4,669
Distribution Plant	106,471,204	31,648	106,399,555	387,805	41,834,889	3,696,245	27,544,576	3,333,745	15,398,416	2,357,966	7,497,146	991,343	154	1,618,349	3,630,782	25,422	79,707
(4) TOTAL GENERAL & INTANGIBLE PLANT	289,344,483	207,959	289,136,524	1,022,215	92,619,119	9,929,963	73,156,954	8,600,633	50,941,336	8,556,732	22,755,986	15,149,237	395	2,060,587	4,119,010	38,409	185,947
Electric Plant In Service																	
Total Production Plant	2,540,456,720	2,478,928	2,537,977,792	8,987,346	717,769,219	68,942,914	639,473,919	74,336,747	498,188,283	66,039,176	209,598,804	198,684,465	3,499	6,428,296	7,064,716	187,920	1,482,487
Total Transmission Plant	319,052,035	300,545	318,751,491	666,546	74,698,884	6,498,929	63,613,495	8,074,563	65,751,458	11,573,153	41,746,625	25,314,295	92	176,906	194,401	5,172	216,971
Total Distribution Plant	1,341,696,934	391,641	1,341,255,293	4,798,858	517,683,488	45,738,804	340,847,492	41,253,080	190,484,233	29,178,404	92,772,657	12,267,266	1,901	20,001,345	44,928,867	314,587	986,322
TOTAL ELECTRIC PLANT IN SERVICE (1+2+3+4)	$4,201,155,690	$3,171,113	$4,197,984,576	$14,452,750	$1,310,139,591	$141,180,648	$1,043,934,906	$123,664,389	$754,423,974	$127,590,733	$344,118,086	$236,266,025	$5,493	$26,606,547	$52,187,974	$507,680	$2,685,781
Accumulated Depreciation																	
(1) Production Plant	($1,081,527,387)	($1,055,406)	($1,080,471,976)	($3,823,617)	($305,445,345)	($37,832,024)	($272,115,603)	($31,638,732)	($212,201,560)	($35,975,615)	($89,352,159)	($84,629,410)	($1,489)	($2,736,148)	($3,007,034)	($79,987)	($632,454)
(2) Transmission Plant	(117,690,607)	(110,618)	(117,579,989)	(310,941)	(27,493,701)	(2,391,999)	(30,770,993)	(2,971,927)	(24,200,508)	(4,259,619)	(15,629,286)	(9,324,551)	(34)	(65,112)	(71,551)	(1,904)	(79,659)
(3) Distribution Plant	(388,407,968)	(105,215)	(388,302,753)	(1,264,482)	(151,298,096)	(12,893,821)	(90,194,096)	(11,412,668)	(50,894,699)	(7,850,365)	(25,995,099)	(3,267,540)	(504)	(6,141,980)	(10,563,245)	(92,481)	(282,652)
Total	(1,585,625,962)	(1,271,239)	(1,581,354,713)	(5,507,025)	(484,237,941)	(53,118,844)	(393,080,694)	(46,022,727)	(287,296,967)	(48,085,600)	(128,977,144)	(97,321,501)	(2,057)	(10,943,240)	(21,641,830)	(174,372)	(994,965)
General & Intangible Plant																	
Production Plant	(65,957,768)	(64,355)	(65,888,413)	(233,320)	(18,633,738)	(2,309,046)	(16,601,375)	(1,929,855)	(12,933,460)	(2,254,431)	(5,441,092)	(5,158,045)	(91)	(166,885)	(183,407)	(4,879)	(38,487)
Transmission Plant	(2,601,341)	(2,450)	(2,598,890)	(7,065)	(609,046)	(52,988)	(681,729)	(65,835)	(536,094)	(94,360)	(340,375)	(206,559)	(1)	(1,442)	(1,585)	(42)	(1,769)
Distribution Plant	(41,082,180)	(11,992)	(41,070,188)	(146,944)	(15,851,760)	(1,400,554)	(10,436,982)	(1,263,198)	(5,832,759)	(893,463)	(2,840,763)	(375,632)	(58)	(612,455)	(1,375,753)	(9,633)	(30,202)
(5) TOTAL GENERAL & INTANGIBLE PLANT	(109,636,289)	(78,798)	(109,557,471)	(387,330)	(35,094,551)	(3,762,588)	(27,720,092)	(3,258,888)	(19,302,314)	(3,242,254)	(8,622,230)	(5,740,237)	(150)	(780,782)	(1,560,745)	(14,554)	(70,458)

COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS	PA PUC JURIS	RA	RS	RH	GS/GM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Accumulated Depreciation																	
Total Production Plant	(1,147,460,150)	(2,319,761)	(1,145,360,389)	(4,056,837)	(324,079,084)	(40,141,870)	(288,716,976)	(33,568,587)	(225,135,020)	(39,230,046)	(94,793,551)	(89,787,455)	(1,579)	(2,903,033)	(3,190,441)	(84,865)	(670,941)
Total Transmission Plant	(120,291,943)	(113,069)	(120,178,874)	(326,000)	(28,102,747)	(2,444,867)	(31,452,722)	(3,037,761)	(24,736,602)	(4,353,879)	(15,969,661)	(9,531,110)	(35)	(86,554)	(73,136)	(1,946)	(81,628)
Total Distribution Plant	(427,490,128)	(117,207)	(427,372,921)	(1,511,411)	(167,150,662)	(14,294,376)	(106,671,085)	(12,675,268)	(56,717,659)	(8,743,828)	(26,636,462)	(9,740,172)	(592)	(8,754,443)	(19,958,997)	(102,114)	(312,854)
TOTAL ACCUMULATED DEPRECIATION (1+2+3+	($1,695,262,221)	($1,350,037)	($1,693,912,184)	($5,894,359)	($519,332,492)	($56,881,232)	($426,840,785)	($49,281,615)	($306,589,281)	($52,327,854)	($137,599,674)	($109,061,737)	($2,207)	($11,724,031)	($23,222,574)	($188,925)	($1,065,423)
Net Allocated Plant																	
(1) Production Plant	$1,284,871,339	$1,250,679	$1,283,617,660	$4,547,967	$363,138,995	$45,018,215	$323,545,111	$37,604,874	$251,853,626	$43,913,822	$105,886,098	$100,442,297	$1,771	$3,251,717	$3,573,047	$95,058	$748,461
(2) Transmission Plant	194,498,154	180,459	194,312,695	526,958	45,597,832	3,967,089	51,043,329	4,926,889	40,136,127	7,064,506	25,219,045	15,464,607	56	107,987	118,667	3,157	132,444
(3) Distribution Plant	846,817,762	254,777	846,562,985	3,046,585	324,547,703	28,148,737	212,168,818	26,507,267	124,205,918	18,970,073	61,279,812	7,908,383	1,214	10,243,008	22,714,820	196,684	623,963
Total	2,326,185,255	1,691,915	2,324,493,340	8,120,511	733,282,530	78,132,041	591,757,258	69,041,030	416,195,671	69,948,400	192,384,956	123,815,288	3,041	13,602,712	26,407,134	294,899	1,504,868
General & Intangible Plant																	
Production Plant	108,105,230	105,487	107,999,743	382,443	30,543,140	3,784,828	27,211,830	3,163,288	21,199,837	3,695,308	8,919,195	8,454,712	149	273,546	300,626	7,997	63,085
Transmission Plant	4,263,939	4,017	4,259,922	11,581	998,306	86,854	1,117,444	107,912	878,729	154,668	557,919	338,578	1	2,364	2,598	69	2,900
Distribution Plant	67,309,044	19,657	67,319,387	240,861	25,983,122	2,235,691	17,107,589	2,070,547	9,560,657	1,464,503	4,656,383	615,710	95	1,003,894	2,255,039	15,290	49,505
(4) TOTAL GENERAL & INTANGIBLE PLANT	179,708,213	129,161	179,579,053	634,885	57,524,568	6,107,375	45,436,860	5,341,745	31,639,022	5,314,479	14,133,497	9,409,000	246	1,279,805	2,558,265	23,355	115,489
Net Allocated Plant																	
Production Plant	1,392,976,569	1,356,166	1,391,617,403	4,930,409	393,682,135	48,803,044	350,756,941	40,768,160	273,053,263	47,609,130	114,805,293	108,897,009	1,920	3,525,263	3,874,275	103,055	811,546
Transmission Plant	198,760,093	184,476	198,572,617	540,539	46,596,138	4,053,943	52,160,773	5,034,801	41,014,856	7,219,174	25,776,964	15,803,185	58	110,351	121,265	3,226	135,344
Distribution Plant	914,126,806	274,434	913,882,372	3,287,446	350,530,826	31,444,429	234,276,407	28,577,814	133,766,575	20,434,575	65,936,195	8,524,094	1,309	11,246,902	24,969,659	212,473	673,468
TOTAL NET ALLOCATED PLANT (1+2+3+4)	$2,505,093,468	$1,821,076	$2,504,072,392	$8,758,395	$790,807,098	$84,299,416	$637,194,121	$74,382,774	$447,834,694	$75,262,879	$206,518,413	$133,224,288	$3,286	$14,882,517	$28,965,199	$318,754	$1,620,358
Additions & Deductions To Net Plant																	
Additions																	
Land Held For Future Use (F714)																	
Production Plant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transmission Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
CWIP - Construction Work In Progress (P216.1)																	
Production Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deductions																	
Accum. Deferred Income Taxes (P270 277)																	
Production Plant	(255,524,503)	(249,036)	(255,275,167)	(903,966)	(72,193,738)	(8,946,066)	(64,316,638)	(7,476,947)	(50,198,830)	(8,734,468)	(21,081,890)	(19,984,103)	(352)	(646,572)	(710,584)	(18,901)	(149,112)
Transmission Plant	(23,699,224)	(22,324)	(23,676,900)	(84,367)	(5,548,642)	(482,741)	(6,210,821)	(599,779)	(4,884,026)	(859,655)	(3,100,944)	(1,861,835)	(7)	(10,141)	(14,440)	(384)	(16,117)
Distribution Plant	(108,945,787)	(31,802)	(108,913,985)	(389,682)	(42,032,302)	(3,214,129)	(27,677,847)	(3,349,875)	(15,467,856)	(2,369,375)	(7,533,420)	(996,139)	(154)	(1,674,170)	(3,648,359)	(25,545)	(80,092)
TOTAL ACCUM. DEFERRED INCOME TAXES	(388,169,514)	(303,463)	(387,866,051)	(1,358,015)	(119,779,682)	(13,142,937)	(98,205,305)	(11,426,601)	(70,460,752)	(11,963,498)	(31,716,255)	(22,862,077)	(513)	(2,283,882)	(4,373,383)	(44,831)	(245,321)

Rate Base Summary																	
Production Plant	1,137,452,066	1,109,031	1,136,342,236	4,026,443	321,486,397	39,854,978	286,437,303	33,291,213	222,944,433	38,874,662	93,723,363	88,912,906	1,568	2,878,691	3,163,691	84,153	662,434
Transmission Plant	175,060,069	165,151	174,895,718	476,172	41,047,498	3,571,202	45,949,953	4,437,022	36,130,830	6,359,519	22,676,020	13,971,351	51	97,211	106,824	2,842	119,227
Distribution Plant	805,211,019	242,631	804,968,388	2,897,765	308,493,524	27,730,300	206,598,580	25,227,939	119,288,679	19,085,201	58,402,775	7,527,955	1,155	9,622,232	21,321,501	186,928	583,376
TOTAL ADJUSTED RUEL PLANT (Rate Base)	$2,117,723,954	$1,517,813	$2,116,206,341	$7,400,380	$671,027,419	$71,156,479	$538,985,816	$62,956,173	$377,373,942	$63,299,382	$174,802,157	$110,362,211	$2,773	$12,598,135	$24,592,016	$273,923	$1,375,037
Return on Rate Base @ %9.61																	
Production Plant	109,309,144	106,555	109,202,469	386,941	30,894,843	3,830,003	27,526,625	3,199,286	21,424,960	3,735,655	9,006,815	8,544,530	151	276,642	304,031	8,087	63,660
Transmission Plant	16,820,348	15,871	16,807,478	45,760	3,944,664	343,192	4,415,790	426,398	3,472,173	611,150	2,179,165	1,337,042	5	9,342	10,266	273	11,458
Distribution Plant	77,300,279	23,317	77,357,462	278,475	29,646,220	2,664,982	19,844,122	2,424,405	11,460,503	1,834,066	5,612,507	723,436	111	924,745	2,050,986	17,944	52,023
TOTAL RETURN ON RATE BASE	$203,429,772	$145,843	$203,367,429	$711,177	$64,485,735	$6,838,138	$51,786,537	$6,050,088	$36,265,636	$6,083,071	$16,798,487	$10,605,009	$267	$1,210,729	$2,363,283	$26,324	$132,141
Adjustments To Rate Base For Ratemaking																	
Add: Regulatory Assets																	
Production	455,273,723	444,247	454,829,476	1,610,617	128,629,198	15,939,406	114,599,737	13,321,844	89,280,023	15,562,397	37,562,076	35,606,124	627	1,152,011	1,266,063	33,677	265,076
Transmission	32,870,171	30,775	32,839,396	88,732	7,648,988	665,475	8,561,023	826,818	6,732,793	1,185,063	4,274,755	2,594,172	9	18,115	19,906	530	22,217
Distribution	56,844,593	16,584	56,827,997	203,324	21,933,783	1,937,919	14,441,457	1,747,863	8,070,676	1,236,262	3,930,709	519,755	81	847,442	1,903,603	13,329	41,790

COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	SH	DSIOM	DMH	OL	OLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Total	544,788,485	491,616	544,296,869	1,902,673	156,211,970	16,542,801	137,603,017	15,898,522	104,083,493	17,983,727	45,767,540	38,720,050	717	2,017,566	3,189,572	47,535	329,683
Phillips																	
Production	78,399,252	76,500	78,322,752	277,352	22,150,264	2,744,805	19,734,356	2,294,054	15,374,239	2,679,883	6,468,282	6,131,462	108	198,379	218,019	5,799	45,750
Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	78,399,252	76,500	78,322,752	277,352	22,150,264	2,744,805	19,734,356	2,294,054	15,374,239	2,679,883	6,468,282	6,131,462	108	198,379	218,019	5,799	45,750
Brunot Island																	
Production	28,758,563	28,062	28,730,501	101,739	8,125,202	1,006,855	7,238,994	841,509	5,639,608	983,040	2,372,707	2,249,155	40	72,770	79,974	2,127	16,782
Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28,758,563	28,062	28,730,501	101,739	8,125,202	1,006,855	7,238,994	841,509	5,639,608	983,040	2,372,707	2,249,155	40	72,770	79,974	2,127	16,782
Warwick																	
Production	15,294,914	14,924	15,279,990	54,109	4,321,296	535,464	3,849,976	447,547	2,999,361	522,816	1,261,897	1,196,187	21	38,702	42,533	1,131	8,925
Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	15,294,914	14,924	15,279,990	54,109	4,321,296	535,464	3,849,976	447,547	2,999,361	522,816	1,261,897	1,196,187	21	38,702	42,533	1,131	8,925
Deferred Taxes																	
Production	(383,558,497)	(374,269)	(383,184,228)	(1,356,911)	(108,367,383)	(13,428,613)	(96,547,858)	(11,223,372)	(75,216,534)	(13,110,990)	(31,645,256)	(29,997,407)	(528)	(970,545)	(1,066,632)	(28,372)	(223,826)
Transmission	(37,049,551)	(34,900)	(37,014,651)	(100,627)	(8,674,322)	(754,681)	(9,709,521)	(837,649)	(7,635,312)	(1,343,919)	(4,841,779)	(2,941,916)	(11)	(20,543)	(22,575)	(601)	(25,196)
Distribution	(65,327,593)	(19,084)	(65,258,513)	(233,845)	(25,226,280)	(2,226,823)	(16,609,280)	(2,010,238)	(9,282,125)	(1,421,845)	(4,520,752)	(597,776)	(93)	(974,653)	(2,189,354)	(15,370)	(48,063)
Total	(485,935,645)	(428,254)	(485,557,391)	(1,691,383)	(142,267,993)	(16,412,117)	(122,866,660)	(14,171,258)	(92,134,021)	(15,876,755)	(41,013,787)	(33,537,099)	(632)	(1,965,741)	(3,278,561)	(44,302)	(297,085)
Working Capital																	
Production	63,590,000	62,050	63,527,950	224,962	17,966,102	2,226,324	16,006,628	1,860,718	12,470,117	2,173,666	5,246,453	4,973,257	88	160,906	176,836	4,704	37,108
Transmission	1,240,000	1,188	1,238,812	3,358	290,316	25,258	324,955	31,387	255,544	44,979	162,249	98,462	0	688	756	20	843
Distribution	5,110,000	1,492	5,108,508	18,278	1,971,720	174,208	1,298,203	157,123	725,507	111,133	359,348	48,723	7	78,180	171,123	1,198	3,757
Total	69,940,000	64,710	69,875,290	246,607	20,228,221	2,425,790	17,629,787	2,049,228	13,451,168	2,329,778	5,767,050	5,118,442	95	237,774	348,715	5,922	41,708
Total Net Adjustment To Rate Base	251,195,569	247,559	250,948,010	891,097	70,788,959	8,843,618	63,109,481	7,357,598	49,413,847	8,622,492	20,618,690	19,878,197	349	599,452	600,253	18,213	145,764
Rate Base Adjusted For Ratemaking	2,368,919,523	1,765,172	2,367,154,351	8,291,477	741,796,375	80,000,097	602,175,296	70,313,771	426,787,789	71,921,874	195,420,848	130,240,408	3,123	13,198,087	25,192,269	292,138	1,520,001
Adjustments To Rate Base For Ratemaking Summary																	
Production Plant	257,757,955	251,515	257,506,440	911,868	72,824,759	9,024,761	64,881,033	7,542,300	50,546,814	8,810,813	21,266,160	20,158,777	355	652,223	716,795	19,067	150,415
Transmission Plant	(3,139,000)	(2,957)	(3,136,423)	(8,527)	(735,015)	(63,948)	(822,703)	(79,451)	(646,975)	(113,876)	(410,775)	(249,282)	(1)	(1,741)	(1,913)	(51)	(2,135)
Distribution Plant	(3,423,000)	(999)	(3,422,007)	(12,244)	(1,320,705)	(116,896)	(869,620)	(105,251)	(485,991)	(74,444)	(236,695)	(31,256)	(5)	(51,030)	(114,629)	(803)	(2,516)
Total	251,195,569	247,559	250,948,010	891,097	70,768,959	8,843,618	63,109,481	7,357,598	49,413,847	8,622,492	20,618,690	19,878,197	349	599,452	600,253	18,213	145,764
Rate Base Adjusted For Ratemaking																	
Production Plant	1,395,210,021	1,361,346	1,393,848,676	4,936,311	394,311,156	48,879,239	351,319,136	40,833,513	273,491,247	47,685,475	114,989,523	109,071,683	1,923	3,530,915	3,880,486	103,270	812,849
Transmission Plant	171,921,489	162,194	171,759,295	467,648	40,312,410	3,507,254	45,127,220	4,357,570	35,483,654	6,245,642	22,265,245	13,672,068	50	95,470	104,912	2,791	117,092
Distribution Plant	801,788,013	241,632	801,546,381	2,885,521	307,172,709	27,613,604	205,728,940	25,122,688	112,812,688	17,990,757	58,166,080	7,496,657	1,150	9,571,702	21,206,871	186,125	590,059
Total	$2,368,919,523	$1,765,172	$2,367,154,351	$8,291,477	$741,796,375	$80,000,097	$602,175,296	$70,313,771	$426,787,789	$71,921,874	$195,420,848	$130,240,408	$3,123	$13,198,087	$25,192,269	$292,138	$1,520,001
Adjusted Return for Ratemaking @9.75%																	
Production Plant	136,045,680	132,825	135,948,858	474,572	37,093,302	4,697,295	33,761,769	3,924,101	26,282,509	4,582,574	11,050,493	10,481,769	185	339,321	372,915	9,919	78,115
Transmission Plant	16,521,555	15,587	16,506,068	44,941	3,874,029	337,047	4,336,726	418,763	3,409,998	600,206	2,139,690	1,313,886	5	9,175	10,082	268	11,253

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COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BS	BH	GSGM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Distribution Plant	17,051,929	29,221	17,028,607	227,299	29,519,900	2,650,667	19,770,551	2,414,290	11,321,799	1,728,912	5,589,760	720,429	110	819,641	2,037,980	17,667	56,782
Total	$227,653,186	$169,633	$227,483,533	$786,811	$71,266,632	$7,668,009	$57,869,046	$6,757,153	$41,014,307	$6,911,692	$16,779,943	$12,516,103	$300	$1,268,336	$2,420,977	$28,074	$140,149
Power Production (O&M) Expenses																	
(1) Production Plant Expense	$374,343,840	$369,847	$373,973,993	$1,167,875	$98,210,706	$11,090,329	$86,549,800	$10,449,525	$60,444,638	$13,191,595	$38,509,330	$32,111,098	$446	$914,794	$1,005,298	$26,751	$301,810
(2) Transmission Plant Expense	11,112,079	10,702	11,101,377	30,857	2,659,951	231,420	2,974,410	287,927	2,041,342	412,108	1,240,499	902,126	3	6,299	6,922	184	2,726
(3) Distribution Plant Expense	38,601,510	9,031	38,592,478	146,425	15,496,637	1,419,441	9,885,560	1,041,431	4,708,860	504,223	1,621,942	1,934,363	63	575,508	1,212,155	11,641	34,333
Total	424,057,429	389,580	423,667,849	1,345,156	116,367,294	12,741,190	99,309,770	11,778,482	67,494,839	14,107,926	41,571,771	34,947,589	512	1,496,599	2,224,375	38,476	343,869
Corporate and Accounting Expense																	
Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution	39,197,755	61	39,197,694	170,411	30,279,855	1,386,779	6,586,016	443,779	206,289	32,534	14,761	2,381	62	31	22,124	432	52,240
(4) TOTAL CORPORATE & ACCOUNTING EXPENSE	39,197,755	61	39,197,694	170,411	30,279,855	1,386,779	6,586,016	443,779	206,289	32,534	14,761	2,381	62	31	22,124	432	52,240
General Expense																	
Production	60,049,381	58,957	59,990,424	200,051	16,387,073	1,942,789	14,507,502	1,717,198	12,332,749	2,083,956	5,557,937	4,920,741	77	149,379	164,163	4,388	41,841
Transmission	2,354,792	2,255	2,352,537	6,502	560,461	48,761	624,892	60,903	493,329	86,833	274,642	190,082	1	1,327	1,459	39	1,028
Distribution	30,472,771	7,689	30,465,082	118,760	12,081,700	1,036,315	7,585,780	850,405	3,918,380	478,569	1,649,505	1,163,418	48	440,408	942,524	8,525	25,238
(5) TOTAL GENERAL EXPENSE	92,876,944	68,901	92,808,043	320,371	29,010,034	3,009,864	22,820,174	2,636,186	16,744,457	2,649,358	7,482,084	6,274,239	126	591,115	1,108,146	12,932	68,008
O&M, Corp /Acct , & General Expense																	
Production	434,393,221	428,804	433,964,417	1,367,926	114,597,779	13,033,117	101,057,302	12,166,723	72,777,386	15,275,551	44,067,268	37,031,839	523	1,064,173	1,169,461	31,139	343,451
Transmission	13,466,871	12,957	13,453,913	37,358	3,220,411	280,181	3,601,302	348,110	2,534,671	498,941	1,515,141	1,092,210	4	7,627	8,381	223	3,754
Distribution	100,272,038	16,701	100,255,258	430,003	57,058,192	3,904,535	23,957,356	2,343,615	8,833,528	1,015,326	3,486,208	3,100,161	123	1,015,945	2,176,803	20,499	112,911
TOTAL O & M EXPENSE (1) + 2 + 3 + 4)	$556,132,128	$458,542	$555,673,586	$1,835,288	$175,857,182	$17,217,833	$128,615,960	$14,858,447	$104,445,585	$16,789,818	$49,068,615	$41,224,210	$700	$2,087,744	$3,354,645	$51,840	$465,117
Depreciation & Amortization Expense																	
(1) Production Plant Expense	$228,409,836	$222,051	$228,186,985	$608,963	$64,577,395	$8,008,618	$57,539,581	$6,686,504	$44,750,234	$7,805,295	$18,799,988	$17,846,852	$315	$576,192	$635,091	$16,901	$192,799
(2) Transmission Plant Expense	6,144,059	5,808	6,138,251	16,746	1,443,537	125,590	1,615,016	156,039	1,270,630	223,648	765,990	489,579	2	3,419	3,757	100	4,193
(3) Distribution Plant Expense	35,798,403	10,252	35,788,176	124,192	13,228,030	1,106,025	8,395,680	1,046,148	4,981,965	762,906	2,452,150	320,535	50	982,030	2,247,975	8,404	26,249

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COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Total	270,352,328	238,915	270,113,413	949,901	79,246,969	9,321,031	87,550,286	7,690,691	51,012,649	8,791,048	22,043,134	16,664,985	367	1,563,601	2,887,123	25,405	183,241
Corporate & Acct. Depr. & Amortization																	
Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(4) TOTAL CORPORATE & ACCOUNT'G DEPR	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
General Plant Depreciation & Amortization																	
Production	11,416,869	11,140	11,405,728	40,369	3,225,626	398,711	2,073,610	334,071	2,238,869	390,257	941,942	692,692	16	28,689	31,749	645	8,682
Transmission	450,310	424	449,885	1,223	165,430	9,173	116,012	11,398	92,801	16,334	58,921	35,757	0	250	274	7	306
Distribution	7,111,599	2,076	7,109,523	25,437	2,744,048	242,445	1,008,719	218,668	1,009,690	154,664	491,755	65,024	10	106,020	238,152	1,668	5,228
(5) TOTAL GENERAL PLANT DEPREC. & AMORT.	18,978,777	13,640	18,965,136	67,049	6,075,103	651,329	4,798,535	564,135	3,341,361	561,256	1,492,618	993,674	26	135,159	270,175	2,519	12,197
Depreciation & Amortization Expense																	
Production	739,026,705	233,991	239,592,713	849,352	67,803,020	8,408,377	60,413,391	7,020,575	46,989,103	8,195,552	19,741,930	16,739,744	331	607,041	667,140	17,746	139,461
Transmission	6,594,369	6,232	6,588,136	17,969	1,548,967	134,763	1,733,028	167,435	1,363,431	239,983	844,917	525,336	2	3,668	4,031	107	4,499
Distribution	42,910,032	12,332	42,897,699	149,630	15,972,008	1,429,271	10,202,401	1,266,610	6,001,675	917,571	2,946,905	383,659	61	1,000,050	2,400,127	10,071	31,477
TOTAL DEPR & AMORT. EXPENSE (1+2+3+4+5)	289,331,105	252,556	289,078,549	1,016,950	85,324,073	9,972,361	72,348,820	8,454,827	54,354,210	9,353,105	23,533,752	18,658,639	393	1,690,759	3,157,298	27,924	175,437
Total O&M And Depr./Amort. Expense																	
Production	674,219,925	662,795	673,557,130	2,217,278	187,381,599	21,441,444	161,470,693	19,187,298	139,766,489	23,471,103	63,809,196	55,771,583	953	1,671,214	1,836,601	48,864	482,913
Transmission	20,061,739	19,189	20,042,050	55,327	4,769,378	414,944	5,334,330	515,545	4,190,102	738,923	2,350,059	1,617,545	6	11,295	12,412	330	13,853
Distribution	151,182,068	29,113	151,152,955	580,233	23,830,278	5,333,806	34,159,757	3,610,431	19,035,203	1,932,897	6,435,113	3,493,220	204	2,103,995	4,662,929	30,570	143,708
TOTAL O&M AND DEPR./AMORT. EXPENSE	$845,463,733	$711,098	$844,752,135	$2,852,838	$215,981,255	$27,190,194	$200,964,781	$23,313,274	$158,799,795	$26,142,923	$72,594,368	$60,882,348	$1,093	$3,786,504	$6,511,943	$79,765	$640,554
Taxes																	
Production	11,876,443	38,037	11,837,610	242,363	24,432,715	2,318,092	18,050,275	2,135,405	11,810,390	1,924,667	5,695,965	2,500,296	89	681,660	1,474,039	11,939	49,698
Transmission	2,809,919	1,908	2,807,931	10,298	927,672	102,925	766,528	65,467	487,377	81,426	199,174	141,789	4	21,219	41,848	409	1,774
Distribution	26,124,555	21,882	26,102,673	90,629	7,286,579	674,124	6,622,255	763,954	4,881,207	835,883	2,218,376	1,687,647	34	116,813	206,283	2,614	16,277

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COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
TOTAL TAXES	100,810,921	62,707	100,748,214	348,290	30,148,967	3,295,942	25,679,058	2,984,846	17,181,975	2,841,775	8,311,515	4,329,932	127	619,912	1,722,967	14,962	67,948
Total O&M, Depr, Amort, And Tax																	
Production	746,096,372	701,632	745,394,740	2,464,641	206,814,315	20,760,336	179,820,968	21,322,703	151,579,079	25,395,770	69,705,162	56,271,879	943	2,353,094	3,311,440	60,803	502,808
Transmission	22,871,158	21,178	22,849,980	65,626	5,697,050	517,869	6,040,858	801,032	4,685,480	820,349	2,559,232	1,759,335	10	32,514	54,260	740	15,627
Distribution	177,308,623	50,995	177,255,628	670,882	81,618,857	6,207,930	40,782,012	4,374,385	19,716,411	2,788,579	8,651,489	5,181,568	267	2,220,808	4,869,210	33,184	160,065
TOTAL O&M, DEPR, AMORT, AND TAX	$946,274,154	$773,805	$945,500,349	$3,201,129	$294,130,221	$30,486,136	$226,643,839	$26,298,121	$175,981,770	$29,984,698	$80,915,883	$65,212,781	$1,220	$4,606,415	$8,234,910	$94,727	$708,500
Cost of Service (Summary)																	
Production Cost	$880,176,055	$832,457	$879,343,598	$2,939,212	$244,707,617	$26,457,631	$213,582,737	$25,246,804	$177,882,388	$29,970,344	$80,755,655	$66,753,687	$1,127	$2,692,414	$3,884,355	$70,723	$610,923
Less: Off-System Revenues	(34,245,464)	(33,418)	(34,212,046)	(121,150)	(9,675,425)	(1,198,954)	(8,020,135)	(1,002,082)	(6,715,599)	(1,170,596)	(2,825,401)	(2,078,275)	(47)	(86,654)	(95,233)	(2,530)	(19,984)
Less: Other Revenues	(17,725,476)	(17,298)	(17,708,179)	(62,707)	(5,006,000)	(620,580)	(4,461,788)	(516,668)	(3,475,999)	(606,901)	(1,462,429)	(1,086,277)	(24)	(44,852)	(49,292)	(1,311)	(10,344)
Total Retail Production Cost	828,205,116	781,745	827,423,371	2,755,355	230,024,186	24,638,097	200,500,814	23,726,073	167,670,790	28,201,847	76,467,825	64,589,116	1,056	2,560,909	3,539,829	66,879	580,595
21 Add: Gross Receipts Tax	21,764,574	23,027	21,741,547	69,980	10,069,444	692,690	3,919,516	583,771	2,632,511	700,162	1,852,971	740,262	23	83,102	329,275	4,459	43,088
Total Retail Production Cost w/GRT	849,969,690	804,772	849,164,918	2,845,335	240,093,629	27,330,788	204,420,330	24,309,844	170,303,302	28,902,009	78,320,795	65,329,377	1,079	2,644,011	3,869,104	71,338	623,683
Transmission Cost	39,292,813	36,784	39,256,049	110,566	9,571,079	854,916	10,377,584	1,018,795	8,095,478	1,420,555	4,698,922	3,073,220	15	41,689	64,342	1,008	26,679
Less: Off-System Revenues	(2,254,574)	(2,124)	(2,252,450)	(6,123)	(527,858)	(45,925)	(590,853)	(57,059)	(464,631)	(81,781)	(285,002)	(179,024)	(1)	(1,250)	(1,374)	(37)	(1,533)
Less: Other Revenues	(6,246,653)	(5,884)	(6,240,768)	(16,956)	(1,462,561)	(127,245)	(1,637,104)	(158,095)	(1,287,375)	(226,598)	(817,375)	(496,631)	(2)	(3,464)	(3,606)	(101)	(4,248)
Total Transmission Cost	30,091,585	28,756	30,062,829	87,477	7,580,660	681,747	8,149,627	804,641	6,343,471	1,112,178	3,586,546	2,398,165	13	36,975	59,162	870	21,098
21 Add: Gross Receipts Tax	667,691	918	666,773	3,507	401,440	37,616	156,260	29,273	104,951	27,913	73,873	29,512	1	3,313	13,127	178	1,730
Total Retail Transmission Cost w/GRT	31,759,276	29,674	31,729,602	91,084	7,982,100	719,362	8,305,887	833,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,288	72,289	1,048	22,828
Distribution Cost	254,356,451	74,916	254,204,736	948,161	111,138,157	8,861,597	60,552,564	6,788,676	31,038,210	4,497,491	14,241,249	5,901,996	378	3,140,648	6,907,191	51,071	216,847
Less: Off-System Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less: Other Revenues	(14,108,307)	(3,110)	(14,104,198)	(50,463)	(5,493,204)	(490,924)	(3,584,237)	(433,809)	(2,003,068)	(306,830)	(975,586)	(128,998)	(20)	(210,327)	(272,457)	(3,308)	(10,372)
Total Retail Distribution Cost	240,250,145	70,097	240,100,537	897,698	105,644,953	8,370,673	56,968,326	6,354,872	29,035,142	4,190,661	13,265,663	5,772,998	358	2,930,321	6,634,734	47,763	206,475
21 Add: Gross Receipts Tax	13,521,512	14,306	13,507,206	55,901	6,255,787	430,342	2,435,040	367,675	1,635,480	434,905	1,151,101	459,097	14	51,670	204,566	2,767	26,955
Total Retail Distribution Cost w/GRT	253,771,657	84,403	253,687,253	953,599	111,900,740	8,810,966	59,403,324	6,722,547	30,670,622	4,625,565	14,416,764	6,232,095	372	2,981,949	6,839,300	50,529	233,430
Total Retail Trans., & Distr. Cost	285,530,733	114,077	285,416,656	1,044,663	119,932,260	9,530,328	67,709,261	7,545,461	37,119,044	5,765,737	18,077,282	8,660,572	385	3,022,237	6,711,589	51,577	256,258
Total Retail Prod., Trans., & Distr. Cost	$1,135,500,423	$918,850	$1,134,581,573	$3,889,997	$360,025,890	$36,851,116	$272,129,591	$31,855,305	$207,422,346	$34,667,746	$96,398,076	$74,089,949	$1,464	$5,666,248	$10,580,693	$122,908	$880,241
Total kWh's	12,406,325,000	12,006,000	12,393,517,000	33,848,000	2,977,268,000	309,038,000	2,621,147,000	328,256,000	2,884,887,000	455,220,000	1,509,474,000	1,201,024,000	13,000	26,618,000	31,448,000	837,000	11,639,000
Average Retail Costs (¢/kWh)																	
Retail Production Cost	$0.0685	$0.0628	$0.0685	$0.0841	$0.0806	$0.0884	$0.0760	$0.0741	$0.0590	$0.0635	$0.0519	$0.0544	$0.0829	$0.0924	$0.1230	$0.0852	$0.0536
Retail Transmission Cost	0.0026	0.0023	0.0026	0.0027	0.0027	0.0023	0.0032	0.0025	0.0022	0.0025	0.0024	0.0020	0.0010	0.0014	0.0023	0.0013	0.0020

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COST OF SERVICE STUDY

(1996)

		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BS	SH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Retail Distribution Cost	0.0205	0.0066	0.0205	0.0282	0.0376	0.0285	0.0227	0.0205	0.0106	0.0102	0.0096	0.0052	0.0286	0.1042	0.2111	0.0604	0.0201
	Retail Trans. & Distr. Cost	0.0230	0.0089	0.0230	0.0309	0.0403	0.0306	0.0258	0.0230	0.0129	0.0127	0.0120	0.0072	0.0298	0.1056	0.2134	0.0618	0.0220
	Retail Total Cost (¢/kWh)	0.0915	0.0717	0.0915	0.1149	0.1209	0.1192	0.1038	0.0970	0.0719	0.0762	0.0639	0.0616	0.1126	0.1980	0.3365	0.1468	0.0756
Alloc #	Total Retail Production Cost	880,176,055	832,457	879,343,598	2,939,212	244,707,617	28,457,631	213,582,737	25,246,804	177,862,388	29,978,344	80,755,655	68,753,667	1,127	2,692,414	3,684,355	70,723	810,923
	Production Energy (501,509, 516, 547, 555)	216,684,908	216,007	216,468,901	810,126	53,667,081	5,570,595	46,664,505	5,836,239	49,527,428	7,802,418	25,501,777	19,780,882	228	515,658	566,866	15,089	209,808
100	less: Off-System Sales	(33,975,902)	(33,153)	(33,942,749)	(120,196)	(9,599,265)	(1,189,517)	(8,552,262)	(994,175)	(8,662,737)	(1,161,381)	(2,803,161)	(2,657,193)	(47)	(85,972)	(94,483)	(2,513)	(19,827)
100	less: Transmission Off-System Sales Loss Revenue	(269,502)	(263)	(269,299)	(954)	(76,160)	(9,438)	(67,853)	(7,888)	(52,862)	(9,214)	(22,240)	(21,082)	(0)	(682)	(750)	(20)	(157)
	Net Production Energy	182,439,444	182,591	182,256,854	688,977	43,991,657	4,371,640	38,244,370	4,834,177	42,811,829	6,631,822	22,676,377	17,102,607	181	429,204	471,634	12,556	189,824
12.4	less: Transmission Loss -Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,897	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.6	less: Distribution Loss - Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
12	less: Spinning Reserve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Production Capacity Cost	663,491,147	616,451	662,874,696	2,329,086	191,040,535	22,887,037	166,718,232	19,410,564	126,334,960	22,175,926	55,253,876	48,972,788	899	2,176,556	3,117,488	55,634	401,115
	less: Other Revenue	(17,725,476)	(17,298)	(17,708,179)	(62,707)	(5,008,006)	(620,580)	(4,461,788)	(518,668)	(3,475,998)	(605,901)	(1,482,429)	(1,388,277)	(24)	(44,652)	(49,292)	(1,311)	(10,344)
	Net Production Capacity Cost	645,765,672	599,155	645,166,517	2,266,379	186,032,529	22,266,457	162,256,444	18,891,896	124,858,961	21,570,025	53,791,448	47,586,509	875	2,131,704	3,068,196	54,323	390,771
129	less: Transmission Loss - Demand	2,653,034	2,472	2,651,362	9,319	763,421	91,611	666,898	77,639	513,663	88,798	220,904	196,454	4	8,608	12,220	221	1,602
129	less: Distribution Loss - Demand	18,456,212	17,190	18,439,022	64,813	5,309,247	637,112	4,637,971	539,946	3,572,296	617,552	1,536,287	1,366,250	25	59,865	84,981	1,539	11,139
129	less: Reactive Power	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
129	less: Regulation &Frequency Control	5,107,040	4,831	5,102,209	18,215	1,492,141	179,058	1,303,487	151,749	1,003,979	173,560	431,767	383,979	7	16,825	23,884	432	3,130
129	less: Operating Spinning Reserve	8,913,265	8,302	8,904,963	31,301	2,564,054	307,687	2,239,067	260,762	1,725,209	298,241	741,936	659,819	12	28,911	41,041	743	5,378
129	less: Operating Reserve Supplemental (O. S.)	9,887,219	9,209	9,878,010	34,721	2,844,229	341,209	2,484,618	289,255	1,913,723	330,830	823,008	731,912	13	32,071	45,528	824	5,967
	Total Net Retail Production Cost	586,646,427	553,405	586,093,021	2,093,887	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,379	2,842,027	50,228	361,127
	Generation Products & Schedule																	
12.4	add: Transmission Loss -Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,897	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.4	add: Transmission Loss -Demand	2,653,034	2,646	2,651,100	7,472	657,204	68,225	573,970	71,479	606,584	95,560	312,331	242,265	3	6,318	6,943	185	2,570
12.6	add: Distribution Loss -Energy	10,436,542	4,345	10,427,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
12.6	add: Distribution Loss -Demand	18,456,212	17,684	18,448,528	78,356	6,892,774	715,457	5,501,086	640,583	3,022,101	458,030	971,353	14	21	66,256	72,802	1,940	26,957
	Ancillary Services																	
1	add: Reactive From Generation	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
1	add: Regulation &Frequency Control	5,107,040	5,067	5,101,978	14,594	1,258,069	169,454	1,406,109	135,991	1,107,378	194,914	516,796	426,677	7	2,979	3,274	87	3,654
1	add: Spinning Reserve	8,913,265	8,698	8,904,567	25,078	2,161,831	168,003	2,416,219	233,660	1,907,087	334,934	891,484	733,190	3	5,120	5,626	150	6,279
1	add: Reserve Supplemental (O.S.)	9,887,219	9,648	9,877,571	27,819	2,398,055	208,635	2,680,239	259,212	2,130,618	371,532	988,697	813,306	3	5,679	6,241	166	6,965
	Subtotal Generation Products	61,105,501	43,452	61,142,048	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,034	4,073	65,675
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Total Net Retail Production Cost	586,646,427	553,405	586,093,021	2,093,887	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,379	2,842,027	50,228	361,127
	Subtotal Generation Products	61,105,501	43,452	61,142,048	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,034	4,073	65,675
	Total Retail Production Cost	828,205,116	813,419	827,431,637	2,750,306	230,419,105	26,371,176	201,746,402	23,747,674	167,691,686	28,147,835	76,396,784	63,566,148	1,026	2,500,981	3,427,084	65,646	599,804

COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BS	RH	GS/GM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
add: Gross Receipts Tax	21,784,574	20,027	21,741,547	69,980	10,069,444	692,690	3,919,516	583,771	2,632,511	700,162	1,652,971	740,262	23	83,102	329,275	4,453	43,388
Total Retail Production Cost W/GRT	849,969,690	788,505	849,170,184	2,840,286	240,488,549	27,063,866	205,685,916	24,331,445	170,324,197	28,847,997	78,249,755	84,306,410	1,049	2,564,093	3,756,338	70,099	643,192
Net Production Energy Less Loss & Ancillary	170,370,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,760,712	4,428,046	40,730,402	6,314,135	21,935,298	16,953,824	167	387,856	426,203	11,345	173,002
Total Net Retail Production Cost	596,848,427	553,405	596,093,021	2,093,867	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,765	43,950,379	808	1,972,379	2,842,027	50,228	361,127
Net Reactive Power, Reg./Freq. Ctl & Spinning Res.	18,121,980	17,505	18,104,475	53,796	4,576,805	436,366	4,832,958	467,330	3,788,681	664,414	1,745,042	1,457,578	10	21,144	27,416	572	12,361
Total Basic Service	785,141,595	747,532	784,394,063	2,587,762	216,169,659	24,932,388	189,526,649	22,370,266	159,870,759	26,905,026	73,383,125	62,361,781	985	2,361,381	3,295,847	62,145	546,490
Total Basic Service ($/kWh)	0.0033	0.0584	0.0033	0.0765	0.0726	0.0807	0.0723	0.0681	0.0554	0.0591	0.0486	0.0519	0.0758	0.0832	0.1046	0.0742	0.0470
Transmission Cost	39,392,813	38,764	39,356,049	110,566	9,571,079	854,916	10,377,584	1,019,795	8,095,478	1,420,555	4,698,922	3,073,220	15	41,669	64,342	1,008	26,879
less: Off-System Revenues	(2,254,574)	(2,124)	(2,252,450)	(6,123)	(527,858)	(45,925)	(590,853)	(57,059)	(464,631)	(81,781)	(285,002)	(179,024)	(1)	(1,250)	(1,374)	(37)	(1,533)
less: Other Revenues	(6,246,853)	(5,884)	(6,240,969)	(16,966)	(1,462,561)	(127,245)	(1,637,104)	(156,095)	(1,287,075)	(226,596)	(817,375)	(496,031)	(2)	(3,464)	(3,606)	(101)	(4,248)
add: Gross Receipts Tax	867,691	818	866,773	3,587	401,440	27,816	156,260	23,273	104,951	27,913	23,873	29,512	1	3,313	13,127	128	1,720
Total Retail Transmission Cost	31,759,078	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
1 less: Dispatch Out Of Account 501	(828,636)	(809)	(827,827)	(2,331)	(200,978)	(17,465)	(224,628)	(21,725)	(176,905)	(31,138)	(82,878)	(66,162)	(0)	(476)	(523)	(14)	(584)
1 add: Scheduling Out Of Account 501	828,636	809	827,827	2,331	200,978	17,465	224,628	21,725	176,905	31,138	82,878	66,162	0	476	523	14	584
Total Transmission Cost With Products	31,759,078	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
Distribution Cost	254,356,451	74,216	254,284,236	948,181	111,138,157	8,661,597	80,552,584	8,788,678	31,038,210	4,497,491	14,241,248	5,901,996	378	3,140,648	5,907,191	51,071	216,847
less: Off-System Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
less: Other Revenues	(14,108,307)	(4,118)	(14,104,188)	(50,463)	(5,443,764)	(460,974)	(3,584,237)	(403,803)	(2,003,068)	(306,830)	(975,566)	(128,998)	(20)	(210,327)	(472,457)	(3,308)	(10,372)
add: Gross Receipts Tax	13,521,512	14,306	13,507,206	55,901	6,255,767	430,342	2,435,048	382,675	1,635,480	424,985	1,151,181	459,697	14	51,626	204,566	2,767	26,955
Total Retail Distribution Cost	753,771,657	84,403	253,687,253	953,599	111,950,160	8,810,966	59,403,374	8,717,547	30,670,622	4,625,645	14,416,864	6,232,695	372	2,981,949	6,639,300	50,529	233,430
less: Cust. Charges for RS,RA,RH,GM,GMH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Distribution Cost	253,771,657	84,403	253,687,253	953,599	111,950,160	8,810,966	59,403,374	8,717,547	30,670,622	4,625,645	14,416,864	6,232,695	372	2,981,949	6,639,300	50,529	233,430
Retail Production Cost ($ kWh)	0.0085	0.0022	0.0085	0.0039	0.0008	0.0078	0.0075	0.0741	0.0090	0.0074	0.0018	0.0035	0.0007	0.0003	0.1194	0.0038	0.0053
Base For Retail Rates																	
Transmission																	
Reactive Power	4,021,675	3,746	4,017,929	14,173	1,156,904	138,029	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,516	335	2,427
Regulation & Frequency Control	5,187,040	4,831	5,182,209	18,215	1,492,141	179,058	1,303,482	151,749	1,003,979	173,560	431,767	383,979	7	16,829	23,884	432	3,130
Operating Spinning Reserve	8,913,765	8,302	8,904,963	31,301	2,564,054	307,607	2,239,867	260,762	1,725,209	298,241	741,936	659,819	12	28,911	41,041	743	5,379
Gross Receipts Tax	481,735	497	481,238	2,078	226,707	16,267	89,024	13,045	55,071	15,954	36,553	15,351	1	1,907	7,762	101	817
Total Retail Transmission Cost	31,759,078	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
Total	50,362,792	47,050	50,315,742	156,781	13,423,406	1,351,203	12,948,891	1,371,126	10,011,097	1,761,514	5,205,437	3,784,537	39	100,977	163,493	2,659	34,582
$/kWh	0.0041	0.0037	0.0041	0.0046	0.0045	0.0044	0.0049	0.0042	0.0035	0.0039	0.0034	0.0031	0.0030	0.0035	0.0052	0.0032	0.0030
Distribution																	
Loss Demand	18,456,212	17,190	18,439,022	64,013	5,309,247	637,112	4,607,971	539,946	3,572,296	617,552	1,536,287	1,366,250	25	59,865	84,981	1,539	11,139

COST OF SERVICE STUDY

(1996)

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Loss Energy	10,436,542	4,045	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
Gross Receipts Tax	795,901	634	795,266	3,563	403,039	27,088	151,485	22,198	82,918	21,762	50,537	15,635	1	3,158	11,734	175	1,972
Total Distribution Cost	253,771,857	84,403	253,687,253	953,589	111,950,180	8,810,986	59,403,374	6,717,547	30,470,922	4,625,645	14,418,884	6,232,895	372	2,981,949	8,639,300	50,528	233,430
Total	283,460,311	106,572	283,353,739	1,066,283	121,560,144	9,879,739	67,004,014	7,641,925	36,034,761	5,523,964	16,552,965	7,614,788	410	3,062,439	8,777,183	53,340	261,784
¢/kWh	0.0228	0.0083	0.0229	0.0315	0.0408	0.0320	0.0257	0.0233	0.0125	0.0121	0.0110	0.0063	0.0315	0.1077	0.2155	0.0037	0.0225

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Schedule B

Cost of Service Study Results (By FERC Account)

(Pages 1-23)

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	ELECTRIC PLANT IN SERVICE																		
	Intangible Plant (P204)																		
301	Total Organization		150,275																
	Production	100	60,321	59	60,263	213	17,043	2,112	16,164	1,765	11,829	2,062	4,977	4,718	0	153	169	4	35
	Transmission	101	2,379	2	2,377	6	557	48	624	60	460	86	311	189	0	1	1	0	2
	Distribution	102	37,574	11	37,563	134	14,498	1,281	9,546	1,155	5,335	817	2,598	344	0	560	1,258	9	28
302	Total Franchises & Consents		8,830																
	Production	100	4,109	4	4,105	15	1,161	144	1,034	120	806	140	339	321	0	10	11	0	2
	Transmission	101	162	0	162	0	38	3	42	4	33	6	21	13	0	0	0	0	0
	Distribution	102	2,559	1	2,558	9	987	87	650	79	363	56	177	23	0	38	86	1	2
303	Total Miscellaneous Intangible Plant		43,993,420																
	Production	100	26,464,871	25,624	26,439,248	93,624	7,477,105	926,544	6,661,585	774,387	5,189,771	904,629	2,183,451	2,068,753	36	66,965	73,595	1,858	15,443
	Transmission	101	1,043,832	883	1,042,949	2,635	244,390	21,262	273,558	26,417	215,117	37,864	136,581	82,885	0	579	636	17	710
	Distribution	102	16,484,916	4,812	16,480,104	58,964	6,350,791	561,996	4,188,019	506,880	2,340,494	356,617	1,139,805	150,729	23	245,758	552,044	3,865	12,119
	Total Intangible Plant		44,100,525	31,696	44,068,829	155,801	14,116,570	1,513,478	11,150,239	1,310,868	7,764,239	1,304,177	3,468,360	2,308,975	60	314,065	627,800	5,854	28,341
	Total Intangible Plant - Class Percentage		100%	0.0719%	99.9281%	0.3533%	32.0100%	3.4319%	25.2837%	2.9725%	17.6056%	2.9573%	7.8647%	5.2357%	0.0001%	0.7122%	1.4236%	0.0133%	0.0643%
	Intangible Plant Summary																		
	Production		26,528,102	25,887	26,503,215	93,852	7,495,309	928,800	6,677,803	776,273	5,202,406	906,831	2,186,767	2,074,792	37	67,128	73,774	1,862	15,481
	Transmission		1,046,373	886	1,045,388	2,642	244,985	21,314	274,222	26,482	215,641	37,956	136,914	83,087	0	580	638	17	712
	Distribution		16,525,049	4,824	16,520,226	59,107	6,376,277	563,364	4,198,215	508,114	2,346,192	359,390	1,142,690	151,098	23	246,356	553,388	3,875	12,149
	Total		44,100,525	31,696	44,068,829	155,801	14,116,570	1,513,478	11,150,239	1,310,868	7,764,239	1,304,177	3,468,360	2,308,975	60	314,065	627,800	5,854	28,341
	Production Plant																		
	A: Steam Production Plant																		
310	Land & Land Rights	32	8,026,760	7,805	8,018,955	29,319	2,312,380	292,915	2,065,771	237,847	1,532,553	272,041	817,257	611,035	11	20,502	22,532	599	4,182
311	Structures & Improvements		128,853,875																
312	Boiler Plant Equipment		484,480,935																
313	Engines and Engine Driven Motors		0																
314	Turbogenerators		115,768,800																
315	Accessory Electric Equipment		76,729,366																
316	Misc Power Plant Equipment		24,260,712																
	Total A/C 311-316		832,093,588																
	Energy	12	158,924,071	156,427	158,765,645	447,487	39,361,260	4,085,663	34,372,020	4,280,496	36,325,089	5,722,558	18,703,970	14,507,970	167	376,348	415,759	11,067	153,860
	Demand	32	673,169,517	664,604	672,514,912	2,458,875	193,929,258	24,565,497	173,247,261	18,647,235	129,528,563	22,814,871	51,766,642	51,244,814	962	1,719,418	1,889,677	50,260	351,579
	Total Steam Production Plant		840,120,348	820,836	839,299,512	2,935,682	235,602,898	28,944,076	209,685,052	24,465,578	166,386,214	28,809,470	71,087,768	66,363,819	1,141	2,116,288	2,327,968	61,926	509,651
	B: Nuclear Production Plant																		
320	Land & Land Rights	32	617,903	601	617,302	2,257	178,008	22,549	159,024	18,310	117,977	20,942	47,517	47,038	1	1,578	1,735	46	323
321	Structures & Improvements		229,416,299																
322	Reactor Plant Equipment		899,156,421																
323	Turbogenerators		119,726,878																
324	Accessory Electric Equipment		161,470,226																
325	Misc Power Plant Equipment		72,991,217																
	Total A/C 321-325		1,482,761,041																
	Energy	12	164,231,389	163,717	164,067,682	462,431	40,675,744	4,222,106	35,519,886	4,423,445	37,536,188	5,913,665	19,326,492	14,992,470	173	390,983	429,643	11,436	159,019
	Demand	32	1,318,529,642	1,282,166	1,317,247,476	4,816,172	379,847,080	48,116,166	339,337,483	39,070,427	251,747,467	44,697,234	101,394,745	100,372,647	1,884	3,367,805	3,701,289	98,444	688,634

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total UUtlty	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Total Nuclear Production Plant		1,483,378,944	1,446,484	1,481,932,460	5,280,860	420,700,832	52,360,820	375,016,393	43,512,181	289,403,831	50,821,841	120,770,754	115,412,155	2,058	3,760,366	4,132,667	109,926	847,976
	D: Other Production Plant																		
340	Land & Land Rights	32	393,704	383	393,321	1,438	113,420	14,367	101,324	11,668	76,170	13,343	30,278	29,971	1	1,008	1,105	28	206
341	Structures & Improvements		8,150,271																
342	Fuel Holders, Products and Accessories		3,371,626																
343	Prime Movers		436,877																
344	Generators		22,779,984																
345	Accessory Electric Equipment		8,674,134																
346	Misc Power Plant Equipment		1,092,833																
	Total A/C 341-346		42,505,725																
	Energy	12	1,980,242	1,974	1,978,268	5,576	490,453	60,909	426,286	53,336	452,822	71,305	233,056	180,774	2	4,714	5,180	138	1,917
	Demand	32	40,525,483	39,408	40,486,075	148,027	11,674,737	1,478,868	10,429,660	1,200,844	7,737,649	1,373,478	3,116,404	3,084,999	58	103,611	113,760	3,028	21,185
	Total Other Production Plant		42,889,428	41,765	42,857,664	155,041	12,278,610	1,544,143	10,959,269	1,265,846	8,265,341	1,458,128	3,379,738	3,295,734	61	109,231	120,046	3,193	23,288
	Production Plant - Energy Related		325,135,713	324,118	324,811,595	915,495	80,527,457	9,359,878	70,320,192	8,757,277	74,315,808	11,707,529	38,265,418	29,591,214	343	774,045	850,583	22,641	314,917
	Production Plant - Demand Related		2,041,263,008	1,984,967	2,039,278,041	7,456,088	588,054,682	74,490,362	525,340,522	60,486,328	389,739,279	69,181,909	156,972,839	155,390,484	2,917	5,213,820	5,730,099	152,404	1,066,099
	Total Production Plant		2,366,398,721	2,309,085	2,364,089,636	8,371,583	668,582,139	82,849,039	595,660,714	69,243,605	464,055,186	80,889,437	195,238,257	185,071,708	3,259	5,987,865	6,580,681	175,045	1,380,916
	Total Production Plant - Class Percentage		*100%*	*0.0976%*	*99.9024%*	*0.3538%*	*28.2532%*	*3.5011%*	*25.1716%*	*2.9261%*	*19.6102%*	*3.4183%*	*8.2504%*	*7.8208%*	*0.0001%*	*0.2530%*	*0.2781%*	*0.0074%*	*0.0584%*
	Transmission Plant																		
350	Total Land and Land Rights		9,833,085																
	Substations 350.1	1	223,218	218	222,998	628	54,139	4,710	60,510	5,852	47,654	8,388	22,326	18,361	0	128	141	4	157
	Land & Land Rights 350.2																		
	Transmission - 69KV & Over	1	9,484,640	9,256	9,475,385	26,686	2,300,413	200,140	2,571,108	248,863	2,024,870	356,405	948,632	780,190	3	5,448	5,987	159	6,682
	Direct Assignment	60	125,229	0	125,229	0	0	0	16,683	0	0	0	108,545	0	0	0	0	0	0
352	Structures and Improvements		8,073,681																
353	Station Equipment		124,857,725																
	Total A/C 352-353		132,931,406																
	Generation Step-Up	1	26,912,926	28,117	26,784,809	81,068	6,988,313	607,995	7,810,643	755,400	6,151,253	1,087,704	2,881,802	2,370,102	9	16,550	18,187	484	20,298
	Transmission - 69KV & Over	1	95,915,572	93,599	95,821,974	259,869	23,263,448	2,023,959	26,000,911	2,514,659	20,476,954	3,604,223	9,593,254	7,889,851	29	55,094	60,542	1,611	67,571
	Subtransmission - 11.5/23KV	1	4,627,043	4,515	4,622,527	13,019	1,122,247	97,637	1,254,304	121,309	987,824	173,871	462,786	380,613	1	2,659	2,921	78	3,260
	All Other	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Directs	61	3,575,865	0	3,575,865	0	0	0	0	0	0	0	0	3,575,865	0	0	0	0	0
354	Towers & Fixtures		66,632,752																
355	Poles & Fixtures		5,653,323																
356	Ovhd Conductor & Devices		43,975,550																
	Total A/C 354-356		116,261,625																
	Transmission - 69KV & Over	1	109,133,532	106,497	109,027,035	307,058	26,469,344	2,302,878	29,584,051	2,861,199	23,298,848	4,100,915	10,915,284	8,977,138	33	62,686	68,885	1,833	76,883
	Direct Assignment	62	7,128,093	0	7,128,093	0	0	0	105,260	0	0	0	7,022,833	0	0	0	0	0	0
357	Underground Conduit	1	34,250,903	33,423	34,217,480	96,368	8,307,245	722,744	9,284,777	897,970	7,312,203	1,287,048	3,425,696	2,817,421	10	19,674	21,619	575	24,129
358	Underground Conductors and Devices	1	18,895,858	18,439	18,877,419	53,165	4,583,018	398,730	5,122,312	495,401	4,034,065	710,050	1,889,920	1,554,341	6	10,854	11,927	317	13,312
359	Roads & Trails	1	13,879	14	13,865	39	3,366	293	3,762	364	2,963	522	1,388	1,142	0	8	9	0	10
	Total Transmission Plant		312,166,756	294,078	311,892,678	847,900	73,091,533	6,359,087	81,814,322	7,900,816	64,336,635	11,324,125	40,849,332	24,789,158	90	173,099	190,219	5,061	212,303
	Total Transmission Plant - Class Percentage		*100%*	*0.0942%*	*99.9058%*	*0.2716%*	*23.4128%*	*2.0369%*	*26.2069%*	*2.5308%*	*20.6084%*	*3.6274%*	*13.0846%*	*7.9405%*	*0.0000%*	*0.0554%*	*0.0609%*	*0.0016%*	*0.0680%*

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total UU/NY	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Distribution Plant																		
360	Land & Land Rights		8,902,261																
	Production 360.1	32	375,655	365	375,290	1,372	108,220	13,709	96,679	11,131	71,724	12,732	28,888	28,597	1	980	1,055	28	198
	Network 360.1	7	511,441	0	511,441	0	0	0	104,270	19,586	281,295	47,001	59,289	0	0	0	0	0	0
	Subtransmission 360.1	6	3,195,689	3,290	3,192,399	12,427	980,084	128,891	950,011	121,329	659,309	114,886	205,767	0	5	8,441	9,277	247	1,726
	Distribution 360.1	8	2,550,990	0	2,550,990	15,222	1,200,550	167,885	970,125	109,208	67,123	8,752	0	0	8	10,340	11,364	302	2,114
	Land Rights 360.2	8	2,268,485	0	2,268,485	13,536	1,067,597	140,400	862,690	97,114	59,889	8,004	0	0	5	9,195	10,105	269	1,880
361	Structures & Improvement		41,029,378																
362	Station Equipment		318,016,298																
	Total Accounts 361-362		359,045,676																
	Transmission - 69KV & Over	32	89,994,989	87,418	89,907,573	328,358	26,897,293	3,280,474	23,135,422	2,663,762	17,163,691	3,046,696	6,912,912	6,843,227	128	229,611	252,347	6,712	46,950
	Subtransmission - 11.5/23KV	6	89,994,831	92,858	89,901,973	348,952	27,600,389	3,829,746	26,753,503	3,416,789	18,566,888	3,235,343	5,794,653	0	133	237,712	261,250	6,949	48,606
	Network	7	16,827,054	0	16,827,054	0	0	0	3,389,847	636,750	9,144,861	1,528,005	1,927,492	0	0	0	0	0	0
	Primary - 13.2/23KV	8	47,297,891	0	47,297,891	282,232	22,259,383	2,827,346	17,987,077	2,024,926	1,244,518	125,189	0	0	107	191,712	210,895	5,604	39,200
	Primary - 4KV	8	46,602,397	0	46,602,397	278,082	21,932,069	2,884,301	17,722,586	1,995,052	1,226,218	123,348	0	0	106	188,893	207,597	5,521	38,624
	Street Lighting	19	377,449	0	377,449	0	0	0	0	0	0	0	0	0	0	113,177	264,272	0	0
	Direct Assignment	63	68,251,265	0	68,251,265	0	285,348	0	4,329,309	27,333	17,218,625	289,070	46,122,580	0	0	0	0	0	0
363	Storage Battery Equipment	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
364	Poles,Towers,Fixtures*		218,026,447																
365	Ovhd Conductor & Devices		168,933,236																
	Total Overhead Lines 364-365		386,959,683																
	Subtransmission-11.5/23KV	6	74,801,625	77,015	74,724,610	290,873	22,940,857	3,016,987	22,236,943	2,839,946	15,432,469	2,689,149	4,816,393	0	111	197,591	217,146	5,775	40,401
	Primary - 13.2/23KV																		
	Capacity	8	44,073,206	0	44,073,206	262,990	20,741,778	2,727,765	16,760,751	1,886,777	1,159,669	116,654	0	0	100	178,641	196,331	5,222	36,528
	Customer	16	46,746,915	69	46,746,846	195,252	34,236,357	1,571,872	3,554,367	232,318	43,611	7,372	1,309	0	138	2,690,474	4,041,327	56,013	116,435
	Primary - 4KV																		
	Capacity	8	60,787,545	0	60,787,545	362,726	28,607,898	3,762,244	23,117,104	2,602,319	1,598,463	160,894	0	0	138	246,389	270,787	7,202	50,381
	Customer	16	62,424,149	92	62,424,057	260,733	45,718,000	2,099,021	4,746,373	310,230	58,237	9,844	1,748	0	184	3,592,763	5,396,642	74,797	155,483
	Secondary																		
	Capacity	9	43,987,176	0	43,987,176	262,477	20,701,291	2,722,441	16,728,034	1,883,094	1,157,406	116,428	0	0	100	178,293	195,947	5,212	36,456
	Customer	17	44,774,335	70	44,774,265	199,125	34,915,395	1,603,048	3,531,625	219,923	6,956	703	0	0	141	0	4,121,482	57,124	118,744
	Street Lighting	19	9,364,732	0	9,364,732	0	0	0	0	0	0	0	0	0	0	2,807,889	6,556,743	0	0
365	Underground Conduit		74,561,251																
367	Underground Lines		112,816,627																
	Total Underground Lines 366 - 367		187,377,878																
	Subtransmission - 11.5/23KV	6	48,152,338	49,577	48,102,761	187,245	14,767,805	1,942,124	14,314,673	1,828,169	9,934,403	1,731,096	3,100,475	0	71	127,190	139,784	3,718	26,007
	Network																		
	Capacity	7	76,987,601	0	76,987,601	0	0	0	15,695,875	2,948,318	42,343,555	7,075,063	8,924,790	0	0	0	0	0	0
	Customer	15	22,297,897	0	22,297,897	0	0	0	17,380,814	3,240,173	1,480,897	148,835	56,188	0	0	0	0	0	0
	Primary - 13.2/23KV																		
	Capacity	8	18,299,382	0	18,299,382	109,195	8,612,074	1,132,580	6,959,135	783,398	481,500	48,435	0	0	41	74,173	81,517	2,168	15,166
	Customer	16	5,297,667	8	5,297,659	22,127	3,879,889	178,135	402,804	26,328	4,942	835	148	0	18	304,902	457,990	6,348	13,185
	Secondary																		
	Capacity	9	12,681,657	0	12,681,657	75,673	5,968,255	784,889	4,822,751	542,903	333,684	33,566	0	0	29	51,402	56,492	1,503	10,511
	Customer	17	3,671,336	6	3,671,330	16,328	2,862,938	131,444	289,581	19,033	570	58	0	0	12	0	337,947	4,684	9,737
368	Line Transformers		150,948,402																
	Primary	9	20,227,095	0	20,227,095	120,697	9,519,297	1,251,889	7,692,232	855,923	532,222	53,538	0	0	46	81,986	90,105	2,397	16,764
	Secondary Network	7	20,521,775	0	20,521,775	0	0	0	4,183,884	785,902	11,287,076	1,885,825	2,378,987	0	0	0	0	0	0

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RB	RH	CSIGM	GMH	GL	GLH	L	HVPS	AL	BE	SM	SH	TRAFFIC SIGNALS
	Capacity	4	68,410,043	37,327	68,372,716	252,943	31,114,787	1,730,863	13,893,462	1,924,140	10,171,560	1,603,548	3,636,387	3,621,588	54	95,761	105,243	2,789	19,581
	Customer	17	21,991,398	35	21,991,364	97,802	17,149,073	787,354	1,734,596	108,018	3,417	345	0	0	89	0	2,024,310	28,057	58,323
	Direct Assignment	64	19,786,091	0	19,786,091	0	2,691,576	183,089	5,025,228	1,242,730	8,631,158	1,952,313	0	0	0	0	0	0	0
369	Services		57,792,430																
	Capacity	4	12,603,040	6,877	12,596,963	46,602	5,732,577	318,894	2,559,726	354,503	1,874,004	295,437	706,814	667,240	10	17,643	19,390	516	3,608
	Customer	16	45,189,390	78	45,189,611	222,304	38,979,754	1,789,653	3,942,727	245,523	7,766	784	0	0	0	0	0	0	0
370	Meters	40	59,852,919	5,109	59,847,810	144,779	25,388,083	1,165,534	27,424,151	1,907,818	2,848,314	474,592	398,473	98,086	0	0	0	0	0
371	Installations on Cust Premises	20	37,793	0	37,793	0	0	0	4,564	0	13,825	0	2,218	17,186	0	0	0	0	0
372	Leased Property on Customer Premise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
373	Street Lights & Signal Systems	19	22,510,688	0	22,510,688	0	0	0	0	0	0	0	0	0	0	8,749,768	15,760,920	0	0
	Total Distribution Plant		1,233,225,730	359,992	1,232,865,739	4,411,052	475,846,599	42,042,559	313,302,916	37,919,335	176,090,817	28,820,436	85,275,611	11,275,923	1,748	18,384,996	41,288,065	289,165	906,816
	Total Distribution Plant - Class Percentage		100%	*0.0292%*	*99.9708%*	*0.3577%*	*38.5855%*	*3.4092%*	*25.4052%*	*3.0748%*	*14.1978%*	*2.1748%*	*6.9148%*	*0.9143%*	*0.0001%*	*1.4908%*	*3.3488%*	*0.0234%*	*0.0735%*
	General Plant																		
389	Land & Land Rights		8,199,971																
	Production	100	3,728,653	3,639	3,726,014	13,194	1,053,745	130,577	939,814	109,134	731,392	127,489	307,713	281,689	5	9,437	10,372	278	2,176
	Transmission	101	147,107	139	146,968	400	34,442	2,996	36,552	3,723	30,316	5,336	19,248	11,681	0	82	90	2	100
	Distribution	102	2,323,211	878	2,322,533	8,310	686,423	79,392	590,215	71,434	329,845	50,526	160,646	21,242	3	34,635	77,799	545	1,708
390	Structures & Improvements		84,436,073																
	Production	100	38,763,352	37,825	38,725,527	137,133	10,951,871	1,357,128	9,757,361	1,134,261	7,601,565	1,325,029	3,198,146	3,031,611	53	98,086	107,796	2,887	22,620
	Transmission	101	1,528,923	1,440	1,527,483	4,153	357,963	31,143	400,683	38,694	315,086	55,459	200,053	121,404	0	848	932	25	1,040
	Distribution	102	24,145,799	7,048	24,138,750	86,366	9,318,782	823,187	6,134,278	742,437	3,428,170	526,128	1,669,842	220,776	34	359,967	808,591	5,662	17,751
391	Office Furniture & Equipment		48,657,788																
	Production	100	29,270,566	28,562	29,242,004	103,550	8,268,859	1,024,780	7,367,873	856,491	5,740,012	1,000,541	2,414,950	2,289,197	40	74,065	81,398	2,165	17,081
	Transmission	101	1,154,504	1,088	1,153,416	3,136	270,301	23,617	302,559	29,216	237,325	41,879	151,062	91,673	0	640	703	19	765
	Distribution	102	18,232,718	5,322	18,227,394	65,216	7,035,189	621,581	4,632,050	560,621	2,588,643	396,529	1,260,762	166,710	26	271,814	610,574	4,275	13,404
392	Transportation Equipment		16,877,412																
	Production	100	10,152,772	9,907	10,142,865	35,917	2,868,479	355,455	2,555,616	297,062	1,990,977	347,047	837,648	794,030	14	25,690	28,234	751	5,925
	Transmission	101	400,451	377	400,074	1,089	93,757	8,157	104,946	10,135	82,526	14,526	52,397	31,798	0	222	244	6	272
	Distribution	102	6,324,190	1,846	6,322,344	22,621	2,440,222	215,601	1,606,870	194,457	897,895	137,540	437,307	57,926	9	94,281	211,783	1,483	4,649
393	Stores Equipment		2,340,839																
	Production	100	1,408,155	1,374	1,406,781	4,982	397,848	49,300	354,455	41,204	276,142	48,134	116,179	110,129	2	3,563	3,916	104	822
	Transmission	101	55,541	52	55,489	151	13,004	1,131	14,558	1,406	11,446	2,015	7,267	4,410	0	31	34	1	38
	Distribution	102	877,143	256	876,887	3,137	338,450	29,803	222,840	26,870	124,535	19,076	60,653	8,020	1	13,076	28,374	206	645
394	Tools, Shop & Garage Equipment		9,830,485																
	Production	100	5,913,624	5,770	5,907,854	20,921	1,670,785	207,040	1,488,555	173,040	1,159,673	202,142	487,900	462,494	8	14,964	16,445	437	3,451
	Transmission	101	233,248	220	233,028	634	54,610	4,751	61,127	5,903	48,069	8,461	30,520	18,521	0	129	142	4	159
	Distribution	102	3,683,613	1,075	3,682,538	13,178	1,421,341	125,590	935,826	113,264	522,992	80,112	254,716	33,681	5	54,816	123,356	864	2,708
395	Laboratory Equipment		6,289,389																
	Production	100	3,783,443	3,682	3,779,761	13,385	1,068,942	132,461	952,354	110,708	741,940	129,329	312,151	295,896	5	9,574	10,521	280	2,208
	Transmission	101	149,228	141	149,087	405	34,938	3,040	39,108	3,777	30,753	5,413	19,526	11,849	0	83	91	2	101
	Distribution	102	2,356,717	698	2,356,029	8,430	909,352	80,344	598,728	72,465	334,602	51,254	162,863	21,548	3	35,134	78,921	553	1,733
396	Power Operated Equipment		1,304,358																
	Production	100	784,649	766	783,883	2,776	221,688	27,471	197,509	22,960	153,871	26,821	64,737	61,366	1	1,985	2,182	58	458
	Transmission	101	30,949	29	30,920	84	7,246	630	8,111	783	6,378	1,123	4,050	2,458	0	17	19	1	21
	Distribution	102	488,760	143	488,617	1,748	188,591	16,663	124,170	15,028	69,393	10,630	33,797	4,469	1	7,286	16,368	115	359
397	Communication Equipment		88,973,334																

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GSGM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Production	100	53,462,922	52,168	53,410,454	169,134	16,104,878	1,871,758	13,457,404	1,584,379	10,484,120	1,827,486	4,410,800	4,161,214	74	135,280	148,673	3,955	31,198
	Transmission	101	2,108,698	1,986	2,106,712	5,727	493,704	42,953	552,623	53,367	434,689	76,490	275,914	167,441	1	1,169	1,285	34	1,434
	Distribution	102	33,302,014	9,721	33,292,293	119,116	12,849,758	1,135,317	9,460,428	1,023,073	4,728,150	724,259	2,302,779	304,495	47	496,488	1,115,212	7,909	24,482
398	Misc Equipment		432,311																
	Production	100	260,061	254	259,807	920	73,475	9,105	65,462	7,610	50,988	8,890	21,456	20,339	0	658	723	19	152
	Transmission	101	10,257	10	10,247	28	2,401	209	2,688	260	2,114	372	1,342	814	0	6	6	0	7
	Distribution	102	161,983	47	161,946	579	62,506	5,523	41,155	4,991	22,999	3,523	11,202	1,481	0	2,415	5,425	38	119
399	Other Tangible Property		0																
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total General Plant		245,243,958	178,263	245,087,695	866,413	78,502,549	9,416,484	62,006,715	7,289,785	43,177,098	7,252,556	19,287,626	12,840,261	335	1,746,522	3,491,210	32,555	157,606
	Total General & Intangible Plant		289,344,483	207,959	289,136,524	1,022,215	92,619,119	9,929,963	73,156,954	8,600,933	50,941,336	8,556,732	22,755,986	15,149,237	395	2,060,587	4,119,010	38,409	185,947
	Total Electric Plant In Service		4,201,155,690	3,171,113	4,197,984,576	14,652,750	1,310,139,591	141,180,648	1,063,934,906	123,664,389	754,423,974	127,590,733	344,118,086	236,286,025	5,493	26,606,547	52,187,974	507,680	2,685,781
	Total Gen. & Intangible Plant - Class Percentage		100%	0.0719%	99.9281%	0.3533%	32.0100%	3.4319%	25.2837%	2.9725%	17.6058%	2.9573%	7.8647%	5.2357%	0.0001%	0.7122%	1.4236%	0.0133%	0.0643%
	Total Electric Plant in Service - Class Percentage		100%	0.0755%	99.9245%	0.3488%	31.1852%	3.3605%	25.3248%	2.9436%	17.9575%	3.0370%	8.1910%	5.6243%	0.0001%	0.6333%	1.2422%	0.0121%	0.0639%
	General Plant Summary																		
	Production		147,528,897	143,956	147,384,941	521,911	41,681,570	5,165,075	37,135,402	4,316,869	28,930,691	5,042,907	12,171,780	11,537,965	203	373,303	410,261	10,913	88,091
	Transmission		5,819,906	5,481	5,813,425	15,804	1,362,365	118,528	1,524,952	147,265	1,199,192	211,072	761,360	462,050	2	3,226	3,546	94	3,957
	Distribution		91,886,155	26,825	91,859,330	328,698	35,458,612	3,132,881	23,346,361	2,826,631	13,047,224	1,998,576	6,354,466	840,247	130	1,368,993	3,077,404	21,548	87,558
	Total		245,243,958	176,263	245,087,695	866,413	78,502,549	9,416,484	62,006,715	7,289,765	43,177,098	7,252,556	19,287,626	12,840,261	335	1,746,522	3,491,210	32,555	157,606
	Total General & Intangible Plant Summary																		
	Production		174,057,999	169,842	173,888,158	616,783	49,176,879	6,093,875	43,813,205	5,093,141	34,133,097	5,949,739	14,360,547	13,612,757	240	440,431	484,035	12,875	101,572
	Transmission		6,865,279	6,467	6,858,812	18,646	1,607,351	139,842	1,799,174	173,748	1,414,823	249,028	898,293	545,137	2	3,807	4,183	111	4,669
	Distribution		108,421,204	31,649	108,389,555	387,805	41,834,889	3,696,245	27,544,576	3,333,745	15,393,416	2,357,966	7,497,146	991,343	154	1,616,349	3,630,792	25,422	79,707
	Total		289,344,483	207,959	289,136,524	1,022,215	92,619,119	9,929,963	73,156,954	8,600,933	50,941,336	8,556,732	22,755,986	15,149,237	395	2,060,587	4,119,010	38,409	185,947
	Total Electric Plant in Service Summary (Excluding General & Intangible Plant)																		
	Production		2,366,398,721	2,309,085	2,364,089,636	8,371,583	668,582,339	82,849,039	595,660,714	69,243,606	464,055,186	80,889,437	195,238,257	185,071,708	3,259	5,987,865	6,580,681	175,045	1,380,915
	Transmission		312,186,756	294,078	311,892,678	847,600	73,091,533	6,359,087	81,814,322	7,900,816	64,336,635	11,324,125	40,848,332	24,789,158	90	173,069	190,218	5,061	212,303
	Distribution		1,233,225,730	359,992	1,232,865,738	4,411,052	476,646,589	42,042,569	313,302,916	37,919,335	175,090,817	26,820,438	85,275,511	11,275,823	1,748	18,394,866	41,298,065	289,166	906,615
	Total		3,911,811,207	2,963,155	3,908,848,052	13,630,535	1,217,320,471	131,250,695	990,777,951	115,063,757	703,482,638	119,034,000	321,362,100	221,136,769	5,098	24,545,860	48,068,964	469,271	2,499,834
	Total Electric Plant in Service Summary (Including General & Intangible Plant)																		
	Production		2,540,456,720	2,478,928	2,537,977,792	8,987,346	717,758,219	88,942,914	639,473,919	74,336,747	498,188,283	86,839,176	209,598,804	198,684,465	3,499	6,428,296	7,064,716	187,920	1,482,487
	Transmission		319,052,035	300,545	318,751,491	866,246	74,698,884	6,498,929	83,613,495	8,074,563	65,751,458	11,573,153	41,746,625	25,334,295	92	176,906	194,401	5,172	216,971
	Distribution		1,341,646,934	391,641	1,341,255,293	4,798,858	517,681,488	45,738,804	340,847,492	41,253,080	190,484,233	29,178,404	92,772,657	12,267,266	1,901	20,001,345	44,928,857	314,587	986,322
	Total		4,201,155,690	3,171,113	4,197,984,576	14,652,750	1,310,139,591	141,180,648	1,063,934,906	123,664,389	754,423,974	127,590,733	344,118,086	236,286,025	5,493	26,606,547	52,187,974	507,680	2,685,781

108 ACCUMULATED DEPRECIATION (9219)

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Intangible Plant																		
301	Organization		0																
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
302	Franchises & Consents		0																
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303	Miscellaneous Intangible Plant		0																
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Intangible Plant		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Intangible Plant Summary																		
	Production		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Production Plant																		
	A: Steam Prod Plant																		
310	Land & Land Rights	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
311	Structures & Improvements	112	(73,121,619)	(71,446)	(73,050,173)	(255,402)	(20,500,785)	(2,517,769)	(18,244,892)	(2,129,052)	(14,486,792)	(2,507,774)	(6,192,714)	(5,778,136)	(99)	(184,345)	(202,594)	(5,389)	(44,418)
312	Boiler Plant Equip	112	(218,157,215)	(213,159)	(217,944,056)	(761,986)	(61,163,805)	(7,511,774)	(54,433,353)	(6,351,995)	(43,221,119)	(7,481,908)	(18,475,867)	(17,238,980)	(296)	(549,990)	(604,436)	(16,079)	(132,521)
313	Engines and Engine Driven Motors	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
314	Turbogenerators	112	(64,854,044)	(63,368)	(64,790,676)	(226,524)	(18,182,851)	(2,233,095)	(16,182,014)	(1,888,329)	(12,848,827)	(2,224,230)	(5,492,526)	(5,124,825)	(88)	(163,502)	(179,688)	(4,780)	(39,396)
315	Accessory Electric Equip	112	(40,961,416)	(40,023)	(40,921,393)	(143,071)	(11,484,177)	(1,410,409)	(10,220,461)	(1,192,657)	(8,115,240)	(1,404,810)	(3,469,047)	(3,236,808)	(56)	(103,267)	(113,490)	(3,019)	(24,882)
316	Misc Power Plant Equip	112	(14,257,747)	(13,931)	(14,243,816)	(49,800)	(3,997,384)	(490,932)	(3,557,512)	(415,137)	(2,824,732)	(488,983)	(1,207,497)	(1,126,660)	(19)	(35,945)	(39,503)	(1,051)	(8,661)
	Total Steam Production Plant 311 - 316		(411,352,041)	(401,928)	(410,950,113)	(1,436,783)	(115,329,011)	(14,163,928)	(102,638,232)	(11,977,170)	(81,496,710)	(14,107,704)	(34,837,654)	(32,505,409)	(558)	(1,037,047)	(1,139,710)	(30,317)	(249,878)
	B: Nuclear Production Plant																		
320	Land & Land Rights	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
321	Structures & Improvements	113	(125,861,202)	(122,731)	(125,738,471)	(448,064)	(35,695,238)	(4,442,629)	(31,819,017)	(3,691,890)	(24,555,434)	(4,295,156)	(10,247,350)	(8,792,537)	(175)	(319,057)	(350,646)	(9,327)	(71,951)
322	Reactor Plant Equipment	113	(334,538,435)	(326,218)	(334,212,217)	(1,190,861)	(94,877,781)	(11,808,486)	(84,574,788)	(9,813,025)	(65,268,218)	(11,416,603)	(27,237,405)	(26,028,513)	(464)	(848,052)	(932,015)	(24,791)	(191,246)
323	Turbogenerators	113	(87,672,070)	(85,489)	(87,586,581)	(240,911)	(19,192,337)	(2,388,678)	(17,108,201)	(1,985,027)	(13,202,774)	(2,309,386)	(5,509,715)	(5,265,175)	(94)	(171,548)	(188,533)	(5,015)	(38,686)
324	Accessory Electric Equipment	113	(86,599,467)	(84,446)	(86,515,021)	(308,293)	(24,560,288)	(3,056,775)	(21,893,243)	(2,540,225)	(16,895,496)	(2,955,305)	(7,050,744)	(6,737,807)	(120)	(219,529)	(241,284)	(6,417)	(49,506)
325	Misc Power Plant Equipment	113	(36,502,357)	(35,595)	(36,466,762)	(129,948)	(10,352,359)	(1,288,455)	(8,228,174)	(1,070,725)	(7,121,585)	(1,245,684)	(2,971,944)	(2,840,039)	(51)	(92,533)	(101,695)	(2,705)	(20,867)
	Total Nuclear Production Plant 321 - 325		(651,173,531)	(634,978)	(650,538,553)	(2,318,166)	(184,677,992)	(22,985,023)	(164,623,422)	(19,100,892)	(127,043,506)	(22,222,034)	(53,017,158)	(50,664,071)	(903)	(1,650,720)	(1,814,152)	(48,255)	(372,258)
	D: Other Production Plant																		
340	Land & Land Rights	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
341	Structures & Improvements	114	(3,289,817)	(3,203)	(3,286,614)	(11,888)	(841,550)	(118,400)	(840,373)	(97,070)	(633,895)	(111,822)	(259,238)	(252,760)	(5)	(8,376)	(9,206)	(245)	(1,787)
342	Fuel Holders, Products and Accessories	114	(1,583,911)	(1,542)	(1,582,369)	(5,724)	(453,317)	(57,005)	(404,605)	(46,735)	(305,194)	(53,838)	(124,813)	(121,694)	(2)	(4,033)	(4,432)	(118)	(860)
343	Prime Movers	114	(223,668)	(218)	(223,350)	(809)	(63,985)	(8,048)	(57,110)	(6,597)	(43,078)	(7,599)	(17,617)	(17,177)	(0)	(569)	(626)	(17)	(121)
344	Generators	114	(10,856,250)	(10,569)	(10,845,681)	(39,231)	(3,107,072)	(390,715)	(2,773,183)	(320,328)	(2,091,825)	(369,007)	(855,475)	(834,098)	(15)	(27,641)	(30,378)	(808)	(5,896)
345	Accessory Electric Equipment	114	(1,919,779)	(1,869)	(1,917,910)	(6,937)	(549,443)	(69,093)	(490,401)	(56,645)	(369,811)	(65,254)	(151,276)	(147,499)	(3)	(4,888)	(5,372)	(143)	(1,043)

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
346	Misc Power Plant Equipment	114	(1,128,485)	(1,099)	(1,127,386)	(4,078)	(322,974)	(40,614)	(288,289)	(33,297)	(217,441)	(38,358)	(88,925)	(86,703)	(2)	(2,873)	(3,158)	(84)	(613)
	Total Other Production Plant 341 - 346		(19,001,810)	(18,499)	(18,983,311)	(68,667)	(5,438,341)	(683,873)	(4,853,849)	(560,670)	(3,661,344)	(645,878)	(1,497,347)	(1,459,931)	(27)	(48,391)	(53,171)	(1,414)	(10,319)
	Total Production Plant		(1,081,527,382)	(1,055,406)	(1,080,471,976)	(3,823,617)	(305,445,345)	(37,832,824)	(272,116,603)	(31,638,732)	(212,201,560)	(36,975,815)	(89,352,159)	(84,829,410)	(1,488)	(2,736,148)	(3,007,034)	(79,987)	(632,454)
	Transmission Plant																		
350	Total Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
352	Structures and Improvements	116	(1,960,150)	(1,881)	(1,958,269)	(5,367)	(462,626)	(40,249)	(517,066)	(50,008)	(407,214)	(71,675)	(243,504)	(156,901)	(1)	(1,086)	(1,204)	(32)	(1,344)
353	Station Equipment	116	(53,293,616)	(50,607)	(53,243,009)	(145,913)	(12,578,174)	(1,094,322)	(14,058,276)	(1,359,636)	(11,071,561)	(1,949,748)	(6,620,521)	(4,265,916)	(19)	(29,788)	(32,734)	(871)	(36,535)
354	Towers & Fixtures	117	(23,349,334)	(21,389)	(23,327,946)	(81,668)	(5,315,955)	(462,497)	(5,962,635)	(574,827)	(4,679,210)	(823,805)	(3,602,591)	(1,802,918)	(7)	(12,590)	(13,835)	(368)	(15,441)
355	Poles & Fixtures	117	(1,666,716)	(1,527)	(1,665,188)	(4,402)	(378,462)	(33,014)	(426,623)	(41,018)	(334,010)	(58,790)	(257,159)	(128,685)	(0)	(899)	(988)	(26)	(1,102)
356	Ovhd Conductor & Devices	117	(21,424,367)	(19,625)	(21,404,742)	(56,584)	(4,877,697)	(424,388)	(5,471,083)	(527,254)	(4,293,447)	(755,705)	(3,305,586)	(1,654,282)	(6)	(11,552)	(12,694)	(338)	(14,168)
357	Underground Conduit	1	(8,072,593)	(7,878)	(8,064,715)	(22,713)	(1,957,934)	(170,344)	(2,196,328)	(211,643)	(1,723,413)	(303,344)	(807,402)	(664,936)	(2)	(4,637)	(5,095)	(136)	(5,687)
358	Underground Conductors and Devices	1	(7,918,705)	(7,727)	(7,910,978)	(22,280)	(1,920,610)	(167,098)	(2,148,612)	(207,608)	(1,690,559)	(297,561)	(792,011)	(651,379)	(2)	(4,548)	(4,998)	(133)	(5,579)
359	Roads & Trails	1	(5,122)	(5)	(5,117)	(14)	(1,242)	(108)	(1,388)	(134)	(1,093)	(192)	(512)	(421)	(0)	(3)	(3)	(0)	(4)
	Total Transmission Plant		(117,690,602)	(110,819)	(117,579,983)	(318,941)	(27,493,701)	(2,391,998)	(30,770,993)	(2,971,927)	(24,200,508)	(4,259,819)	(15,829,286)	(9,324,551)	(34)	(65,112)	(71,551)	(1,904)	(79,859)
	Distribution Plant																		
360	Land & Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
361	Structures & Improvement	118	(13,307,734)	(6,674)	(13,301,060)	(45,909)	(3,631,344)	(471,526)	(3,458,746)	(398,977)	(2,393,048)	(308,621)	(2,251,932)	(253,639)	(18)	(35,623)	(44,335)	(919)	(6,428)
362	Station Equipment	118	(85,204,582)	(42,733)	(85,161,859)	(293,936)	(23,250,178)	(3,019,007)	(22,145,094)	(2,554,503)	(15,321,819)	(1,975,985)	(14,418,304)	(1,623,956)	(113)	(228,078)	(283,860)	(5,882)	(41,145)
363	Storage Battery Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
364	Poles,Towers,Fixtures*	119	(66,699,658)	(13,315)	(66,686,343)	(316,154)	(35,828,787)	(3,017,026)	(15,829,547)	(1,719,308)	(3,353,914)	(534,522)	(830,721)	0	(157)	(1,705,092)	(3,619,119)	(36,429)	(95,566)
365	Ovhd Conductor & Devices	119	(60,090,427)	(11,995)	(60,078,432)	(284,827)	(32,278,533)	(2,718,072)	(14,080,824)	(1,548,943)	(3,021,576)	(481,556)	(748,406)	0	(141)	(1,536,135)	(3,260,502)	(32,819)	(86,096)
368	Underground Conduit	120	(15,840,062)	(4,192)	(15,835,870)	(34,707)	(3,050,984)	(352,443)	(5,060,765)	(793,561)	(4,612,212)	(764,106)	(1,021,323)	0	(14)	(47,143)	(90,769)	(1,557)	(6,308)
367	Underground Lines	120	(34,037,405)	(9,008)	(34,028,397)	(74,580)	(8,565,984)	(757,335)	(10,874,660)	(1,705,218)	(9,910,903)	(1,641,824)	(2,194,637)	0	(31)	(101,301)	(195,044)	(3,348)	(13,554)
368	Line Transformers	121	(51,529,807)	(12,754)	(51,516,853)	(160,940)	(20,641,260)	(1,342,702)	(11,104,784)	(1,681,866)	(10,523,089)	(1,841,956)	(2,121,765)	(1,236,326)	(68)	(80,879)	(757,749)	(11,352)	(32,317)
369	Services	122	(19,888,087)	(2,391)	(19,885,696)	(92,446)	(15,371,364)	(724,884)	(2,235,436)	(206,279)	(646,822)	(101,836)	(242,991)	(229,386)	(3)	(6,065)	(6,668)	(177)	(1,240)
370	Meters	40	(25,120,856)	(2,151)	(25,118,705)	(60,969)	(10,690,502)	(490,826)	(11,548,775)	(803,415)	(1,115,250)	(199,859)	(187,804)	(41,306)	0	0	0	0	0
371	Installations on Cust Premises	20	37,544	0	37,544	0	0	0	4,534	0	13,734	0	2,203	17,073	0	0	0	0	0
372	Leased Property on Customer Premise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
373	Street Lights & Signal Systems	19	(14,747,084)	0	(14,747,084)	0	0	0	0	0	0	0	0	0	0	(4,421,873)	(10,325,211)	0	0
	Total Distribution Plant		(386,407,868)	(105,215)	(386,302,753)	(1,364,467)	(151,298,898)	(12,893,821)	(96,134,098)	(11,412,068)	(50,884,998)	(7,656,365)	(23,995,699)	(3,367,540)	(534)	(8,141,988)	(18,583,245)	(92,481)	(282,652)
	General Plant																		
389	Land & Land Rights																		
	Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	Structures & Improvements																		
	Production	100	(13,588,593)	(13,259)	(13,575,334)	(48,072)	(3,839,206)	(475,745)	(3,420,468)	(397,618)	(2,684,748)	(484,492)	(1,121,118)	(1,082,739)	(19)	(34,384)	(37,788)	(1,005)	(7,930)
	Transmission	101	(535,968)	(505)	(535,463)	(1,456)	(125,485)	(10,917)	(140,460)	(13,564)	(110,454)	(19,441)	(70,129)	(42,558)	(0)	(297)	(327)	(9)	(364)
	Distribution	102	(8,464,372)	(2,471)	(8,461,901)	(30,276)	(3,266,022)	(286,563)	(2,150,387)	(260,263)	(1,201,754)	(184,085)	(585,297)	(77,393)	(12)	(126,187)	(283,454)	(1,895)	(6,223)
391	Office Furniture & Equipment																		
	Production	100	(12,202,513)	(11,907)	(12,190,606)	(43,169)	(3,447,595)	(427,217)	(3,071,569)	(357,060)	(2,392,938)	(417,112)	(1,006,761)	(954,336)	(17)	(30,877)	(33,934)	(903)	(7,121)
	Transmission	101	(481,297)	(453)	(480,844)	(1,307)	(112,685)	(9,804)	(126,133)	(12,181)	(99,188)	(17,458)	(62,976)	(38,217)	(0)	(267)	(293)	(8)	(327)
	Distribution	102	(7,600,979)	(2,219)	(7,598,760)	(27,187)	(2,932,878)	(259,129)	(1,931,041)	(233,716)	(1,078,171)	(165,308)	(525,595)	(69,499)	(11)	(113,316)	(254,540)	(1,782)	(5,588)
392	Transportation Equipment																		
	Production	100	(5,721,685)	(5,583)	(5,716,102)	(20,242)	(1,616,557)	(200,320)	(1,440,240)	(167,423)	(1,122,033)	(195,582)	(472,064)	(447,482)	(8)	(14,478)	(15,911)	(423)	(3,339)

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Transmission	101	(225,677)	(213)	(225,464)	(613)	(52,937)	(4,597)	(59,143)	(5,711)	(46,508)	(8,186)	(29,529)	(17,920)	(0)	(125)	(138)	(4)	(163)
	Distribution	102	(3,564,053)	(1,040)	(3,563,013)	(12,749)	(1,375,308)	(121,504)	(905,453)	(109,588)	(508,017)	(77,512)	(246,448)	(32,598)	(5)	(53,133)	(119,352)	(838)	(2,820)
393	Stores Equipment																		
	Production	100	(529,931)	(517)	(529,414)	(1,876)	(149,722)	(18,563)	(133,392)	(15,508)	(103,920)	(18,114)	(43,722)	(41,445)	(1)	(1,341)	(1,474)	(39)	(309)
	Transmission	101	(20,902)	(20)	(20,882)	(57)	(4,894)	(426)	(5,478)	(529)	(4,308)	(758)	(2,735)	(1,660)	(0)	(12)	(13)	(0)	(14)
	Distribution	102	(330,096)	(96)	(330,000)	(1,181)	(127,369)	(11,253)	(83,881)	(10,150)	(46,866)	(7,179)	(22,826)	(3,018)	(0)	(4,821)	(11,054)	(77)	(243)
394	Tools, Shop & Garage Equipment																		
	Production	100	(2,126,093)	(2,075)	(2,124,019)	(7,521)	(600,688)	(74,438)	(535,172)	(62,212)	(416,831)	(72,676)	(176,412)	(166,278)	(3)	(5,380)	(5,912)	(157)	(1,241)
	Transmission	101	(83,858)	(79)	(83,779)	(228)	(19,634)	(1,709)	(21,977)	(2,122)	(17,282)	(3,042)	(10,973)	(6,659)	(0)	(46)	(51)	(1)	(57)
	Distribution	102	(1,324,348)	(397)	(1,323,963)	(4,737)	(511,007)	(45,149)	(336,453)	(40,721)	(186,028)	(28,802)	(91,577)	(12,109)	(2)	(19,743)	(44,350)	(311)	(974)
395	Laboratory Equipment																		
	Production	100	(1,333,738)	(1,301)	(1,332,437)	(4,718)	(376,823)	(46,695)	(335,723)	(39,027)	(261,549)	(45,591)	(110,039)	(104,309)	(2)	(3,375)	(3,709)	(99)	(778)
	Transmission	101	(52,606)	(50)	(52,556)	(143)	(12,317)	(1,072)	(13,788)	(1,331)	(10,841)	(1,908)	(6,883)	(4,177)	(0)	(29)	(32)	(1)	(36)
	Distribution	102	(830,789)	(249)	(830,540)	(2,972)	(320,564)	(28,323)	(211,063)	(25,545)	(117,854)	(18,068)	(57,448)	(7,596)	(1)	(12,385)	(27,821)	(195)	(611)
396	Power Operated Equipment																		
	Production	100	(514,404)	(502)	(513,902)	(1,820)	(145,335)	(18,010)	(129,484)	(15,052)	(100,876)	(17,584)	(42,441)	(40,231)	(1)	(1,302)	(1,430)	(38)	(300)
	Transmission	101	(20,289)	(19)	(20,270)	(55)	(4,750)	(413)	(5,317)	(513)	(4,181)	(736)	(2,655)	(1,611)	(0)	(11)	(12)	(0)	(14)
	Distribution	102	(320,424)	(96)	(320,330)	(1,146)	(123,637)	(10,924)	(81,404)	(9,852)	(45,493)	(6,969)	(22,157)	(2,930)	(0)	(4,777)	(10,730)	(75)	(236)
397	Communication Equipment																		
	Production	100	(28,833,969)	(28,111)	(28,804,858)	(105,543)	(8,429,038)	(1,044,505)	(7,509,691)	(872,877)	(5,850,497)	(1,019,800)	(2,461,433)	(2,333,260)	(41)	(75,491)	(82,985)	(2,207)	(17,410)
	Transmission	101	(1,178,726)	(1,108)	(1,175,618)	(3,186)	(275,504)	(23,869)	(308,383)	(29,781)	(242,504)	(42,684)	(153,970)	(93,438)	(0)	(652)	(717)	(19)	(800)
	Distribution	102	(18,583,661)	(5,425)	(18,578,236)	(66,471)	(7,170,603)	(633,546)	(4,721,208)	(571,412)	(2,638,469)	(404,161)	(1,285,029)	(169,919)	(26)	(277,046)	(622,327)	(4,357)	(13,662)
398	Misc Equipment																		
	Production	100	(101,842)	(99)	(101,743)	(360)	(28,774)	(3,566)	(25,635)	(2,980)	(19,971)	(3,481)	(8,402)	(7,965)	(0)	(258)	(283)	(8)	(59)
	Transmission	101	(4,017)	(4)	(4,013)	(11)	(940)	(82)	(1,053)	(102)	(828)	(146)	(526)	(319)	(0)	(2)	(2)	(0)	(3)
	Distribution	102	(63,437)	(19)	(63,418)	(227)	(24,477)	(2,163)	(16,118)	(1,951)	(9,007)	(1,380)	(4,387)	(580)	(0)	(946)	(2,124)	(15)	(47)
	Subtotal		(109,636,269)	(78,798)	(109,557,471)	(387,330)	(35,094,551)	(3,762,588)	(27,720,092)	(3,258,888)	(19,302,314)	(3,242,254)	(8,622,530)	(5,740,237)	(150)	(780,782)	(1,560,745)	(14,554)	(70,458)
399	Other Tangible Property																		
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total General Plant		(109,636,269)	(78,798)	(109,557,471)	(387,330)	(35,094,551)	(3,762,588)	(27,720,092)	(3,258,888)	(19,302,314)	(3,242,254)	(8,622,530)	(5,740,237)	(150)	(780,782)	(1,560,745)	(14,554)	(70,458)
	Total Accumulated Depreciation		(1,695,262,221)	(1,350,037)	(1,693,912,184)	(5,894,355)	(519,332,492)	(56,881,232)	(426,740,785)	(49,281,615)	(306,589,281)	(52,327,854)	(137,599,674)	(103,061,737)	(2,207)	(11,724,031)	(23,222,574)	(188,926)	(1,065,423)
	NET PLANT IN SERVICE		2,505,893,468	1,821,076	2,504,072,392	8,758,395	790,807,098	84,289,416	637,194,121	74,382,774	447,934,684	75,262,879	206,518,413	133,224,288	3,286	14,882,517	28,865,398	318,764	1,520,358
	Total Accumulated Depr. - Class Percentage		*100%*	*0.0796%*	*99.9204%*	*0.3477%*	*30.6343%*	*3.3553%*	*25.1726%*	*2.9070%*	*18.0851%*	*3.0867%*	*8.1167%*	*6.0794%*	*0.0001%*	*0.6916%*	*1.3699%*	*0.0111%*	*0.0628%*
	NET PLANT IN SERVICE - Class Percentage		*100%*	*0.0727%*	*99.9273%*	*0.3495%*	*31.5579%*	*3.3640%*	*25.4276%*	*2.9683%*	*17.8713%*	*3.0034%*	*8.2413%*	*5.3164%*	*0.0001%*	*0.5939%*	*1.1559%*	*0.0127%*	*0.0647%*

Total General & Intangible Plant Accumulated Depreciation Summary																
Production	(65,952,768)	(64,355)	(65,888,413)	(233,320)	(18,633,739)	(2,309,046)	(16,601,375)	(1,929,855)	(12,933,460)	(2,254,431)	(5,441,392)	(5,158,045)	(91)	(166,885)	(183,407)	(4,879)	(38,487)
Transmission	(2,601,341)	(2,450)	(2,598,890)	(7,065)	(609,046)	(52,988)	(681,729)	(65,935)	(536,094)	(94,360)	(340,376)	(206,659)	(1)	(1,442)	(1,585)	(42)	(1,769)
Distribution	(41,082,160)	(11,992)	(41,070,168)	(146,944)	(15,851,766)	(1,400,554)	(10,436,987)	(1,263,198)	(5,932,759)	(893,463)	(2,840,763)	(375,632)	(58)	(617,455)	(1,375,763)	(8,633)	(30,202)
Total	(109,636,269)	(78,798)	(109,557,471)	(387,330)	(35,094,551)	(3,762,588)	(27,720,092)	(3,258,888)	(19,302,314)	(3,242,254)	(8,622,530)	(5,740,237)	(150)	(780,782)	(1,560,745)	(14,554)	(70,458)

Total Plant Accumulated Depreciation Summary (including General & Intangible Plant

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Production		(1,147,480,150)	(1,119,761)	(1,146,360,389)	(4,056,937)	(324,079,084)	(40,141,870)	(288,718,978)	(33,568,587)	(225,135,020)	(39,230,046)	(94,793,551)	(89,787,455)	(1,579)	(2,903,033)	(3,190,441)	(84,665)	(870,941)
	Transmission		(120,291,943)	(113,069)	(120,178,874)	(326,006)	(28,102,747)	(2,444,997)	(31,452,722)	(3,037,761)	(24,736,602)	(4,353,979)	(15,969,681)	(9,531,110)	(35)	(86,554)	(73,136)	(1,046)	(81,828)
	Distribution		(427,490,128)	(117,207)	(427,372,921)	(1,511,411)	(167,150,662)	(14,284,375)	(106,571,085)	(12,676,266)	(56,717,659)	(8,743,828)	(26,936,452)	(3,743,172)	(592)	(8,764,443)	(19,959,997)	(102,114)	(312,854)
		Total	(1,695,262,221)	(1,350,037)	(1,693,912,184)	(5,894,355)	(519,332,492)	(56,881,232)	(426,740,785)	(49,281,615)	(306,589,281)	(52,327,854)	(137,699,674)	(103,061,737)	(2,207)	(11,724,031)	(23,223,574)	(188,825)	(1,065,423)
	Total Net Electric Plant in Service Summary (Excluding General & Intangible Plant)																		
	Production		1,284,871,339	1,253,678	1,283,617,660	4,547,987	363,138,995	45,016,215	323,545,111	37,604,874	251,853,626	43,913,822	105,886,098	100,442,297	1,771	3,251,717	3,573,647	95,058	748,461
	Transmission		194,496,154	183,459	194,312,696	528,959	45,597,832	3,967,089	51,043,328	4,928,889	40,138,127	7,064,506	25,219,045	15,464,607	56	107,997	118,697	3,157	132,444
	Distribution		946,617,762	254,777	946,362,985	3,349,595	324,547,703	29,149,737	217,168,818	26,507,267	124,205,918	19,970,073	61,278,812	7,908,393	1,214	19,243,009	22,714,820	196,684	623,963
		Total	2,326,185,255	1,691,915	2,324,493,340	8,123,511	733,282,530	78,132,041	591,757,258	69,041,030	416,195,671	69,948,400	192,384,956	123,815,288	3,041	13,602,712	26,407,134	294,899	1,504,868
	Total Net Electric Plant in Service Summary (Including General & Intangible Plant)																		
	Production		1,392,976,569	1,359,166	1,391,617,403	4,930,409	393,680,135	48,801,044	350,758,941	40,768,180	273,053,263	47,609,130	114,805,253	108,887,009	1,920	3,525,263	3,874,275	103,055	811,548
	Transmission		198,760,093	187,476	198,572,617	540,539	46,598,138	4,053,943	52,160,773	5,036,801	41,014,858	7,218,174	25,776,984	15,803,185	58	110,351	121,265	3,228	135,344
	Distribution		914,159,806	274,434	913,882,372	3,287,446	350,530,826	31,444,429	234,276,407	28,577,814	133,766,575	20,434,575	65,936,195	8,524,094	1,309	11,246,802	24,969,860	212,473	673,468
		Total	2,505,893,468	1,821,076	2,504,072,392	8,758,395	790,807,098	84,299,416	637,194,121	74,382,774	447,834,694	75,262,879	206,518,413	133,224,288	3,288	14,882,517	28,965,399	318,754	1,620,358
	Additions To Plant																		
105	Add: Land/Plant Held For Future Use (P214)																		
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	CWIP - Construction Work In Progress (P216.1)		0																
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Deductions To Plant																		
	Less: Accum. Deferred Income Taxes (P273-277)																		
	Intangible Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Production Plant	100	(240,024,770)	(234,211)	(239,790,559)	(849,133)	(67,814,574)	(8,403,411)	(60,418,105)	(7,023,407)	(47,069,303)	(8,204,648)	(19,803,095)	(18,771,887)	(331)	(607,352)	(667,481)	(17,755)	(140,087)
	Transmission Plant	101	(23,087,876)	(21,749)	(23,066,127)	(62,707)	(5,405,509)	(470,288)	(6,050,606)	(584,306)	(4,758,037)	(837,479)	(3,020,952)	(1,833,290)	(7)	(12,802)	(14,058)	(374)	(15,701)
	Distribution Plant	102	(99,290,860)	(28,984)	(99,261,976)	(355,148)	(38,311,836)	(3,384,981)	(25,225,023)	(3,053,007)	(14,097,123)	(2,159,399)	(6,865,805)	(907,861)	(141)	(1,460,235)	(3,325,040)	(23,282)	(72,995)
	General Plant		(25,765,908)																
	Production	100	(15,499,733)	(15,124)	(15,484,609)	(54,833)	(4,379,164)	(542,655)	(3,901,533)	(453,540)	(3,038,526)	(529,920)	(1,278,796)	(1,212,206)	(21)	(39,220)	(43,103)	(1,147)	(9,045)
	Transmission	101	(611,348)	(576)	(610,772)	(1,660)	(143,133)	(12,453)	(160,215)	(15,472)	(125,988)	(22,176)	(79,992)	(48,544)	(0)	(339)	(372)	(10)	(416)
	Distribution	102	(9,654,827)	(2,819)	(9,652,009)	(34,534)	(3,725,366)	(329,148)	(2,452,874)	(295,867)	(1,370,772)	(209,975)	(667,615)	(88,278)	(14)	(143,936)	(373,319)	(2,284)	(7,098)
		Total	(388,169,514)	(303,463)	(387,866,051)	(1,356,015)	(119,779,692)	(13,142,937)	(99,208,395)	(11,426,601)	(70,460,752)	(11,963,498)	(31,716,255)	(22,862,077)	(513)	(2,263,882)	(4,373,383)	(44,831)	(245,321)

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total UGI-IV	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GSIGM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Rate Base Prior To Extraordinary Adjustment		2,117,723,954	1,517,613	2,116,206,341	7,400,380	671,027,416	71,156,479	538,985,816	62,956,173	377,373,942	63,299,382	174,892,157	110,362,211	2,773	12,598,635	24,592,016	273,923	1,375,037
	Total Accumulated Deferred Income Taxes Summary																		
	Production		(255,524,503)	(249,336)	(255,275,167)	(903,966)	(72,193,738)	(8,946,066)	(64,319,638)	(7,476,947)	(50,108,630)	(8,734,468)	(21,091,890)	(19,984,103)	(352)	(846,572)	(710,584)	(18,901)	(149,112)
	Transmission		(23,899,224)	(22,324)	(23,876,900)	(84,367)	(5,548,642)	(482,741)	(6,210,821)	(599,778)	(4,684,026)	(859,655)	(3,100,944)	(1,861,835)	(7)	(13,141)	(14,440)	(394)	(38,117)
	Distribution		(108,945,787)	(31,892)	(108,913,895)	(369,682)	(42,937,302)	(3,714,129)	(27,877,847)	(3,349,976)	(16,467,896)	(2,369,375)	(7,533,420)	(896,139)	(154)	(1,624,170)	(3,848,359)	(25,545)	(80,092)
	Total		(388,169,514)	(303,483)	(387,865,961)	(1,358,015)	(119,779,682)	(13,142,937)	(98,208,305)	(11,426,601)	(70,460,752)	(11,963,498)	(31,718,255)	(22,882,077)	(513)	(2,283,882)	(4,373,383)	(44,831)	(245,321)
	Net Rate Base Prior To Extraordinary Adjustment Summary																		
	Production		1,137,452,066	1,109,831	1,136,342,236	4,028,443	321,486,397	39,854,978	286,437,303	33,291,215	222,944,433	38,874,662	93,723,363	88,912,908	1,568	2,876,691	3,163,691	84,153	662,434
	Transmission		175,060,869	165,151	174,895,718	476,172	41,047,496	3,571,202	45,949,953	4,437,022	36,130,830	6,358,516	22,876,020	13,921,351	51	97,211	106,824	2,842	119,227
	Distribution		805,211,019	242,631	804,968,388	2,897,765	308,493,524	27,730,300	206,598,560	25,227,936	118,299,679	18,065,201	58,402,776	7,627,955	1,155	9,622,732	21,321,501	186,928	593,376
	Total		2,117,723,954	1,517,613	2,116,206,341	7,400,380	671,027,416	71,156,479	538,985,816	62,956,173	377,373,942	63,299,382	174,892,157	110,362,211	2,773	12,598,635	24,592,016	273,923	1,375,037
	Adjustments To Rate Base For Ratemaking																		
	Add:																		
	Regulatory Assets		544,788,485																
	Production	100	455,273,723	444,247	454,829,476	1,610,617	128,629,188	15,939,406	114,599,737	13,321,844	89,280,023	15,562,397	37,562,078	35,606,124	627	1,152,011	1,266,063	33,677	265,676
	Transmission	101	32,670,171	30,775	32,639,396	88,732	7,648,988	665,475	8,561,623	926,816	6,732,793	1,185,063	4,274,755	2,584,172	9	16,115	19,906	530	22,217
	Distribution	102	56,844,591	16,584	56,827,997	203,324	21,933,783	1,937,919	14,441,457	1,747,663	9,070,676	1,236,267	3,930,709	518,755	81	847,442	1,903,603	13,329	41,790
	Phillips		78,398,252																
	Production	100	78,399,252	76,500	78,322,752	277,352	22,150,264	2,744,805	19,734,356	2,294,054	15,374,239	2,679,883	6,466,282	6,131,462	108	198,379	218,019	5,799	45,750
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Brunot Island		28,758,583																
	Production	100	28,758,583	28,062	28,730,501	101,738	8,125,202	1,006,855	7,238,994	841,509	5,639,608	983,040	2,372,707	2,249,155	40	72,770	79,974	2,127	16,782
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Warwick		15,284,914																
	Production	100	15,284,914	14,924	15,279,990	54,109	4,321,286	535,484	3,848,978	447,547	2,999,361	522,818	1,261,897	1,196,187	21	38,702	42,533	1,131	8,925
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Deferred Taxes		(485,985,645)																
	Production	100	(383,558,487)	(374,269)	(383,184,228)	(1,356,911)	(108,367,383)	(13,428,613)	(96,547,858)	(11,223,372)	(75,218,534)	(13,110,990)	(31,645,256)	(29,997,407)	(528)	(870,545)	(1,068,632)	(28,372)	(223,826)
	Transmission	101	(37,049,551)	(34,800)	(37,014,651)	(100,627)	(8,674,322)	(754,681)	(9,709,521)	(937,648)	(7,635,312)	(1,343,919)	(4,847,779)	(2,941,916)	(11)	(20,543)	(22,575)	(601)	(25,186)
	Distribution	102	(65,377,587)	(19,084)	(65,358,513)	(233,845)	(25,226,298)	(2,228,823)	(16,609,280)	(2,010,236)	(9,282,175)	(1,421,846)	(4,520,752)	(597,776)	(93)	(974,653)	(2,189,354)	(15,330)	(48,063)
	Working Capital		69,940,000																
	Production	100	63,590,000	62,050	63,527,950	224,962	17,966,182	2,226,324	16,006,628	1,860,718	12,470,117	2,173,666	5,246,453	4,973,257	88	160,906	176,836	4,704	37,108
	Transmission	101	1,240,000	1,168	1,238,832	3,368	290,318	25,258	324,965	31,382	255,544	44,979	162,249	98,462	0	689	758	20	843
	Distribution	102	5,110,000	1,491	5,108,509	18,278	1,971,720	174,208	1,298,203	157,123	725,507	111,133	353,348	46,723	7	76,180	171,123	1,188	3,757
	Total Net Adjustment To Rate Base		251,195,569	247,559	250,948,010	891,097	70,768,959	8,843,618	63,189,481	7,357,598	49,413,847	8,622,492	20,618,690	18,878,197	349	599,452	600,253	18,213	145,764

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total UUUV	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Rate Base Adjusted For Ratemaking		2,388,919,523	1,765,172	2,387,154,351	8,291,477	741,798,375	80,000,097	602,176,296	70,313,771	426,787,789	71,921,874	195,420,848	130,240,408	3,123	13,198,087	25,192,269	292,136	1,520,801
	Extraordinary Adjustment Summary																		
	Production		257,767,955	251,515	257,506,440	911,868	72,824,759	9,024,261	64,881,833	7,542,300	50,546,814	8,510,813	21,288,160	20,158,777	355	652,223	716,795	19,067	150,415
	Transmission		(3,139,390)	(2,957)	(3,136,423)	(8,527)	(735,016)	(83,948)	(822,733)	(79,451)	(646,975)	(113,876)	(410,775)	(249,282)	(1)	(1,741)	(1,913)	(61)	(2,135)
	Distribution		(3,423,006)	(999)	(3,422,007)	(12,244)	(1,320,795)	(116,996)	(869,820)	(105,251)	(495,891)	(74,444)	(286,695)	(31,268)	(5)	(51,030)	(114,828)	(803)	(2,519)
	Total		251,195,569	247,559	250,948,010	891,097	70,768,959	8,843,818	63,189,481	7,357,598	49,413,847	8,622,492	20,618,690	19,878,187	349	599,452	600,253	18,213	145,784
	Net Rate Base After Extraordinary Adjustment Summary																		
	Production		1,395,210,021	1,361,346	1,393,848,676	4,936,311	394,311,166	48,878,239	351,319,136	40,833,513	273,491,247	47,685,475	114,989,523	109,071,883	1,923	3,530,915	3,880,486	103,220	812,849
	Transmission		171,921,489	162,194	171,759,295	467,646	40,312,480	3,507,254	45,127,220	4,357,570	35,483,854	6,245,642	22,265,245	13,672,068	50	95,470	104,912	2,791	117,092
	Distribution		801,769,013	241,632	801,646,381	2,985,521	307,172,739	27,813,604	205,729,940	25,122,688	117,812,688	17,990,751	58,196,980	7,499,857	1,150	9,571,702	21,206,971	186,126	590,859
	Total		2,388,919,523	1,765,172	2,387,154,351	8,291,477	741,798,375	80,000,097	602,176,296	70,313,771	426,787,789	71,921,874	195,420,848	130,240,408	3,123	13,198,087	25,192,269	292,136	1,520,801
	Adjusted Return for Ratemaking @9.75%																		
	Production Plant		134,078,683	130,825	133,948,858	474,572	37,893,302	4,697,295	33,761,769	3,924,101	26,282,509	4,582,574	11,050,493	10,481,789	185	339,321	372,915	9,919	78,115
	Transmission Plant		16,521,855	15,587	16,506,068	44,941	3,874,029	337,047	4,336,726	418,763	3,409,898	600,206	2,139,680	1,313,886	5	9,175	10,082	268	11,253
	Distribution Plant		77,051,828	23,221	77,028,607	287,069	29,519,300	2,653,667	19,770,551	2,414,290	11,321,799	1,728,912	5,599,760	720,429	110	919,841	2,037,980	17,897	56,782
	Total		227,653,166	169,633	227,483,533	796,811	71,286,632	7,688,009	57,869,046	6,757,153	41,014,307	6,911,692	18,779,943	12,516,103	300	1,268,336	2,420,977	28,074	146,149
	POWER PRODUCTION EXPENSE (P320)																		
	A: Steam Power Generation																		
	Operation																		
500	Supervision & Engineering	100	6,004,647	5,859	5,998,788	21,243	1,696,502	210,226	1,511,466	175,703	1,177,522	205,254	495,410	459,612	8	15,194	16,698	444	3,504
501	Fuel	12	156,405,163	155,916	156,249,247	440,395	39,737,384	4,020,907	33,827,232	4,212,851	35,749,354	5,631,657	18,407,418	14,278,023	185	372,351	409,169	10,891	151,441
502	Steam Expense	100	8,590,515	8,382	8,582,133	30,391	2,427,092	300,759	2,162,371	251,369	1,684,616	293,845	708,755	671,848	12	21,737	23,889	635	5,013
503	Steam From Other Sources	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
504	Steam Transferred - Credit	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
505	Electric Expenses	100	2,104,874	2,054	2,102,820	7,448	594,693	73,693	529,831	61,591	412,770	71,950	173,661	164,618	3	5,326	5,853	158	1,228
506	Misc Steam Expense	100	6,759,727	6,596	6,753,131	23,914	1,909,836	236,662	1,701,532	197,798	1,325,595	231,064	557,702	528,668	9	17,105	18,798	500	3,945
507	Rents	100	335,478	327	335,151	1,187	94,783	11,745	84,445	9,816	65,788	11,467	27,678	26,237	0	849	933	25	196
509	Allowances	12	2,068,025	2,062	2,065,963	6,823	512,195	53,165	447,271	55,701	472,686	74,466	243,397	188,787	2	4,823	5,410	144	2,002
	Total Operation		182,268,429	181,196	182,087,233	530,398	45,972,495	4,907,158	40,264,149	4,964,829	40,888,331	6,519,704	20,614,017	16,327,792	200	437,485	480,751	12,795	167,329
	Maintenance																		
510	Supervision & Engineering	100	1,245,970	1,216	1,244,754	4,408	352,026	43,622	313,631	36,459	244,337	42,690	102,798	97,445	2	3,153	3,465	92	727
511	Structures	100	960,939	938	960,001	3,400	271,496	33,643	241,884	28,118	188,442	32,947	79,282	75,153	1	2,432	2,672	71	561
512	Boiler Equipment	100	15,393,782	15,021	15,378,771	54,458	4,349,232	538,946	3,874,866	450,440	3,018,751	526,198	1,270,055	1,203,920	21	38,852	42,808	1,139	8,983
513	Electric Plant	100	4,024,699	3,927	4,020,772	14,238	1,137,105	140,907	1,013,082	117,767	789,251	137,574	332,055	314,764	6	10,164	11,192	298	2,349
514	Misc Steam Plant	100	4,637,547	4,525	4,633,022	16,406	1,310,253	162,363	1,167,345	135,700	909,432	158,523	382,618	362,694	6	11,735	12,896	343	2,706
	Total Maintenance		26,262,947	25,627	26,237,320	92,910	7,420,112	919,482	6,610,807	768,485	5,150,213	897,733	2,166,808	2,053,977	36	66,455	73,034	1,943	15,326
	Total Steam Expense		208,531,376	206,823	208,324,553	623,308	53,392,607	5,826,639	46,874,956	5,733,113	46,038,544	7,417,437	22,780,825	18,381,769	236	503,940	553,786	14,738	182,655
	Total Steam Expense - Class Percentage		*100%*	*0.0992%*	*99.9008%*	*0.2989%*	*25.6041%*	*2.7941%*	*22.4786%*	*2.7493%*	*22.0775%*	*3.5570%*	*10.9244%*	*8.8149%*	*0.0001%*	*0.2417%*	*0.2656%*	*0.0071%*	*0.0876%*

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PAPUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	B: Nuclear Power Generation																		
	Operation																		
517	Supervision & Engineering	100	13,576,986	13,247	13,562,739	48,028	3,835,845	475,303	3,417,295	397,249	2,662,276	464,061	1,120,078	1,061,753	19	34,352	37,753	1,004	7,922
518	Fuel	12	25,740,809	26,660	25,715,149	72,479	6,376,313	661,762	5,567,209	693,309	5,993,548	926,878	3,029,451	2,349,845	27	61,261	67,340	1,792	24,924
519	Coolants & Water	100	558,656	545	558,111	1,976	157,838	19,559	140,623	16,347	109,553	19,096	46,092	43,691	1	1,414	1,554	41	326
520	Steam Expenses	100	5,455,447	5,323	5,450,124	19,300	1,541,336	190,998	1,373,224	159,633	1,069,823	186,481	460,098	426,661	8	13,804	15,171	404	3,184
521	Steam from Other Sources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
522	Steam Transferred - Credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
523	Electric Expenses	100	128,447	126	128,321	458	36,573	4,532	32,584	3,788	25,385	4,425	10,680	10,124	0	328	360	10	78
524	Misc Nuclear Power Expense	100	16,937,324	16,527	16,920,797	59,918	4,785,528	592,988	4,263,398	495,606	3,321,441	578,960	1,397,403	1,324,637	23	42,858	47,101	1,253	9,884
525	Rents	100	46,325,120	45,184	46,179,016	163,523	13,059,491	1,618,299	11,635,105	1,352,543	9,064,440	1,580,022	3,813,610	3,615,026	64	116,962	128,541	3,419	26,974
	Total Operation		108,820,788	106,533	108,514,256	365,683	29,791,524	3,563,430	26,429,437	3,118,474	22,136,466	3,759,924	9,867,413	8,831,736	141	270,988	297,820	7,923	73,288
	Maintenance																		
528	Supervision & Engineering	100	3,295,342	3,216	3,292,126	11,658	931,038	115,372	829,491	96,428	646,223	112,643	271,880	257,723	5	8,338	9,164	244	1,923
529	Structures	100	1,641,883	1,602	1,640,281	5,808	463,884	57,493	413,288	48,043	321,976	56,124	135,463	128,409	2	4,155	4,566	121	958
530	Reactor Plant Equipment	100	7,760,707	7,573	7,753,134	27,455	2,192,845	271,707	1,953,495	227,087	1,521,889	265,280	640,292	606,851	11	19,637	21,582	574	4,529
531	Electric Plant	100	3,324,829	3,244	3,321,585	11,762	939,369	116,404	836,913	97,288	652,005	113,651	274,313	260,028	5	8,413	9,245	246	1,940
532	Misc Nuclear Plant	100	8,020,938	7,827	8,013,111	28,376	2,266,168	280,818	2,018,699	234,702	1,572,921	274,176	661,763	627,303	11	20,296	22,305	593	4,681
	Total Maintenance		24,043,699	23,461	24,020,238	85,059	6,793,104	841,784	6,052,187	703,547	4,715,014	821,874	1,983,710	1,880,414	33	60,839	66,863	1,779	14,031
	Total Nuclear Expense		132,864,488	129,994	132,534,494	450,742	36,584,627	4,405,214	32,481,624	3,822,021	26,851,480	4,581,798	11,851,123	10,712,150	174	331,837	364,683	9,702	87,319
	Total Nuclear Expense - Class Percentage		*100%*	*0.0980%*	*99.9020%*	*0.3393%*	*27.5758%*	*3.3206%*	*24.4840%*	*2.8810%*	*20.2401%*	*3.4537%*	*8.9332%*	*8.0746%*	*0.0001%*	*0.2501%*	*0.2749%*	*0.0073%*	*0.0658%*
	D: Other Power Generation																		
	Operation																		
546	Supervision & Engineering	100	26,232	26	26,206	93	7,411	918	6,603	768	5,144	897	2,164	2,052	0	66	73	2	15
547	Fuel	12	201,637	201	201,436	568	49,940	5,184	43,610	5,431	40,088	7,261	23,731	18,407	0	460	527	14	105
548	Generation Expense	100	25,322	25	25,297	90	7,164	887	6,374	741	4,966	866	2,089	1,980	0	64	70	2	15
549	Misc Power Prod Exp	100	130,028	127	129,902	460	36,737	4,552	32,730	3,805	25,498	4,445	10,728	10,168	0	329	362	10	76
550	Rents	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Operation		383,220	378	382,842	1,210	101,243	11,541	89,317	10,744	81,697	13,468	38,712	32,608	0	940	1,032	27	301
	Maintenance																		
551	Supervision & Engineering	100	26,391	26	26,365	93	7,456	924	6,643	772	5,175	902	2,177	2,064	0	67	73	2	15
552	Structures	100	32,128	31	32,097	114	9,077	1,125	8,087	940	6,300	1,098	2,651	2,513	0	81	89	2	19
553	Gen & Electric Plant	100	36,380	35	36,345	129	10,278	1,274	9,157	1,065	7,134	1,244	3,002	2,845	0	92	101	3	21
554	Misc Power Exp	100	17,924	17	17,907	63	5,064	628	4,512	524	3 515	613	1,479	1,402	0	45	50	1	10
	Total Maintenance		112,823	110	112,713	399	31,876	3,950	28,399	3,301	22,126	3,857	9,308	8,824	0	285	314	8	66
	Total Other Power Production Expense		496,043	488	495,555	1,609	133,119	15,491	117,717	14,046	103,822	17,324	48,021	41,432	1	1,225	1,346	36	367
	E: Other Power Supply Expense																		
555	Purchased Power	12	32,268,274	32,168	32,237,106	90,862	7,992,240	829,587	6,879,183	869,148	7,375,752	1,161,956	3,787,790	2,945,820	34	76,823	84,419	2,247	31,245
	Energy Related	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Demand Related	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
556	System Control & Load Dispatch	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
557	Other Expense	100	382,659	373	382,286	1,354	108,113	13,397	98 321	11,197	75,040	13,080	31,571	29,927	1	968	1,064	28	223
	Total Other Power Supply Expense		32,651,933	32,542	32,619,391	92,215	8,100,353	842,984	7,075,504	880,345	7,450,792	1,175,036	3,829,361	2,975,747	35	77,791	85,483	2,275	31,468
	Total Power Production Expense		374,343,840	369,847	373,973,993	1,167,875	98,210,708	11,090,329	86,549,800	10,449,526	80,444,838	13,181,585	38,509,330	32,111,098	446	914,794	1,005,298	26,751	301,810

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	OS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Total Other Power Supply Expense - Class Percentage		*100%*	*0.0997%*	*99.9003%*	*0.2624%*	*24.8082%*	*2.5617%*	*21.6695%*	*2.6961%*	*22.8188%*	*3.5987%*	*11.7278%*	*9.1135%*	*0.0001%*	*0.2382%*	*0.2618%*	*0.0070%*	*0.0954%*
	Total Power Production Expense - Class Percentage		*100%*	*0.0986%*	*99.9012%*	*0.3120%*	*26.2354%*	*2.9626%*	*23.1204%*	*2.7914%*	*21.4895%*	*3.5239%*	*10.2872%*	*8.5780%*	*0.0001%*	*0.2444%*	*0.2685%*	*0.0071%*	*0.0805%*
	Transmission Expense																		
	Operation																		
560	Supervision & Engineering	1	289,396	282	289,114	814	70,190	8,107	78,450	7,587	81,783	10,876	28,945	23,805	0	166	183	5	204
561	Load Dispatching	1	984,019	941	983,078	2,712	233,814	20,342	261,327	25,274	205,808	36,225	98,419	79,289	0	554	608	18	678
562	Station Expense	116	585,815	556	585,059	1,603	138,215	12,025	154,479	14,940	121,659	21,414	72,749	46,876	0	327	360	10	401
563	Overhead Line Expense	117	3,116	3	3,113	9	709	62	796	77	624	110	481	241	0	2	2	0	2
564	Underground Line Expense	1	33,965	33	33,932	96	8,238	717	9,207	890	7,251	1,276	3,387	2,794	0	20	21	1	24
565	Transmission By Others	1	5,411,140	5,280	5,405,860	15,225	1,312,425	114,183	1,466,858	141,888	1,155,221	203,335	541,210	445,111	2	3,108	3,410	91	3,812
566	Misc Trans Expense	101	64,167	60	64,107	174	15,023	1,307	16,816	1,624	13,224	2,328	6,386	5,095	0	36	39	1	44
567	Rents	101	486,227	458	485,769	1,321	113,839	9,904	127,425	12,305	100,204	17,637	63,621	38,609	0	270	296	8	331
	Total Operation		7,837,845	7,814	7,830,031	21,953	1,892,452	164,646	2,115,358	204,584	1,665,774	293,199	815,217	641,829	2	4,482	4,925	131	5,497
	Maintenance																		
568	Supervision & Engineering	1	61,655	60	61,595	173	14,954	1,301	16,714	1,616	13,163	2,317	6,167	5,072	0	35	39	1	43
569	Structures	101	457,572	431	457,141	1,243	107,130	9,321	119,916	11,580	94,299	16,598	59,871	36,333	0	254	279	7	311
570	Station Equipment	101	438,228	413	437,816	1,190	102,601	8,926	114,848	11,091	90,312	15,896	57,340	34,797	0	243	267	7	298
571	Overhead Lines	101	2,276,982	2,144	2,273,838	6,182	532,970	46,361	596,463	57,601	469,043	82,558	297,803	180,724	1	1,262	1,387	37	1,548
572	Underground Lines	1	40,997	40	40,957	115	9,943	865	11,114	1,075	8,752	1,541	4,100	3,372	0	24	26	1	29
573	Misc Transmission Expense	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Maintenance		3,274,434	3,088	3,271,346	8,903	767,499	66,774	859,051	82,963	675,568	118,909	425,281	260,298	1	1,818	1,997	53	2,229
	Total Transmission Expense		11,112,079	10,702	11,101,377	30,857	2,659,951	231,420	2,974,410	287,527	2,341,342	412,108	1,240,499	902,126	3	6,299	6,922	184	7,726
	Total Transmission Expense - Class Percentage		*100%*	*0.0963%*	*99.9037%*	*0.2777%*	*23.9375%*	*2.0826%*	*26.7674%*	*2.5875%*	*21.0702%*	*3.7087%*	*11.1635%*	*8.1184%*	*0.0000%*	*0.0567%*	*0.0623%*	*0.0017%*	*0.0695%*
	Distribution Expense																		
	Operation																		
580	Supervision & Engineering	8	2,216,899	0	2,216,899	13,228	1,043,319	137,208	843,072	94,906	58,332	5,868	0	0	5	8,986	9,976	263	1,837
581	Load Dispatching	3	1,154,492	1,068	1,153,424	4,034	316,139	41,839	308,317	39,383	219,897	37,293	89,499	68,588	2	2,740	3,011	80	560
582	Station Expense	118	2,833,152	1,421	2,831,731	9,774	773,096	100,388	736,350	84,940	509,469	65,704	479,425	53,998	4	7,584	9,439	196	1,368
583	Overhead Line Expense		3,631,484																
	Primary	118	1,280,522	258	1,280,266	6,070	667,853	57,922	300,061	33,008	64,390	10,262	15,948	0	3	32,735	69,481	659	1,835
	Secondary	118	2,350,962	469	2,350,493	11,143	1,262,857	106,341	550,894	60,660	118,215	18,840	29,280	0	6	60,099	127,563	1,284	3,368
584	Underground Line Expense		802,063																
	Primary	120	732,043	194	731,849	1,604	140,999	16,288	233,881	36,674	213,152	35,313	47,200	0	1	2,179	4,195	72	292
	Secondary	120	70,020	18	70,002	153	13,487	1,558	22,371	3,508	20,388	3,378	4,515	0	0	208	401	7	28
585	Street Lighting & Signal Expense	20	292,580	0	292,580	0	0	0	35,334	0	107,032	0	17,172	133,052	0	0	0	0	0
586	Meter Expense	40	1,285,488	110	1,285,378	3,120	547,056	25,117	590,976	41,112	57,070	10,227	8,587	2,114	0	0	0	0	0
587	Customer Install Expense	20	3,447,613	0	3,447,613	0	0	0	416,344	0	1,261,166	0	202,334	1,567,769	0	0	0	0	0
588	Misc Distribution Expense	102	3,192,187	932	3,191,255	11,418	1,231,722	108,827	810,980	98,154	453,220	69,424	220,734	29,188	5	47,589	108,899	748	2,347
589	Rents	102	1,827,440	533	1,826,907	6,536	705,127	62,300	464,264	56,190	259,456	39,744	126,364	18,709	3	27,244	61,197	428	1,343
	Total Operation		20,683,409	5,002	20,678,407	67,081	6,723,655	657,784	5,312,996	548,476	3,341,776	298,052	1,241,051	1,891,418	27	189,364	392,052	3,778	12,978
	Maintenance																		
590	Supervision & Engineering	8	454,314	0	454,314	2,711	213,810	28,118	172,773	19,449	11,954	1,202	0	0	1	1,841	2,024	54	377
591	Structures	118	468,745	234	468,511	1,610	127,383	16,538	121,309	13,993	83,932	10,824	78,882	8,886	1	1,249	1,555	32	225
592	Station Equipment	118	1,457,120	731	1,456,389	5,027	397,611	51,629	378,713	43,686	262,025	33,792	246,574	27,772	2	3,900	4,854	101	704
593	Overhead Lines		13,504,784																

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PAPUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Primary	119	13,604,764	2,696	13,602,088	64,012	7,254,311	810,862	3,164,539	348,111	678,072	108,226	168,197	0	32	345,233	732,769	7,376	19,349
	Secondary	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total UNIV	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
594	Underground Lines		845,121																
	Primary	120	845,121	224	844,897	1,852	162,779	18,804	270,009	42,339	248,077	40,788	54,491	0	1	2,515	4,843	83	337
	Secondary	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
595	Line Transformers		105,029																
	Demand Related	121	105,029	26	105,003	328	42,072	2,737	22,634	3,428	21,448	3,754	4,325	2,520	0	124	1,544	23	66
	Customer Related	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
596	Street Lighting & Signal Systems	19	84,234	0	84,234	0	0	0	0	0	0	0	0	0	0	25,257	58,977	0	0
597	Meters	39	596,821	1	596,820	2,359	419,177	19,198	140,058	9,528	5,225	820	391	64	0	0	0	0	0
598	Misc Distribution Plant Expense	102	403,934	118	403,816	1,445	155,860	13,771	102,620	12,420	57,350	9,795	27,931	3,893	1	8,022	13,527	95	287
	Total Maintenance		17,919,102	4,029	17,914,073	79,344	8,772,992	761,857	4,372,854	492,955	1,367,084	208,171	580,892	42,845	37	386,142	820,093	7,763	21,354
	Total Distribution Expense		38,601,510	9,031	38,592,479	148,425	15,498,837	1,419,441	9,685,560	1,041,431	4,708,860	504,223	1,821,842	1,934,383	63	576,508	1,212,155	11,541	34,333
	Total Distribution Expense - Class Percentage		*100%*	*0.0234%*	*99.9766%*	*0.3793%*	*40.1452%*	*3.6772%*	*25.0911%*	*2.6979%*	*12.1965%*	*1.3062%*	*4.7199%*	*5.0111%*	*0.0002%*	*1.4909%*	*3.1402%*	*0.0299%*	*0.0889%*
	Customer Accounts Expense																		
901	Supervision		3,408,371																
	Production	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	39	3,408,371	5	3,408,366	13,464	2,392,465	109,572	799,383	54,382	29,825	4,678	2,231	368	0	0	0	0	0
902	Meter Reading		4,382,518																
	Production	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	39	4,382,518	6	4,382,512	17,323	3,078,062	140,971	1,028,458	69,966	38,371	6,018	2,871	471	0	0	0	0	0
903	Cust Records & Contracts		13,520,070																
	Production	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	39	13,520,070	19	13,520,051	53,441	9,495,822	434,897	3,172,794	215,845	118,376	18,567	8,856	1,452	0	0	0	0	0
904	Uncollectable Accounts		11,000,000																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	11,000,000	19	10,999,981	52,894	9,416,428	431,261	974,866	63,696	12,124	2011	493	57	38	19	13,604	268	32,123
905	Misc Customer Accounts Expense		187,178																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	187,178	0	187,178	902	160,232	7,338	16,589	1,084	206	34	8	1	1	0	231	5	547
	Total Customer Accounts Expense		32,496,137	48	32,496,088	138,126	24,543,009	1,124,039	5,992,091	404,973	198,902	31,309	14,460	2,347	39	19	13,836	270	32,670
	Customer Service & Info Expense			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
907	Customer Service & Info		176,328																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	176,328	0	176,328	849	150,944	6,913	15,627	1,021	194	32	8	1	1	0	218	4	515
908	Customer Assistance		1,740,258																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	*13*	*1,740,258*	*3*	*1,740,255*	*8,384*	*1,489,729*	*68,228*	*154,229*	*10,077*	*1,918*	*318*	*78*	*9*	*6*	*3*	*2,152*	*42*	*5,082*
909	Info, Instruct,Advertize		220,069																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Distribution	13	220,069	0	220,069	1,060	188,388	8,828	18,503	1,274	243	40	10	1	1	0	272	5	643
910	Misc. Customer Service & Info.		30,974																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	30,974	0	30,974	149	26,515	1,214	2,745	179	34	6	1	0	0	0	38	1	90
	Total Customer Assistance & Info. Expense	13	2,167,629	4	2,167,625	10,443	1,855,575	84,983	192,104	12,552	2,398	396	97	11	7	4	2,681	52	6,330
	Sales Expense																		
911	Supervision		18,837																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	18,837	0	18,837	91	16,125	739	1,669	109	21	3	1	0	0	0	23	0	55
912	Demonstration & Selling		4,377,036																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	4,377,036	8	4,377,028	21,087	3,746,913	171,804	387,911	25,345	4,824	800	196	23	15	8	5,413	106	12,782
913	Advertising		19,427																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	19,427	0	19,427	84	16,630	762	1,722	112	21	4	1	0	0	0	24	0	57
916	Misc. Sales Expense		118,689																
	Production	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	13	118,689	0	118,689	572	101,602	4,655	10,519	687	131	22	5	1	0	0	147	3	347
	Total Sales Expense		4,533,989	8	4,533,981	21,843	3,881,271	177,757	401,821	26,254	4,997	829	203	23	16	8	5,607	109	13,240
	Administrative & General Expense																		
	Operation																		
920	Salaries		26,338,845																
	Production	104	15,844,388	15,841	15,828,748	49,879	4,178,453	475,173	3,685,255	443,727	3,384,754	557,213	1,608,124	1,351,018	19	38,812	42,852	1,135	12,636
	Transmission	106	624,842	502	624,340	1,735	149,595	13,015	167,280	16,170	131,677	23,177	69,766	50,736	0	354	388	10	435
	Distribution	107	9,869,514	2,309	9,867,205	37,437	3,962,132	362,918	2,476,374	256,270	1,203,947	128,918	465,829	494,572	18	147,144	309,920	2,951	8,778
921	Office Supplies & Expenses		5,596,877																
	Production	104	3,366,656	3,324	3,363,332	10,599	887,901	100,972	783,099	94,280	719,244	118,405	341,718	287,085	4	9,247	9,063	241	2,684
	Transmission	106	132,787	128	132,659	369	31,788	2,766	35,546	3,436	27,981	4,925	14,825	10,781	0	75	83	2	92
	Distribution	107	2,097,224	491	2,096,733	7,955	841,934	77,118	526,217	56,581	255,833	27,394	98,986	105,094	3	31,267	65,856	627	1,865
922	Admin Expenses Transferred - Credit		(6,171,869)																
	Production	104	(3,712,748)	(3,665)	(3,709,083)	(11,688)	(979,119)	(111,345)	(863,550)	(103,977)	(793,135)	(130,569)	(376,825)	(316,578)	(4)	(9,095)	(9,994)	(266)	(2,937)
	Transmission	106	(146,440)	(141)	(146,298)	(407)	(35,054)	(3,050)	(39,198)	(3,789)	(30,855)	(5,431)	(16,348)	(11,889)	(0)	(83)	(91)	(2)	(102)
	Distribution	107	(2,312,681)	(541)	(2,312,140)	(8,773)	(928,429)	(85,041)	(580,278)	(62,394)	(282,116)	(30,209)	(109,156)	(115,891)	(4)	(34,490)	(72,622)	(691)	(2,057)
923	Outside Services Employment		8,467,154																
	Production	104	5,093,499	5,028	5,088,471	16,035	1,343,248	152,754	1,184,700	142,645	1,088,097	178,127	516,884	434,312	6	12,477	13,711	365	4,030
	Transmission	106	200,900	193	200,707	558	46,090	4,184	53,776	5,198	42,330	7,451	22,428	16,310	0	114	125	3	140
	Distribution	107	3,172,755	742	3,172,013	12,035	1,273,707	116,667	798,080	85,598	387,033	41,443	149,750	158,990	5	47,302	99,630	949	2,822
924	Property Insurance		5,684,103																
	Production	126	5,155,774	5,031	5,150,743	18,251	1,457,214	180,652	1,288,346	150,900	1,010,549	176,209	424,824	403,019	7	13,048	14,340	381	3,003
	Transmission	127	57,186	54	57,142	156	13,411	1,167	15,013	1,450	11,805	2,078	7,409	4,548	0	32	35	1	39
	Distribution	128	391,133	118	391,015	1,408	149,851	13,470	100,358	12,255	57,464	8,775	28,368	3,657	1	4,674	10,357	91	288
925	Injuries & Damages		3,804,775																

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total VtPSC	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Production	104	2,168,488	2,141	2,166,347	6,826	571,869	65,033	504,370	60,729	463,243	76,261	220,090	184,902	3	5,312	5,837	155	1,716
	Transmission	106	85,531	82	85,448	238	20,474	1,761	22,894	2,213	18,021	3,172	9,648	6,944	0	48	53	1	59
	Distribution	107	1,350,757	316	1,350,441	5,124	542,264	49,870	338,920	36,442	184,774	17,644	63,754	67,888	2	20,136	42,416	404	1,201
926	Pensions & Benefits		13,504,446																
	Production	104	9,123,731	9,019	9,115,712	26,574	2,142,375	243,031	1,889,503	227,507	1,735,430	285,694	824,517	692,893	10	19,900	21,869	582	6,427
	Transmission	106	320,420	309	320,111	890	76,700	6,673	85,768	8,291	67,513	11,883	35,770	26,013	0	182	200	5	223
	Distribution	107	5,060,295	1,184	5,059,111	19,195	2,031,463	186,075	1,269,886	136,522	617,287	66,099	238,839	253,577	8	75,443	158,902	1,513	4,501
927	Franchise Requirements		0																
	Production	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
928	Regulatory Commission Expense-VT PSB		1,790,074																
	Production	104	1,076,836	1,063	1,075,773	3,390	283,981	32,294	250,462	30,157	230,039	37,870	109,293	91,820	1	2,638	2,899	77	852
	Transmission	106	42,473	41	42,432	118	10,167	885	11,369	1,099	8,949	1,575	4,742	3,448	0	24	28	1	30
	Distribution	107	670,764	157	670,607	2,544	269,279	24,665	168,302	18,097	81,824	8,762	31,659	33,613	1	10,000	21,053	201	597
929	Duplicate Charges - Credit		(1,247,245)																
	Production	104	(750,292)	(741)	(749,552)	(2,362)	(197,856)	(22,501)	(174,511)	(21,012)	(160,281)	(26,386)	(76,151)	(63,976)	(1)	(1,838)	(2,020)	(54)	(594)
	Transmission	106	(29,593)	(29)	(29,565)	(82)	(7,084)	(616)	(7,921)	(766)	(6,235)	(1,098)	(3,304)	(2,403)	(0)	(17)	(18)	(0)	(21)
	Distribution	107	(467,359)	(109)	(467,250)	(1,773)	(187,622)	(17,186)	(117,266)	(12,609)	(57,011)	(6,105)	(22,059)	(23,420)	(1)	(6,968)	(14,676)	(140)	(416)
930	Miscellaneous General Expense		20,628,428																
	Production	123	16,124,257	15,734	16,108,523	57,043	4,555,612	564,520	4,058,736	471,815	3,161,997	551,168	1,330,322	1,261,049	22	40,800	44,840	1,193	9,409
	Transmission	124	304,935	287	304,648	828	71,384	8,211	78,914	7,717	62,842	11,061	39,899	24,213	0	169	196	5	207
	Distribution	125	4,199,233	1,226	4,198,007	15,020	1,620,296	143,158	1,066,822	129,118	598,198	91,326	290,370	38,395	6	62,602	140,623	885	3,087
931	Rents		11,498,652																
	Production	126	6,917,126	6,749	6,910,377	24,486	1,955,038	242,368	1,741,886	202,452	1,355,780	236,406	569,955	540,701	10	17,506	19,239	512	4,038
	Transmission	127	272,629	257	272,572	742	63,972	5,566	71,812	6,815	56,309	9,911	35,340	21,698	0	152	166	4	166
	Distribution	128	4,308,897	1,298	4,307,399	15,506	1,650,754	148,385	1,105,512	134,995	633,018	86,667	312,514	40,282	6	51,491	114,092	1,000	3,175
	Total Operation		89,614,238	67,288	89,546,940	308,855	27,857,780	2,982,034	22,005,082	2,548,043	16,244,304	2,580,917	7,261,763	6,073,000	122	557,474	1,039,152	12,240	66,264
935	Maintenance of General Plant		3,282,708																
	Production	104	641,465	633	640,832	2,019	169,166	19,238	149,199	17,964	137,033	22,559	65,105	54,686	1	1,571	1,727	46	508
	Transmission	106	468,802	471	468,331	1,357	117,007	10,180	130,839	12,648	102,992	18,128	54,567	39,683	0	277	305	8	340
	Distribution	107	2,132,439	499	2,131,940	8,089	856,971	78,413	535,053	57,531	260,128	27,854	100,648	106,859	4	31,792	68,952	636	1,697
	Total Admin & General Expense		92,876,944	68,801	92,808,043	320,321	29,010,934	3,089,864	22,820,174	2,636,186	16,744,457	2,649,358	7,482,084	6,274,239	126	591,115	1,108,146	12,932	69,008
	TOTAL OPERATION & MAINTENANCE EXPENSE		556,132,128	458,542	555,673,586	1,835,888	175,657,182	17,217,833	128,615,960	14,658,447	104,445,585	18,769,818	49,068,615	41,224,210	700	2,087,744	3,354,645	51,840	465,117
	Total Customer Accounts Expense - Class Percentage		*100%*	*0.0002%*	*99.9998%*	*0.4347%*	*77.2490%*	*3.5379%*	*16.8020%*	*1.1322%*	*0.5263%*	*0.0830%*	*0.0377%*	*0.0061%*	*0.0002%*	*0.0001%*	*0.0564%*	*0.0011%*	*0.1333%*
	Total Admin & Gen Expense - Class Percentage		*100%*	*0.0742%*	*99.9258%*	*0.3449%*	*31.2349%*	*3.3268%*	*24.5703%*	*2.8384%*	*18.0286%*	*2.8525%*	*8.0559%*	*6.7554%*	*0.0001%*	*0.6364%*	*1.1931%*	*0.0139%*	*0.0743%*
	TOTAL OPER. & MAINT. EXPENSE - Class Percentage		*100%*	*0.0825%*	*99.9175%*	*0.3301%*	*31.5655%*	*3.0960%*	*23.1269%*	*2.6717%*	*18.7807%*	*3.0190%*	*8.8232%*	*7.4127%*	*0.0001%*	*0.3754%*	*0.6032%*	*0.0093%*	*0.0836%*
	Customer Accounts Expense Summary																		
	Production		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution		32,496,137	49	32,496,088	138,125	24,543,009	1,124,039	5,992,091	404,973	198,902	31,309	14,460	2,347	39	19	13,836	270	32,670
	Total		32,496,137	49	32,496,088	138,125	24,543,009	1,124,039	5,992,091	404,973	198,902	31,309	14,460	2,347	39	19	13,836	270	32,670
	Customer Service & Info Expense Summary																		

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	I	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Production		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution		2,167,629	4	2,167,625	10,443	1,855,675	84,983	192,104	12,552	2,389	396	97	11	7	4	2,681	62	6,330
	Total		2,167,629	4	2,167,625	10,443	1,855,675	84,983	192,104	12,552	2,389	396	97	11	7	4	2,681	62	6,330
	Sales Expense Summary																		
	Production		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution		4,533,989	8	4,533,981	21,843	3,881,271	177,767	401,821	26,254	4,997	828	203	23	16	8	5,607	109	13,240
	Total		4,533,989	8	4,533,981	21,843	3,881,271	177,767	401,821	26,254	4,997	828	203	23	16	8	5,607	109	13,240
	Administration & General Expense Summary																		
	Production		60,049,381	58,957	59,990,424	200,051	16,387,873	1,942,789	14,507,502	1,717,199	12,332,748	2,083,956	5,657,937	4,920,741	77	149,379	184,183	4,366	41,641
	Transmission		2,354,782	2,255	2,352,537	8,502	660,461	48,761	826,892	60,583	493,326	86,933	274,642	180,092	1	1,327	1,459	39	1,628
	Distribution		30,472,771	7,689	30,465,082	113,768	12,081,700	1,098,315	7,685,780	858,405	3,918,380	478,569	1,649,505	1,103,416	48	440,408	942,524	8,526	25,738
	Total		92,876,944	68,901	92,808,043	320,321	29,010,034	3,089,864	22,820,174	2,636,186	16,744,457	2,649,358	7,582,084	6,274,239	126	591,115	1,108,146	12,932	69,008
403	**Depreciation Expense (P336)**																		
	Production																		
	Steam Production (310 - 316)	112	33,351,123	32,587	33,318,536	116,480	9,350,512	1,148,366	8,321,583	971,071	6,607,496	1,143,808	2,824,527	2,835,436	45	84,081	92,404	2,458	20,259
	Nuclear Production (320 - 325)	113	106,200,173	103,559	106,096,614	378,071	30,119,214	3,748,637	26,848,505	3,115,173	20,719,580	3,624,201	8,846,591	8,262,825	147	269,217	295,871	7,870	60,712
	Other Production (340 - 346)	114	634,025	617	633,408	2,297	181,459	22,818	161,960	18,708	122,166	21,551	49,981	48,713	1	1,614	1,774	47	344
	Total Production Plant		140,185,321	136,763	140,048,558	496,852	39,651,184	4,919,822	35,332,048	4,104,951	27,449,242	4,789,560	11,521,078	10,946,974	194	354,911	390,049	10,375	81,315
	Transmission Plant																		
350	Land and Land Rights	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
352	Structures and Improvements	116	140,451	133	140,318	385	33,149	2,884	37,049	3,583	29,178	5,136	17,448	11,242	0	79	86	2	86
353	Station Equipment	116	2,527,165	2,400	2,524,765	6,919	596,453	51,892	668,639	64,473	525,010	92,408	313,943	202,288	1	1,413	1,552	41	1,732
354	Towers & Fixtures	117	1,072,809	983	1,071,826	2,833	244,247	21,250	273,959	26,402	214,991	37,841	185,525	82,837	0	579	636	17	709
355	Poles & Fixtures	117	125,604	115	125,489	332	28,596	2,488	32,075	3,091	25,171	4,430	19,380	9,699	0	68	74	2	83
356	Ovhd Conductor & Devices	101	909,008	856	908,152	2,468	212,824	18,516	238,222	23,005	187,332	32,973	118,940	72,180	0	504	554	15	618
357	Underground Conduit	1	458,859	448	458,411	1,291	111,262	9,683	124,388	12,030	97,962	17,243	45,884	37,745	0	264	290	8	323
358	Underground Conductors and Devices	1	460,991	450	460,541	1,297	111,809	9,728	124,966	12,086	98,417	17,323	46,107	37,920	0	265	291	8	325
359	Roads & Trails	1	393	0	393	1	95	8	107	10	84	15	39	32	0	0	0	0	0
	Total Transmission Plant		5,695,280	5,385	5,689,895	15,527	1,338,465	116,449	1,497,405	144,681	1,178,144	207,369	727,275	453,943	2	3,170	3,493	93	3,888
	Distribution Plant																		
360	Land & Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
361	Structures & Improvement	118	660,862	341	660,521	2,349	185,780	24,125	176,959	20,413	122,435	15,780	115,215	12,977	1	1,823	2,268	47	329
362	Station Equipment	118	7,591,164	3,807	7,587,357	26,188	2,071,437	268,974	1,972,981	227,589	1,365,072	176,047	1,284,575	144,684	10	20,320	25,290	524	3,668
363	Storage Battery Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
364	Poles, Towers, Fixtures	119	5,194,751	1,037	5,193,714	24,623	2,780,444	234,974	1,217,272	133,904	261,212	41,630	64,689	0	12	132,797	281,867	2,837	7,443
365	Ovhd Conductor & Devices	119	3,755,554	750	3,754,804	17,801	2,017,356	169,875	880,029	96,806	188,844	30,096	46,774	0	9	96,006	203,776	2,051	5,381
366	Underground Conduit	120	1,090,387	289	1,090,098	2,388	210,020	24,261	348,369	54,627	317,492	52,599	70,305	0	1	3,245	6,248	107	434
367	Underground Lines	120	3,130,687	829	3,129,858	6,860	603,003	69,658	1,000,228	156,842	911,574	151,021	201,858	0	3	9,317	17,940	308	1,247
368	Line Transformers	121	3,602,007	892	3,601,115	11,250	1,442,859	93,857	776,243	117,565	735,582	128,756	148,316	86,421	4	4,242	52,967	794	2,259

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	OS/OM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
369	Services	122	1,383,881	167	1,383,694	6,439	1,070,653	50,490	155,704	14,388	45,060	7,093	16,925	15,977	0	422	464	12	88
370	Meters	102	4,282,205	1,250	4,280,955	15,317	1,652,311	145,987	1,087,901	131,870	607,979	93,130	296,107	39,154	8	63,839	143,402	1,004	3,148
371	Install on Cust Premises'	20	2,773	0	2,773	0	0	0	335	0	1,014	0	163	1,261	0	0	0	0	0
372	Leased Property on Cust Premise	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
373	Street Lights & Signal Systems	19	2,015,246	0	2,015,246	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Distribution Plant		32,729,497	9,381	32,720,136	113,216	12,043,873	1,082,201	7,816,020	953,784	4,556,264	698,182	2,244,938	300,474	48	936,278	2,145,203	7,884	23,893
	General Plant																		
389	Land & Land Rights																		
	Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
390	Structures & Improvements																		
	Production	100	391,772	382	391,389	1,386	110,688	13,718	98,815	11,464	78,827	13,392	32,323	30,640	1	991	1,089	28	228
	Transmission	101	15,452	15	15,437	42	3,618	316	4,049	391	3,184	560	2,022	1,227	0	9	9	0	11
	Distribution	102	244,035	71	243,964	873	84,162	8,320	61,998	7,504	34,648	5,307	16,875	2,231	0	3,838	8,172	57	179
391	Office Furniture & Equipment																		
	Production	100	4,057,587	3,958	4,053,628	14,354	1,146,396	142,059	1,021,360	118,730	795,700	138,698	334,769	317,336	8	10,267	11,284	300	2,366
	Transmission	101	160,041	151	159,890	435	37,470	3,260	41,942	4,050	32,982	5,805	20,941	12,708	0	89	98	3	109
	Distribution	102	2,527,482	738	2,526,744	9,040	975,242	86,166	642,111	77,716	358,847	54,968	174,771	23,110	4	37,880	84,640	593	1,858
392	Transportation Equipment																		
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
393	Stores Equipment																		
	Production	100	50,935	50	50,785	180	14,362	1,780	12,798	1,487	9,969	1,738	4,194	3,976	0	129	141	4	30
	Transmission	101	2,005	2	2,003	5	469	41	525	51	413	73	262	159	0	1	1	0	1
	Distribution	102	31,666	9	31,657	113	12,218	1,080	8,045	974	4,486	689	2,190	280	0	472	1,060	7	23
394	Tools, Shop & Garage Equipment																		
	Production	100	248,294	242	248,052	878	70,151	8,693	62,500	7,265	48,691	8,487	20,485	19,419	0	628	690	18	145
	Transmission	101	9,793	9	9,784	27	2,293	199	2,566	248	2,018	355	1,281	778	0	5	6	0	7
	Distribution	102	154,663	45	154,618	553	59,678	5,273	39,292	4,756	21,959	3,364	10,695	1,414	0	2,306	5,178	36	114
395	Laboratory Equipment																		
	Production	100	139,863	136	139,726	486	39,516	4,897	35,206	4,093	27,427	4,781	11,539	10,938	0	354	388	10	82
	Transmission	101	5,517	5	5,512	15	1,292	112	1,446	140	1,137	200	722	438	0	3	3	0	4
	Distribution	102	87,121	25	87,095	312	33,616	2,970	22,133	2,679	12,369	1,895	6,024	797	0	1,299	2,917	20	64
396	Power Operated Equipment																		
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
397	Communication Equipment																		
	Production	100	6,504,355	6,347	6,498,008	23,010	1,837,686	227,721	1,637,251	190,325	1,275,516	222,335	536,638	508,694	9	16,458	18,088	481	3,796
	Transmission	101	256,548	242	256,306	697	60,065	5,226	67,233	6,483	52,870	9,306	33,568	20,371	0	142	156	4	174
	Distribution	102	4,051,581	1,183	4,050,398	14,492	1,563,324	138,125	1,029,310	124,578	575,235	88,115	280,160	37,045	6	60,401	135,678	950	2,979
398	Misc Equipment																		
	Production	100	24,164	24	24,140	85	6,827	846	6,082	707	4,739	826	1,994	1,890	0	61	67	2	14
	Transmission	101	954	1	953	3	223	19	250	24	197	35	125	76	0	1	1	0	1
	Distribution	102	15,051	4	15,047	54	5,808	513	3,824	463	2,137	327	1,041	138	0	224	504	4	11

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
399	Other Tangible Property																		
	Production	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total General Plant		18,978,777	13,640	18,965,136	67,049	6,075,103	651,329	4,788,535	564,135	3,341,361	561,256	1,492,618	893,674	26	135,159	270,175	2,519	12,197
	Total Depreciation Expense		197,588,875	165,150	197,423,726	692,643	59,108,626	6,769,801	49,244,009	5,767,552	36,525,011	6,254,348	15,985,911	12,695,065	287	1,429,618	2,808,910	20,871	121,392
	Total Depreciation Expense - Class Percentage		*100%*	*0.0836%*	*99.9164%*	*0.3505%*	*29.9150%*	*3.4262%*	*24.9225%*	*2.9190%*	*18.4854%*	*3.1653%*	*8.0905%*	*6.4250%*	*0.0001%*	*0.7235%*	*1.4216%*	*0.0105%*	*0.0614%*
	Amortization Expense (P336)																		
404	Amortization of Leasehold Improvements																		
	Production	100	4,676,182	4,563	4,671,619	16,643	1,321,169	163,718	1,177,070	136,831	917,008	159,844	385,805	385,716	8	11,832	13,004	348	2,729
	Transmission	101	448,779	423	448,356	1,219	105,072	9,141	117,611	11,358	92,486	16,279	58,721	35,635	0	249	273	7	305
	Distribution	102	3,068,936	898	3,068,040	10,977	1,184,165	104,826	779,668	94,364	435,721	68,744	212,212	28,061	4	45,752	102,772	720	2,256
405	Amortization of Transition Costs (Acct 405)																		
	Production	100	83,548,333	81,525	83,466,808	295,568	23,605,041	2,926,077	21,030,463	2,444,722	16,393,893	2,855,881	6,893,103	6,534,162	115	211,408	232,336	6,190	48,755
	Transmission	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Amortization Expense		91,742,230	87,406	91,654,824	324,307	26,215,447	3,202,559	23,104,812	2,687,275	17,839,109	3,098,758	7,549,842	6,963,574	126	269,241	348,388	7,253	54,045
	Total Amortization Expense - Class Percentage		*100%*	*0.0953%*	*99.9047%*	*0.3535%*	*28.5751%*	*3.4908%*	*25.1845%*	*2.9292%*	*19.4340%*	*3.3777%*	*8.2294%*	*7.5904%*	*0.0001%*	*0.2935%*	*0.3797%*	*0.0079%*	*0.0589%*
	Total Depr/Amort Expense - Class Percentage		*100%*	*0.0873%*	*99.9127%*	*0.3515%*	*29.4901%*	*3.4657%*	*25.0055%*	*2.9222%*	*18.7862%*	*3.2327%*	*8.1345%*	*6.7945%*	*0.0001%*	*0.5871%*	*1.0912%*	*0.0097%*	*0.0606%*

Total General Plant Depreciation Summary																	
Production	11,416,868	11,140	11,405,728	40,399	3,225,626	399,711	2,873,810	334,071	2,238,869	390,257	941,942	892,892	16	28,889	31,749	845	6,662
Transmission	450,310	424	449,885	1,223	105,430	9,173	118,012	11,396	92,801	16,334	58,921	35,757	0	250	274	7	306
Distribution	7,111,599	2,076	7,109,523	25,437	2,744,049	242,445	1,808,713	218,668	1,009,690	154,664	491,755	65,024	10	106,020	238,152	1,668	5,229
Total	18,978,777	13,640	18,965,136	67,049	6,075,103	651,329	4,788,535	564,135	3,341,361	561,256	1,492,618	993,674	26	135,159	270,175	2,519	12,197
Total Plant Depreciation/Amortization Summary (Excluding General Plant)																	
Production	228,409,836	222,851	228,186,985	808,863	64,577,395	8,008,616	57,539,581	6,696,504	44,756,234	7,805,295	18,799,988	17,846,852	315	578,152	635,381	16,901	132,789
Transmission	6,144,059	5,808	6,138,251	16,746	1,443,537	125,590	1,615,018	156,039	1,270,630	223,648	785,996	489,578	2	3,419	3,757	100	4,193
Distribution	35,798,433	10,257	35,788,176	124,192	13,278,038	1,186,875	8,395,688	1,048,148	4,991,985	762,806	2,457,150	328,635	50	892,030	2,247,976	8,404	26,248
Total	270,352,328	238,915	270,113,413	949,801	79,248,969	9,321,031	67,550,286	7,890,691	51,012,849	8,791,849	22,043,134	18,664,865	367	1,563,601	2,887,123	25,405	163,241
Total Plant Depreciation/Amortization Summary																	
Production	239,826,705	233,991	239,592,713	849,352	67,803,020	8,408,327	60,413,391	7,030,575	46,989,103	8,195,552	19,741,930	18,739,744	331	607,041	667,140	17,746	139,451
Transmission	6,594,368	6,232	6,588,136	17,969	1,548,967	134,763	1,733,028	167,435	1,363,431	239,983	844,917	525,336	2	3,668	4,031	107	4,499
Distribution	42,910,032	12,332	42,897,699	149,630	16,022,088	1,429,271	10,202,401	1,266,816	6,001,675	917,471	2,948,905	393,659	61	1,089,050	2,486,127	10,071	31,477
Total	289,331,105	252,556	289,078,549	1,016,950	85,374,073	9,972,361	72,348,820	8,464,827	54,354,210	9,353,105	23,535,752	19,658,739	393	1,699,759	3,157,298	27,924	175,457

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Taxes (P262)																		
408	Taxes Other Than Income Taxes		44,063,033																
	Production	110	35,817,995	25,740	35,892,255	125,615	11,381,066	1,206,881	9,141,555	1,067,778	6,400,511	1,073,598	2,984,780	1,871,816	47	213,681	417,097	4,646	23,322
	Transmission	110	474,217	340	473,977	1,657	150,262	15,934	120,694	14,098	84,504	14,174	39,143	24,713	1	2,821	5,507	61	308
	Distribution	110	7,870,821	5,497	7,865,324	26,808	2,430,598	257,743	1,952,316	228,040	1,366,924	229,283	633,168	399,754	10	45,635	89,077	992	4,991
409	Federal Income Tax		93,003,328																
	Production	103	73,568,984	55,728	73,513,256	256,348	22,897,768	2,469,417	18,633,447	2,183,991	13,230,317	2,238,859	6,043,820	4,156,894	96	461,633	904,027	8,826	47,014
	Transmission	103	2,185,457	1,654	2,181,803	7,608	679,584	73,260	553,023	64,226	392,663	66,441	176,375	123,432	3	13,701	26,831	262	1,395
	Distribution	103	17,250,887	13,067	17,237,820	60,110	5,369,203	578,809	4,369,280	507,425	3,102,322	524,934	1,417,190	975,202	22	108,246	211,982	2,069	11,024
409	State Income Tax		34,348,324																
	Production	103	27,189,180	20,580	27,148,600	94,670	8,456,184	911,591	6,881,371	799,166	4,885,984	826,741	2,231,995	1,535,889	35	170,462	333,959	3,259	17,362
	Transmission	103	806,355	611	805,744	2,810	250,972	27,055	204,232	23,718	145,011	24,537	66,243	45,584	1	5,060	9,909	97	515
	Distribution	103	6,370,789	4,826	6,365,963	22,199	1,982,858	213,755	1,613,584	187,393	1,145,894	193,859	523,371	360,144	8	39,978	78,286	764	4,071
410	Deferred Income Tax		(26,940,324)																
	Production	100	(30,241,939)	(29,509)	(30,212,430)	(106,987)	(8,544,302)	(1,058,788)	(7,612,384)	(884,915)	(5,930,600)	(1,033,745)	(2,495,092)	(2,365,187)	(42)	(76,523)	(84,099)	(2,237)	(17,648)
	Transmission	101	370,959	349	370,589	1,007	86,847	7,656	97,211	9,388	78,444	13,455	48,536	29,454	0	206	228	6	252
	Distribution	102	2,930,677	855	2,929,822	10,483	1,130,617	99,911	744,543	80,113	416,091	63,737	202,651	26,798	4	43,691	98,142	687	2,165
410	Deferred State Income Tax		1,014,841																
	Production	100	802,776	783	801,992	2,840	226,810	28,106	202,072	23,490	157,426	27,441	66,233	62,784	1	2,031	2,232	59	469
	Transmission	101	23,928	22	23,903	85	5,578	485	6,244	603	4,910	864	3,118	1,892	0	13	15	0	16
	Distribution	102	188,240	55	188,185	673	72,633	6,417	47,823	5,788	26,726	4,094	13,016	1,721	0	2,806	6,304	44	138
411	Income Tax Deferred In Prior Years		(36,611,485)																
	Production	100	(28,861,004)	(28,260)	(28,832,744)	(102,455)	(8,182,398)	(1,013,842)	(7,289,952)	(847,433)	(5,679,307)	(989,960)	(2,389,410)	(2,264,887)	(40)	(73,282)	(80,537)	(2,142)	(16,900)
	Transmission	101	(859,535)	(810)	(858,725)	(2,334)	(201,241)	(17,508)	(225,257)	(21,753)	(177,136)	(31,176)	(112,467)	(68,251)	(0)	(477)	(524)	(14)	(585)
	Distribution	102	(6,790,946)	(1,882)	(6,788,984)	(24,280)	(2,820,322)	(231,514)	(1,725,250)	(209,809)	(964,184)	(147,691)	(469,583)	(62,093)	(10)	(101,240)	(227,414)	(1,592)	(4,892)
411	Amortization of Investment Tax Credits		(7,838,483)																
	Production	100	(6,200,523)	(6,050)	(6,194,472)	(21,936)	(1,751,843)	(217,084)	(1,560,772)	(181,435)	(1,216,934)	(211,849)	(511,570)	(484,932)	(9)	(15,690)	(17,243)	(459)	(3,618)
	Transmission	101	(184,028)	(173)	(183,852)	(500)	(43,086)	(3,749)	(48,227)	(4,657)	(37,925)	(6,675)	(24,079)	(14,613)	(0)	(102)	(112)	(3)	(125)
	Distribution	102	(1,453,935)	(424)	(1,453,510)	(5,200)	(561,008)	(49,567)	(369,374)	(44,706)	(206,427)	(31,020)	(100,537)	(13,284)	(2)	(21,675)	(48,689)	(341)	(1,089)
411	Gain From Disposal Of Allowances		(226,313)																
	Production	100	(178,022)	(175)	(178,847)	(633)	(50,579)	(6,268)	(45,083)	(5,238)	(35,107)	(6,119)	(14,770)	(14,001)	(0)	(453)	(498)	(13)	(104)
	Transmission	101	(5,313)	(5)	(5,309)	(14)	(1,244)	(108)	(1,392)	(134)	(1,095)	(193)	(695)	(422)	(0)	(3)	(3)	(0)	(4)
	Distribution	102	(41,978)	(12)	(41,966)	(150)	(16,197)	(1,431)	(10,665)	(1,291)	(5,960)	(913)	(2,903)	(384)	(0)	(626)	(1,406)	(10)	(31)
	Total All Taxes		100,810,921	62,707	100,748,214	348,280	33,148,967	3,295,942	25,679,058	2,984,846	17,181,975	2,841,775	8,311,515	4,328,932	127	819,912	1,722,867	14,962	67,946
	Total All Taxes - Class Percentage		*100%*	*0.0622%*	*99.9378%*	*0.3455%*	*32.8823%*	*3.2694%*	*25.4725%*	*2.9608%*	*17.0436%*	*2.8189%*	*8.2447%*	*4.2951%*	*0.0001%*	*0.8133%*	*1.7091%*	*0.0148%*	*0.0674%*

Total Taxes Summary															
Production	71,876,447	38,837	71,837,610	247,363	24,432,715	2,318,892	18,350,275	2,135,405	11,813,390	1,924,667	5,895,965	2,500,298	69	681,880	1,474,839	11,939	49,806
Transmission	2,809,919	1,988	2,807,931	10,298	927,672	102,925	706,528	85,487	487,377	81,426	199,174	141,789	4	21,219	41,848	409	1,774
Distribution	26,124,555	21,882	26,102,673	90,628	7,788,579	874,124	6,622,255	763,954	4,881,207	835,603	2,216,376	1,687,847	34	116,813	206,281	2,614	16,277
Total	100,810,921	62,707	100,748,214	348,290	33,148,967	3,295,942	25,679,058	2,984,846	17,181,975	2,841,775	8,311,515	4,328,932	127	819,912	1,722,867	14,962	67,946

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COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Revenues																		
447	Off-System Sales																		
	Production	100	(34,245,464)	(33,416)	(34,212,048)	(121,150)	(9,675,425)	(1,196,854)	(9,620,135)	(1,002,082)	(6,715,599)	(1,170,596)	(2,625,401)	(2,678,275)	(47)	(86,654)	(95,233)	(2,533)	(19,984)
	Transmission	101	(2,254,574)	(2,124)	(2,252,450)	(6,123)	(527,858)	(45,925)	(590,853)	(57,059)	(464,831)	(81,781)	(285,002)	(178,024)	(1)	(1,250)	(1,374)	(37)	(1,533)
	Distribution	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		(36,500,038)	(35,540)	(36,464,498)	(127,273)	(10,203,283)	(1,244,879)	(9,210,988)	(1,059,121)	(7,180,230)	(1,252,377)	(3,120,402)	(2,857,299)	(48)	(87,904)	(96,606)	(2,570)	(21,517)
454	Other Revenues																		
	Production	100	(17,725,476)	(17,286)	(17,708,179)	(62,707)	(5,008,606)	(620,580)	(4,461,788)	(518,668)	(3,475,999)	(605,901)	(1,482,428)	(1,386,277)	(24)	(44,852)	(49,292)	(1,311)	(10,344)
	Transmission	101	(8,246,853)	(5,884)	(8,240,969)	(18,986)	(1,462,581)	(127,245)	(1,637,104)	(158,095)	(1,287,375)	(226,596)	(817,375)	(498,031)	(2)	(3,464)	(3,808)	(101)	(4,248)
	Distribution	102	(14,108,397)	(4,118)	(14,104,188)	(50,463)	(5,443,764)	(480,974)	(3,584,237)	(433,893)	(2,003,068)	(308,930)	(975,588)	(128,988)	(20)	(210,327)	(472,457)	(3,308)	(10,372)
	Total		(38,080,636)	(27,289)	(38,053,337)	(130,137)	(11,914,331)	(1,228,799)	(9,683,129)	(1,110,587)	(6,766,442)	(1,139,427)	(3,265,370)	(2,011,306)	(46)	(258,643)	(525,555)	(4,721)	(24,964)
	Rate Base																		
	Electric Plant in Service (P207)		4,201,155,690	3,171,113	4,197,984,576	14,652,750	1,310,139,591	141,180,648	1,063,934,906	123,664,389	754,423,974	127,690,733	344,118,086	236,286,025	5,493	26,606,547	52,187,874	507,680	2,685,781
	Less: Accum. Depreciation (P219)		(1,695,262,221)	(1,350,037)	(1,693,912,184)	(5,894,355)	(519,332,492)	(56,881,232)	(426,740,785)	(49,281,615)	(306,589,281)	(52,327,854)	(137,599,874)	(103,061,737)	(2,207)	(11,724,031)	(23,222,574)	(188,925)	(1,065,423)
	Net Book Value		2,505,893,469	1,821,076	2,504,072,392	8,758,395	790,807,098	84,299,416	637,194,121	74,382,774	447,834,694	75,362,879	206,518,413	133,224,288	3,286	14,882,517	28,965,299	318,754	1,620,358
	Add: Land/Plant Held For Future Use (P214)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CWIP - Constr. Work In Progress (P216)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Less: Accum. Deferred Income Taxes (P273-277)		(388,169,514)	(303,463)	(387,866,051)	(1,358,015)	(119,779,682)	(13,142,937)	(98,208,305)	(11,426,601)	(70,460,752)	(11,863,498)	(31,716,255)	(22,862,077)	(513)	(2,283,882)	(4,373,383)	(44,931)	(245,321)
	Total Adjusted Net Plant		2,117,723,954	1,517,613	2,116,206,341	7,400,380	671,027,416	71,156,479	538,985,816	62,956,173	377,373,942	63,299,382	174,802,157	110,362,211	2,773	12,598,635	24,592,016	273,823	1,375,037
	Return Per Books	9.61%	203,513,272	145,843	203,367,429	711,177	64,485,735	6,838,138	51,796,537	6,050,098	36,265,636	6,083,071	16,799,487	10,605,809	267	1,210,728	2,363,293	26,324	132,141
	Adjustments To Rate Base For Ratemaking																		
	Add: Regulatory Assets		544,788,485	491,616	544,296,869	1,902,673	158,211,970	18,542,801	137,603,017	15,898,522	104,083,483	17,983,727	45,767,540	38,720,050	717	2,017,568	3,189,572	47,535	329,683
	Phillips		78,399,252	76,500	78,322,752	277,352	22,150,264	2,744,805	19,734,356	2,294,054	15,374,239	2,679,883	6,468,282	6,131,462	108	188,378	218,018	5,798	45,750
	Brunot Island		28,758,563	28,062	28,730,501	101,739	8,125,202	1,006,855	7,238,994	841,509	5,639,608	983,040	2,372,707	2,249,155	40	72,770	79,974	2,127	16,782
	Warwick		15,294,914	14,924	15,279,990	54,109	4,321,286	535,484	3,849,976	447,547	2,999,361	522,818	1,261,897	1,196,187	21	38,702	42,533	1,131	8,925
	Deferred Taxes		(485,685,645)	(428,254)	(485,557,391)	(1,691,393)	(142,267,993)	(16,412,117)	(122,866,660)	(14,171,256)	(92,134,021)	(15,876,765)	(41,013,787)	(33,537,099)	(632)	(1,965,741)	(3,278,561)	(44,302)	(297,085)
	Working Capital		69,940,000	64,710	69,875,290	246,607	20,228,221	2,425,290	17,629,797	2,049,223	13,451,168	2,328,778	5,762,050	5,118,442	95	237,774	348,716	5,922	41,708
	Total Adjustment To Rate Base		251,195,569	247,559	250,948,010	891,097	70,768,959	8,843,618	63,189,481	7,357,598	49,413,847	8,622,492	20,618,690	19,878,197	349	599,452	600,253	18,213	145,764
	Rate Base Adjusted For Ratemaking		2,368,919,523	1,765,172	2,367,154,351	8,291,477	741,796,375	80,000,097	602,175,296	70,313,771	426,787,789	71,921,874	195,420,846	130,240,408	3,123	13,198,087	25,192,269	292,136	1,520,801
	Return Per Books	9.61%	227,653,166	169,633	227,483,533	796,811	71,286,632	7,688,009	57,869,046	6,757,153	41,014,307	6,911,692	18,779,943	12,516,103	300	1,268,336	2,420,977	28,074	146,149
	Expenses																		

COST OF SERVICE STUDY

(By FERC Account - 1996)

FERC ACCT	Description of Account	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Operation and Maintenance (P320)	656,132,128	458,642	555,673,586	1,635,888	175,657,182	17,217,833	128,615,960	14,858,447	104,445,585	16,789,818	49,069,815	41,224,210	700	2,087,744	3,354,645	51,840	465,117
	Depreciation & Amortization Expense (P336)	289,331,105	252,556	289,078,549	1,018,950	85,324,073	9,972,361	72,348,820	9,454,627	64,354,210	9,353,105	23,635,752	19,658,639	393	1,698,759	3,157,298	27,924	175,437
	Taxes (P262)	100,810,921	62,707	100,748,214	348,290	33,148,987	3,295,842	25,679,059	2,984,646	17,191,975	2,841,776	9,311,515	4,329,932	127	819,912	1,722,967	14,982	67,948
	Total Expenses	946,274,154	773,805	945,500,349	3,201,128	294,130,221	30,486,136	226,643,839	26,298,121	175,981,770	28,984,698	80,915,883	65,212,781	1,220	4,606,415	8,234,910	94,727	708,500
	Add: Gross Receipts Tax	36,153,777	38,251	38,115,526	149,468	16,726,650	1,150,648	6,510,824	989,720	4,372,942	1,163,060	3,078,024	1,229,671	38	138,044	546,968	7,397	72,072
	Total Expenses /wGRT	982,427,931	812,056	981,615,875	3,350,597	310,856,872	31,636,784	233,154,663	27,287,840	180,354,712	30,147,758	83,993,907	66,442,451	1,258	4,744,459	8,781,878	102,124	780,573
Less:	Off-System Sales (P311)	(36,500,038)	(35,540)	(36,464,498)	(127,275)	(10,203,283)	(1,244,879)	(9,210,988)	(1,058,121)	(7,180,230)	(1,252,377)	(3,120,402)	(2,857,299)	(48)	(87,804)	(98,606)	(2,570)	(21,517)
	Other Revenues (P300)	(38,080,636)	(27,299)	(38,053,337)	(130,137)	(11,914,331)	(1,228,789)	(9,683,129)	(1,110,567)	(6,766,442)	(1,139,327)	(3,255,370)	(2,011,306)	(46)	(258,843)	(525,555)	(4,721)	(24,984)
	Net Expenses	907,847,257	749,217	907,098,040	3,093,186	288,739,258	29,163,107	214,260,545	25,098,152	166,408,039	27,756,054	77,618,135	61,573,846	1,164	4,397,812	8,159,716	94,834	734,092
	Cost of Service	1,135,500,423	918,850	1,134,581,573	3,889,997	360,025,890	36,851,116	272,129,591	31,855,305	207,422,346	34,667,746	98,398,079	74,089,949	1,464	5,666,248	10,580,693	122,908	880,241
	Class Percentages	100.000%	0.081%	99.919%	0.343%	31.706%	3.245%	23.966%	2.805%	18.267%	3.053%	8.669%	6.525%	0.000%	0.499%	0.932%	0.011%	0.078%
	mWh @ METER	12,406,326	12,808	12,393,517	33,848	2,977,268	309,035	2,621,147	326,256	2,884,887	455,220	1,509,474	1,201,824	13	28,618	31,448	837	11,639
	AVERAGE EMBEDDED COST / kWh	0.09153	0.07174	0.09155	0.11493	0.12092	0.11924	0.10382	0.09704	0.07190	0.07616	0.06386	0.06165	0.11259	0.19800	0.33645	0.14684	0.07563

Exhibit JAL-1B
Page 23 of 23

Schedule C

Cost of Service Study Results
Basis for Retail Rates
(Pages 1-6)

COST OF SERVICE STUDY

(1996)

Alloc #		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BS	RH	OS/GM	GMH	GI	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Total Retail Production Cost	880,176,055	632,457	879,543,598	2,939,212	244,707,617	28,457,631	213,582,737	25,246,804	177,662,388	29,978,344	80,755,655	66,753,667	1,127	2,692,414	3,664,355	70,723	610,923
	Production Energy (501,509, 518, 547, 555)	216,664,908	216,007	216,468,901	610,126	63,667,081	5,570,595	46,864,505	5,836,239	49,527,428	7,802,418	25,501,777	19,780,882	226	515,858	566,866	15,099	209,808
100	less: Off-System Sales	(33,975,902)	(33,153)	(33,942,749)	(120,198)	(9,599,265)	(1,189,517)	(8,552,282)	(894,175)	(6,662,737)	(1,161,381)	(2,803,161)	(2,657,193)	(47)	(65,972)	(94,463)	(2,513)	(18,827)
100	less: Transmission Off-System Sales Loss Revenue	(269,562)	(263)	(269,299)	(954)	(76,160)	(9,438)	(67,853)	(7,688)	(52,862)	(9,214)	(22,240)	(21,082)	(0)	(682)	(750)	(20)	(157)
	Net Production Energy	182,439,444	182,591	182,256,854	488,977	43,991,657	4,371,640	38,244,370	4,934,177	42,811,829	6,631,822	22,676,377	17,102,607	181	429,204	471,634	12,556	189,824
12.4	less: Transmission Loss - Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,697	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.6	less: Distribution Loss - Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
12	less: Spinning Reserve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Production Capacity Cost	663,491,147	616,451	662,874,696	2,329,086	191,040,535	22,887,037	166,718,232	19,410,564	126,334,960	22,175,926	55,253,978	46,972,786	899	2,176,556	3,117,486	55,634	401,115
	less: Other Revenue	(17,725,476)	(17,296)	(17,708,179)	(62,707)	(5,008,006)	(620,580)	(4,461,788)	(518,668)	(3,475,999)	(605,901)	(1,462,429)	(1,305,277)	(24)	(44,852)	(49,292)	(1,311)	(10,344)
	Net Production Capacity Cost	645,765,672	599,155	645,166,517	2,266,379	186,032,528	22,266,457	162,256,444	18,891,896	124,858,961	21,570,025	53,791,448	45,666,509	875	2,131,704	3,068,196	54,323	390,771
129	less: Transmission Loss - Demand	2,650,834	2,472	2,651,362	9,318	763,421	91,611	666,698	77,639	513,663	86,798	220,904	196,454	4	8,608	12,220	221	1,602
129	less: Distribution Loss - Demand	18,456,212	17,190	18,439,022	64,813	5,309,247	637,112	4,637,971	539,946	3,572,296	617,552	1,536,287	1,366,250	25	59,865	84,981	1,539	11,139
129	less: Reactive Power	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
129	less: Regulation & Frequency Control	5,187,040	4,831	5,182,209	18,215	1,492,141	179,058	1,303,462	151,749	1,003,979	173,560	431,787	383,979	7	16,825	23,884	432	3,131
129	less: Operating Spinning Reserve	8,910,265	8,302	8,904,963	31,301	2,564,054	307,667	2,239,867	260,762	1,725,209	298,241	741,936	659,819	12	28,911	41,041	743	5,378
129	less: Operating Reserve Supplemental (Q. S.)	9,697,219	9,209	9,678,010	34,721	2,844,229	341,309	2,484,618	289,255	1,913,723	330,830	823,008	731,917	13	32,071	45,526	824	5,967
	Total Net Retail Production Cost	596,646,427	553,405	596,093,021	2,093,887	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,379	2,842,027	50,228	361,127
	Generation Products & Schedule																	
12.4	add: Transmission Loss - Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,697	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.4	add: Transmission Loss - Demand	2,650,834	2,646	2,651,188	7,472	657,284	68,225	573,970	71,479	600,584	95,560	312,931	242,265	3	6,318	6,943	185	2,570
12.6	add: Distribution Loss - Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
12.6	add: Distribution Loss - Demand	18,456,212	7,684	18,448,528	78,356	6,892,774	715,457	5,501,886	640,583	3,022,101	458,030	971,353	14	21	66,256	72,802	1,940	26,957
	Ancillary Services																	
1	add: Reactive From Generation	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
1	add: Regulation & Frequency Control	5,187,040	5,062	5,181,978	14,594	1,258,069	109,454	1,408,109	135,991	1,107,378	194,914	518,796	476,677	2	2,979	3,274	87	3,654
1	add: Spinning Reserve	8,910,265	8,698	8,904,567	25,070	2,161,031	188,083	2,416,219	233,693	1,902,887	334,934	891,484	733,190	3	5,120	5,626	150	6,279
1	add: Reserve Supplemental (Q.S.)	9,697,219	9,648	9,677,571	27,819	2,390,055	208,635	2,680,239	259,217	2,110,616	371,502	988,697	813,306	3	5,679	6,241	166	6,965
	Subtotal Generation Products	61,105,501	43,452	61,142,046	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,034	4,073	65,675
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Total Net Retail Production Cost	596,646,427	553,405	596,093,021	2,093,887	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,379	2,842,027	50,228	361,127
	Subtotal Generation Products	61,105,501	43,452	61,142,046	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,034	4,073	65,675
	Total Retail Production Cost	828,205,116	773,479	827,431,637	2,750,306	230,419,105	26,371,176	201,746,402	23,747,674	167,691,686	28,147,835	76,396,784	63,566,148	1,026	2,500,981	3,427,064	65,646	599,804
	add: Gross Receipts Tax	21,704,574	20,027	21,741,547	69,980	10,069,444	692,690	3,919,516	583,771	2,632,511	700,162	1,852,971	740,262	23	83,102	329,225	4,453	43,386
	Total Retail Production Cost W GRT	849,909,690	793,506	849,173,184	2,820,286	240,488,548	27,063,866	205,665,918	24,331,445	170,324,197	28,847,997	78,249,755	64,306,410	1,048	2,584,083	3,756,338	70,099	643,192
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Total Net Retail Production Cost	596,646,427	553,405	596,093,021	2,093,887	171,902,532	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,379	2,842,027	50,228	361,127
	Net Reactive Power, Reg./Freq. Ctrl & Spinning Res	18,121,980	17,505	18,104,475	63,796	4,578,805	436,346	4,632,958	487,330	3,788,681	664,414	1,745,042	1,457,578	10	21,149	27,418	522	12,361
	Total Basic Service	785,141,595	747,532	784,394,063	2,587,762	216,169,659	24,902,388	189,526,649	22,370,286	159,870,759	26,905,028	73,383,125	62,361,781	985	2,301,381	3,295,647	62,145	546,490
	Total Basic Service ($/kWh)	0.0630	0.0504	0.0633	0.0765	0.0776	0.0807	0.0723	0.0681	0.0654	0.0591	0.0486	0.0519	0.0758	0.0832	0.1048	0.0742	0.0470

COST OF SERVICE STUDY

(1996)

Alloc #		Total Utility	FERC JURIS	PA PUC JURIS	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Total Retail Production Cost	880,176,055	832,457	879,343,598	2,939,212	244,707,617	26,457,631	213,582,737	25,246,804	177,862,388	29,978,044	80,755,655	68,753,667	1,127	2,692,414	3,684,955	70,723	610,823
	Production Energy (301,309, 318, 347, 353)	216,684,908	216,007	216,468,901	610,126	53,867,081	5,570,585	46,864,505	5,636,239	49,527,428	7,802,418	25,501,777	19,780,882	226	515,858	566,866	15,089	209,806
100	less: Off-System Sales	(33,975,902)	(33,153)	(33,942,749)	(120,196)	(9,599,265)	(1,189,517)	(6,552,282)	(984,175)	(6,662,737)	(1,161,381)	(2,803,161)	(2,657,193)	(47)	(85,972)	(94,483)	(2,513)	(19,827)
100	less: Transmission Off-System Sales Loss Revenue	(269,562)	(263)	(269,299)	(954)	(76,160)	(9,436)	(67,853)	(7,888)	(52,882)	(9,214)	(22,240)	(21,082)	(0)	(682)	(750)	(20)	(157)
	Net Production Energy	182,439,444	182,591	182,256,854	488,977	43,991,657	4,371,640	38,244,370	4,634,177	42,811,829	6,631,822	22,676,377	17,102,607	191	429,204	471,634	12,556	189,824
12.4	less: Transmission Loss -Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,897	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.6	less: Distribution Loss - Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,486	41,168	1,097	15,244
12	less: Spinning Reserve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Production Capacity Cost	663,481,147	616,451	662,874,696	2,329,086	191,040,535	22,887,037	166,716,232	19,410,584	126,334,960	22,175,926	55,253,878	48,972,786	899	2,176,556	3,117,488	55,634	401,115
	less: Other Revenue	(17,725,476)	(17,288)	(17,708,179)	(62,707)	(5,008,008)	(620,560)	(4,461,788)	(516,668)	(3,475,999)	(605,901)	(1,402,429)	(1,386,277)	(24)	(44,852)	(49,292)	(1,311)	(10,344)
	Net Production Capacity Cost	645,755,672	599,155	645,166,517	2,266,379	186,032,529	22,266,457	162,256,444	18,891,896	124,858,961	21,570,025	53,791,448	47,586,509	875	2,131,704	3,068,196	54,323	390,771
129	less: Transmission Loss - Demand	2,653,834	2,472	2,651,362	9,319	763,421	91,611	666,898	77,639	513,663	88,798	220,904	196,454	4	8,608	12,220	221	1,602
129	less: Distribution Loss - Demand	18,456,212	17,190	18,439,022	64,813	5,309,247	637,112	4,637,971	539,946	3,572,296	617,552	1,536,287	1,366,250	25	59,865	84,981	1,539	11,139
129	less: Reactive Power	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
129	less: Regulation & Frequency Control	5,187,040	4,831	5,182,209	18,215	1,492,141	179,058	1,303,482	151,749	1,003,979	173,560	431,767	383,979	7	16,825	23,884	432	3,130
129	less: Operating Spinning Reserve	8,913,265	8,302	8,904,963	31,301	2,564,054	307,687	2,239,887	260,762	1,725,209	298,241	741,936	659,819	12	28,911	41,041	743	5,379
129	less: Operating Reserve Supplemental (Q, S)	9,887,219	9,209	9,878,010	34,721	2,844,229	341,209	2,484,618	289,255	1,913,723	330,830	823,008	731,917	13	32,071	45,526	824	5,967
	Total Net Retail Production Cost	598,646,427	553,405	598,093,021	2,090,887	171,902,502	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,378	2,842,027	50,228	361,127
	Generation Products & Schedule																	
12.4	add: Transmission Loss -Energy	1,629,714	1,625	1,628,089	4,589	403,637	41,897	352,474	43,895	372,502	58,683	191,802	148,774	2	3,880	4,263	113	1,578
12.4	add: Transmission Loss -Demand	2,653,834	2,646	2,651,188	7,472	657,284	68,225	573,970	71,479	606,584	95,560	312,331	242,265	3	6,318	6,943	185	2,570
12.6	add: Distribution Loss -Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,486	41,168	1,097	15,244
12.6	add: Distribution Loss -Demand	18,456,212	7,684	18,448,528	78,356	6,892,774	715,457	5,501,886	640,560	3,022,101	458,030	971,353	14	21	66,256	72,802	1,940	26,957
	Ancillary Services																	
1	add: Reactive From Generation	4,021,675	3,746	4,017,929	14,123	1,156,904	138,829	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
1	add: Regulation & Frequency Control	5,187,040	5,082	5,181,978	14,594	1,256,069	109,454	1,406,109	135,991	1,107,378	194,914	518,796	426,677	2	2,979	3,274	87	3,654
1	add: Spinning Reserve	8,913,265	8,698	8,904,567	25,078	2,161,831	188,083	2,416,219	233,683	1,902,887	334,934	891,484	733,190	3	5,120	5,626	150	6,279
1	add: Reserve Supplemental (Q S)	9,887,219	9,649	9,877,571	27,819	2,398,055	208,635	2,680,239	259,217	2,110,815	371,502	988,697	813,306	3	5,679	6,241	166	6,965
	Subtotal Generation Products	61,185,501	43,452	61,142,048	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,834	4,073	65,675
	Net Production Energy Less Loss & Ancillary	170,373,189	176,621	170,196,568	440,079	39,690,323	3,925,170	34,780,712	4,428,048	40,730,402	6,314,135	21,935,298	16,953,824	167	387,858	426,203	11,345	173,002
	Total Net Retail Production Cost	598,646,427	553,405	598,093,021	2,090,887	171,902,502	20,570,852	149,912,978	17,454,888	115,351,675	19,926,477	49,702,785	43,950,379	808	1,972,378	2,842,027	50,228	361,127
	Subtotal Generation Products	61,185,501	43,452	61,142,048	216,340	18,826,251	1,875,155	17,052,711	1,864,737	11,609,608	1,907,224	4,758,702	2,661,945	50	140,743	158,834	4,073	65,675
	Total Retail Production Cost	828,205,118	779,479	827,431,637	2,750,306	230,419,105	26,371,176	201,746,402	23,747,674	167,691,686	28,147,835	76,396,784	63,566,148	1,026	2,500,981	3,427,064	65,646	599,804
	add: Gross Receipts Tax	21,764,574	23,027	21,741,547	89,980	10,069,444	692,690	3,919,516	583,721	2,632,511	200,162	1,652,971	740,262	23	80,102	329,275	4,453	43,388
	Total Retail Production Cost W GRT	849,969,690	796,506	849,173,184	2,840,286	240,488,549	27,063,866	205,665,918	24,331,445	170,324,197	28,847,997	78,249,755	64,306,410	1,048	2,584,083	3,756,338	70,099	643,192

COST OF SERVICE STUDY

(1996)

Alloc #		Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GI	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Transmission Cost	39,392,913	36,764	39,356,049	110,566	9,571,079	854,916	10,377,584	1,019,795	8,095,478	1,420,555	4,696,922	3,070,220	15	41,669	84,342	1,008	26,878
	less: Off-System Revenues	(2,254,574)	(2,124)	(2,252,450)	(6,123)	(527,858)	(45,925)	(590,853)	(57,069)	(464,631)	(81,781)	(295,002)	(179,024)	(1)	(1,250)	(1,374)	(37)	(1,530)
	less: Other Revenues	(6,246,853)	(5,884)	(6,240,969)	(16,966)	(1,462,561)	(127,245)	(1,637,104)	(158,095)	(1,287,375)	(226,596)	(817,375)	(496,031)	(2)	(3,464)	(3,806)	(101)	(4,248)
	add: Gross Receipts Tax	867,691	818	866,773	3,587	401,440	27,616	156,260	23,273	104,951	27,913	79,873	29,512	1	3,313	13,127	178	1,730
	Total Retail Transmission Cost	31,759,076	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
1	less: Dispatch Out Of Account 561	(828,636)	(809)	(827,827)	(2,331)	(200,978)	(17,485)	(224,628)	(21,725)	(176,905)	(31,138)	(82,878)	(68,102)	(0)	(476)	(523)	(14)	(584)
1	add: Scheduling Out Of Account 561	828,636	809	827,827	2,331	200,978	17,485	224,628	21,725	176,905	31,138	82,878	68,162	0	476	523	14	584
	Total Transmission Cost With Products	31,759,076	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
	Distribution Cost	254,058,451	74,216	254,284,236	948,161	111,138,157	8,861,597	60,552,564	6,788,676	31,038,210	4,497,491	14,241,249	5,801,998	378	3,140,648	6,907,191	51,071	216,847
	less: Off-System Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	less: Other Revenues	(14,108,307)	(4,118)	(14,104,188)	(50,463)	(5,443,764)	(480,974)	(3,584,237)	(433,803)	(2,003,068)	(306,830)	(975,566)	(128,998)	(20)	(210,327)	(472,457)	(3,308)	(10,972)
	add: Gross Receipts Tax	13,521,512	14,306	13,507,206	55,901	6,255,787	430,342	2,435,048	382,475	1,635,480	434,985	1,151,181	459,897	14	51,828	204,586	2,747	26,955
	Total Retail Distribution Cost	253,771,657	84,403	253,687,253	953,599	111,950,180	8,810,966	59,403,374	6,717,547	30,670,622	4,625,645	14,416,864	6,232,895	372	2,981,949	6,639,300	50,529	233,430
	less: Cust. Charges for RS,RA,RH,GM,GMH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Distribution Cost	253,771,657	84,403	253,687,253	953,599	111,950,180	8,810,966	59,403,374	6,717,547	30,670,622	4,625,645	14,416,864	6,232,895	372	2,981,949	6,639,300	50,529	233,430
	Retail Production Cost (¢/kWh)	0.0685	0.0622	0.0685	0.0839	0.0808	0.0876	0.0785	0.0741	0.0590	0.0634	0.0518	0.0535	0.0807	0.0903	0.1194	0.0838	0.0553
	Basis For Retail Rates																	
	Transmission																	
	Reactive Power	4,021,975	3,746	4,017,929	14,123	1,156,904	138,029	1,010,631	117,656	778,416	134,567	334,762	297,711	5	13,045	18,518	335	2,427
	Regulation & Frequency Control	5,187,040	4,831	5,182,209	18,215	1,492,141	179,058	1,303,482	151,749	1,003,979	173,560	431,767	383,979	7	16,825	23,884	432	3,130
	Operating Spinning Reserve	8,913,765	8,302	8,904,963	31,301	2,564,054	307,667	2,239,867	260,762	1,725,209	298,241	741,936	659,819	12	28,911	41,041	743	5,379
	Gross Receipts Tax	481,735	497	481,238	2,078	228,207	16,267	89,024	13,045	55,071	15,054	38,553	15,351	1	1,907	7,767	101	617
	Total Retail Transmission Cost	31,759,076	29,674	31,729,402	91,064	7,982,100	709,362	8,305,887	827,914	6,448,422	1,140,092	3,660,418	2,427,677	13	40,268	72,289	1,048	22,828
	Total	50,362,792	47,050	50,315,742	156,781	13,423,406	1,351,283	12,948,891	1,371,126	10,011,097	1,761,514	5,209,437	3,784,537	39	100,977	163,493	2,659	34,582
	¢/kWh	0.0041	0.0037	0.0041	0.0046	0.0045	0.0044	0.0049	0.0042	0.0035	0.0039	0.0034	0.0031	0.0030	0.0035	0.0052	0.0032	0.0030
	Distribution																	
	Loss Demand	18,456,212	17,190	18,439,022	64,813	5,309,247	637,112	4,637,971	539,946	3,572,296	617,552	1,536,287	1,366,250	25	59,665	84,981	1,539	11,139
	Loss Energy	10,436,542	4,345	10,432,197	44,308	3,897,697	404,574	3,111,184	362,234	1,708,925	259,005	549,277	8	12	37,466	41,168	1,097	15,244
	Gross Receipts Tax	795,901	634	795,266	3,563	403,039	27,008	151,485	22,198	82,918	21,762	50,537	15,635	1	3,158	11,734	175	1,972
	Total Distribution Cost	253,771,657	84,403	253,687,253	953,599	111,950,180	8,810,966	59,403,374	6,717,547	30,670,622	4,625,645	14,416,864	6,232,895	372	2,981,949	6,639,300	50,529	233,430
	Total	283,460,311	106,572	283,353,739	1,066,283	121,560,144	9,879,739	67,304,014	7,641,925	36,034,761	5,523,964	16,552,965	7,614,788	410	3,082,439	6,777,183	53,340	261,784
	¢/kWh	0.0228	0.0083	0.0229	0.0315	0.0408	0.0320	0.0257	0.0233	0.0125	0.0121	0.0110	0.0083	0.0315	0.1077	0.2155	0.0837	0.0225

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COST OF SERVICE STUDY

(1996)

Production COS Summary

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Production Plant In Service	2,540,456,720	2,478,928	2,537,977,792	8,987,346	717,759,219	88,942,914	639,473,919	74,336,747	498,188,283	86,839,176	209,598,604	186,684,465	3,499	6,428,286	7,064,716	187,920	1,482,487
less Accumulated Depreciation	(1,147,480,150)	(1,119,761)	(1,146,360,389)	(4,056,937)	(324,079,084)	(40,141,870)	(288,716,978)	(33,568,587)	(225,135,020)	(39,230,046)	(94,793,551)	(89,787,455)	(1,579)	(2,903,033)	(3,190,441)	(84,865)	(670,941)
Net Production Plant	1,392,976,569	1,359,166	1,391,617,403	4,930,409	393,680,135	48,801,044	350,756,941	40,768,160	273,053,263	47,609,130	114,805,253	108,897,009	1,920	3,525,253	3,874,275	103,055	811,546
Additions To Net Production Plant																	
Land/Plant Held For Future Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CWIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deductions To Net Production Plant																	
ADIT	(255,524,503)	(249,336)	(255,275,167)	(903,966)	(72,193,738)	(8,946,066)	(64,319,638)	(7,476,947)	(50,108,830)	(8,734,468)	(21,081,890)	(19,984,103)	(352)	(646,572)	(710,584)	(18,901)	(149,112)
Production Rate Base	1,137,452,066	1,109,831	1,136,342,236	4,026,443	321,486,397	39,854,978	286,437,303	33,291,213	222,944,433	38,874,662	93,723,363	88,912,906	1,568	2,878,691	3,163,691	84,153	662,434
Adjustments To Production Rate Base	257,757,955	251,515	257,506,440	911,868	72,824,759	9,024,261	64,881,833	7,542,300	50,546,814	8,810,813	21,266,160	20,158,777	355	652,223	716,795	19,067	150,415
Rate Base Adjusted For Retemaking	1,395,210,021	1,361,346	1,393,848,676	4,938,311	394,311,156	48,878,239	351,319,136	40,833,513	273,491,247	47,685,475	114,989,523	109,071,683	1,923	3,530,915	3,880,486	103,220	812,849
Return on Rate Base	134,079,683	130,825	133,948,858	474,572	37,893,302	4,697,295	33,761,769	3,924,101	26,282,509	4,582,574	11,050,493	10,481,789	185	339,321	372,915	9,919	78,115
Production O & M Expense	434,393,221	428,804	433,964,417	1,387,926	114,578,579	13,033,117	101,057,302	12,166,723	92,777,386	15,275,551	44,067,268	37,031,839	523	1,084,173	1,169,461	31,119	343,451
Production Depreciation/Amortization	239,826,705	233,991	239,592,713	849,352	67,803,020	8,408,327	60,413,391	7,020,575	46,989,103	8,195,552	19,741,930	18,739,744	331	607,041	667,140	17,746	139,461
Taxes	71,878,447	38,837	71,837,810	247,363	24,432,715	2,316,892	18,350,275	2,135,405	11,813,390	1,924,667	5,895,965	2,500,298	89	681,880	1,474,839	11,939	49,896
Production Revenue Requirement	880,178,055	832,457	879,343,598	2,939,212	244,707,817	28,457,631	213,582,737	25,248,804	177,862,388	29,978,344	80,755,655	68,753,667	1,127	2,692,414	3,684,355	70,723	610,923
less Off-System Sales Revenue	(34,245,464)	(33,416)	(34,212,048)	(121,150)	(9,675,425)	(1,198,954)	(8,620,135)	(1,002,062)	(6,715,599)	(1,170,596)	(2,825,401)	(2,678,275)	(47)	(86,854)	(95,233)	(2,533)	(19,984)
less Other Revenue	(17,225,476)	(17,298)	(17,208,179)	(62,707)	(5,008,008)	(620,580)	(4,461,788)	(518,668)	(3,475,999)	(605,901)	(1,462,429)	(1,386,227)	(24)	(44,852)	(49,292)	(1,311)	(10,344)
Total Retail Production Cost	828,205,116	781,745	827,423,371	2,755,355	230,024,188	26,638,097	200,500,814	23,728,073	167,870,790	28,201,847	76,467,825	64,689,116	1,056	2,560,909	3,539,829	66,078	580,595

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COST OF SERVICE STUDY

(1996)

Transmission COS Summary

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Transmission Plant In Service	319,052,035	300,545	318,751,491	866,546	74,698,884	6,498,929	83,613,495	8,074,563	65,751,456	11,573,153	41,746,625	25,334,295	82	176,908	194,401	5,172	216,971
less Accumulated Depreciation	(120,291,943)	(113,069)	(120,178,874)	(326,008)	(28,102,747)	(2,444,987)	(31,452,722)	(3,037,781)	(24,736,602)	(4,353,979)	(15,969,661)	(9,531,110)	(35)	(66,554)	(73,136)	(1,946)	(81,628)
Net Transmission Plant	198,760,093	187,476	198,572,617	540,539	46,596,138	4,053,943	52,160,773	5,036,801	41,014,856	7,219,174	25,776,964	15,803,185	58	110,351	121,265	3,226	135,344
Additions To Net Transmission Plant																	
Land/Plant Held For Future Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CWIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deductions To Net Transmission Plant																	
ADIT	(23,699,224)	(22,324)	(23,676,900)	(64,367)	(5,548,642)	(482,741)	(6,210,821)	(599,779)	(4,884,026)	(859,655)	(3,100,944)	(1,881,835)	(7)	(13,141)	(14,440)	(384)	(16,117)
Transmission Rate Base	175,060,869	165,151	174,895,716	476,172	41,047,496	3,571,202	45,949,953	4,437,022	36,130,830	6,359,519	22,676,020	13,921,351	51	97,211	106,824	2,842	119,227
Adjustments To Transmission Rate Base	(3,139,380)	(2,957)	(3,136,423)	(8,527)	(735,015)	(63,948)	(822,733)	(79,451)	(646,975)	(113,876)	(410,775)	(249,282)	(1)	(1,741)	(1,913)	(51)	(2,135)
Rate Base Adjusted For Ratemaking	171,921,489	162,194	171,759,295	467,646	40,312,480	3,507,254	45,127,220	4,357,570	35,483,854	6,245,642	22,265,245	13,672,068	50	95,470	104,912	2,791	117,092
Return on Rate Base	16,521,655	15,587	16,506,068	44,941	3,874,029	337,047	4,336,726	418,763	3,409,998	600,206	2,139,690	1,313,866	5	9,175	10,082	268	11,253
Transmission O & M Expense	13,466,871	12,957	13,453,913	37,358	3,220,411	280,181	3,601,302	348,110	2,834,871	498,941	1,515,141	1,092,210	4	7,627	8,381	223	9,354
Transmission Depreciation/Amortization	6,594,369	6,232	6,588,136	17,969	1,548,987	134,763	1,733,028	167,435	1,363,431	239,983	844,917	525,336	2	3,668	4,031	107	4,499
Taxes	2,809,919	1,988	2,807,931	10,298	927,672	102,925	706,528	85,487	487,377	81,426	199,174	141,789	4	21,219	41,648	409	1,774
Transmission Revenue Requirement	39,392,813	36,764	39,356,049	110,566	9,571,079	854,916	10,377,584	1,019,795	8,095,478	1,420,555	4,698,922	3,073,220	15	41,689	64,342	1,008	26,879
less Off-System Sales Revenue	(2,254,574)	(2,124)	(2,252,450)	(6,123)	(527,858)	(45,925)	(590,853)	(57,059)	(464,631)	(81,781)	(295,002)	(179,024)	(1)	(1,250)	(1,374)	(37)	(1,533)
less Other Revenue	(6,246,853)	(5,884)	(6,240,969)	(16,966)	(1,462,561)	(127,245)	(1,637,104)	(158,095)	(1,287,375)	(226,598)	(817,375)	(498,031)	(2)	(3,464)	(3,808)	(101)	(4,248)
Total Retail Transmission Cost	30,891,385	28,756	30,862,629	87,477	7,580,660	681,747	8,149,627	804,641	6,343,471	1,112,178	3,586,546	2,398,165	13	36,975	59,162	870	21,098

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COST OF SERVICE STUDY

(1996)

Distribution COS Summary

	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Distribution Plant In Service	1,341,646,934	391,841	1,341,255,293	4,798,858	517,681,488	45,738,804	340,847,492	41,253,080	190,484,233	29,178,404	92,772,657	12,267,266	1,901	20,001,345	44,928,857	314,587	986,322
less Accumulated Depreciation	(427,490,128)	(117,207)	(427,372,921)	(1,511,411)	(167,150,662)	(14,284,375)	(106,571,085)	(12,675,288)	(58,717,659)	(8,743,828)	(26,836,462)	(3,743,172)	(592)	(8,754,443)	(18,958,987)	(102,114)	(312,854)
Net Distribution Plant	914,156,806	274,434	913,882,372	3,287,446	350,530,826	31,444,429	234,276,407	28,577,814	133,766,575	20,434,575	65,936,195	8,524,094	1,309	11,246,902	24,969,860	212,473	673,468
Additions To Net Distribution Plant																	
Land/Plant Held For Future Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CWIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deductions To Net Distribution Plant																	
ADIT	(108,945,787)	(31,802)	(108,913,985)	(389,682)	(42,037,302)	(3,714,129)	(27,677,847)	(3,349,875)	(15,467,896)	(2,369,375)	(7,533,420)	(996,139)	(154)	(1,624,170)	(3,848,359)	(25,545)	(80,092)
Distribution Rate Base	805,211,019	242,631	804,968,388	2,897,765	308,493,524	27,730,300	206,598,560	25,227,939	118,298,679	18,065,201	58,402,775	7,527,955	1,155	9,622,732	21,121,501	186,928	593,376
Adjustments To Distribution Rate Base	(3,423,006)	(999)	(3,422,007)	(12,244)	(1,320,785)	(116,696)	(869,620)	(105,251)	(485,991)	(74,444)	(236,695)	(31,298)	(5)	(51,030)	(114,629)	(803)	(2,516)
Rate Base Adjusted For Ratemaking	801,788,013	241,632	801,546,381	2,885,521	307,172,739	27,613,604	205,728,940	25,122,688	117,812,688	17,990,757	58,166,080	7,496,657	1,150	9,571,702	21,006,871	186,125	590,859
Return on Rate Base	77,051,828	23,221	77,028,607	277,299	29,519,300	2,653,667	19,770,551	2,414,290	11,321,799	1,728,912	5,589,760	720,429	110	919,841	2,037,980	17,887	56,782
Distribution O & M Expense	108,272,036	16,781	108,255,256	430,603	57,858,192	3,904,535	23,957,356	2,343,615	8,833,528	1,015,326	3,486,208	3,100,161	173	1,015,945	2,176,803	20,499	112,31
Distribution Depreciation/Amortization	42,910,032	12,332	42,897,699	149,630	15,972,086	1,429,271	10,202,401	1,266,816	6,001,875	917,571	2,948,905	393,559	61	1,088,050	2,486,127	10,071	31,47
Taxes	26,124,555	21,882	26,102,673	90,829	7,788,579	874,124	6,622,255	763,954	4,881,207	835,683	2,216,376	1,687,847	34	116,813	208,281	2,614	16,277
Distribution Revenue Requirement	254,358,451	74,218	254,284,236	948,161	111,138,157	8,861,597	60,552,564	6,788,676	31,038,210	4,497,491	14,241,249	5,901,996	378	3,140,648	6,907,191	51,071	216,847
less Off-System Sales Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
less Other Revenue	(14,108,307)	(4,118)	(14,104,188)	(50,463)	(5,443,764)	(480,974)	(3,584,237)	(433,803)	(2,003,068)	(306,830)	(975,566)	(128,998)	(20)	(210,327)	(472,457)	(3,308)	(10,372)
Total Retail Distribution Cost	240,250,145	70,097	240,180,047	897,698	105,694,393	8,380,623	56,968,326	6,354,872	29,035,142	4,190,661	13,265,683	5,772,998	358	2,930,321	6,434,734	47,763	206,475

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Schedule D

Cost of Service
Table of Allocation Factors
(Pages 1-6)

COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Offset Number ---------->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Allocator Number	Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GSIGM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
*	12 CP (Coincident Peak - Monthly System Peak	2,074,750	2,025	2,072,725	5,838	503,212	43,780	562,428	54,395	442,937	77,863	207,512	170,885	1	1,192	1,310	35	1,462
1	Class Percentages (Based on 1996 Data)	100.000%	0.098%	99.902%	0.281%	24.254%	2.110%	27.108%	2.622%	21.349%	3.758%	10.002%	8.236%	0.000%	0.057%	0.063%	0.002%	0.070%
1.5	1 CP (Coincident Peak - Annual System Peak)	2,463,000	2,582	2,460,438	6,788	633,047	40,972	709,284	43,370	526,403	84,041	224,273	186,789	0	0	0	0	1,462
2	Class Percentages (Based on 1996 Data)	100.000%	0.104%	99.896%	0.357%	25.702%	1.664%	28.798%	1.761%	21.454%	3.412%	9.106%	7.584%	0.000%	0.000%	0.000%	0.000%	0.059%
*	NCP (Class Customer Peaks)	3,012,818	2,787	3,009,831	10,526	830,176	109,177	864,703	102,770	573,790	97,314	233,523	231,189	4	7,150	7,858	209	1,462
3	Class Percentages (Based on 1996 Data)	100.000%	0.093%	99.907%	0.349%	27.557%	3.624%	28.711%	3.411%	19.046%	3.230%	7.751%	7.673%	0.000%	0.237%	0.261%	0.007%	0.049%
*	MDD (Non-Coincidental - Individual Customer Peaks)	5,107,839	2,787	5,105,052	18,886	2,323,187	129,235	1,007,358	143,886	759,480	119,729	286,444	270,406	4	7,150	7,858	209	1,462
4	Class Percentages (Based on 1996 Data)	100.000%	0.055%	99.945%	0.370%	45.483%	2.530%	20.309%	2.813%	14.869%	2.344%	5.606%	5.294%	0.000%	0.140%	0.154%	0.004%	0.029%
*	Class Max @ Gen. Level - Subtransmission (D20C)	2,706,896	2,787	2,704,109	10,526	830,176	109,177	864,703	102,771	558,465	97,314	174,294	0	4	7,150	7,858	209	1,462
6	Class Percentages (Based on 1996 Data)	100.000%	0.103%	99.897%	0.389%	30.669%	4.033%	29.728%	3.797%	20.631%	3.595%	6.439%	0.000%	0.000%	0.264%	0.290%	0.008%	0.054%
*	Class Max @ Gen. Level - Network (D21C)	205,400	0	205,400	0	0	0	41,676	7,886	112,971	18,876	23,811	0	0	0	0	0	0
7	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.000%	0.000%	0.000%	20.288%	3.839%	55.000%	9.190%	11.593%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Class Max @ Gen. Level - Subtran(Network Total (D30C)	1,764,001	0	1,764,001	10,526	830,176	109,177	870,838	76,517	46,415	4,688	0	0	4	7,150	7,858	209	1,462
8	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.597%	47.062%	6.189%	38.029%	4.281%	2.631%	0.265%	0.000%	0.000%	0.000%	0.405%	0.445%	0.012%	0.083%
*	Class Max @ Gen. Level - Secondary Loss Series (D31C)	1,764,001	0	1,764,001	10,526	830,176	109,177	870,838	75,517	46,415	4,688	0	0	4	7,150	7,858	209	1,462
9	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.597%	47.062%	6.189%	38.029%	4.281%	2.631%	0.265%	0.000%	0.000%	0.000%	0.405%	0.445%	0.012%	0.083%
	# of Hours	8,760																
	mWhs at Customer Meter Level (Based on 1996 Data)	12,406,325	12,806	12,393,517	33,848	2,977,268	309,038	3,021,147	328,258	2,884,887	455,220	1,509,474	1,201,824	13	28,618	31,448	837	11,639
	Total Loss		1.034		1.105	1.105	1.105	1.098	1.090	1.052	1.051	1.038	1.009	1.077	1.105	1.105	1.105	1.105
	Transmission Loss		1.009		1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009	1.009
	Distribution Loss		1.025		1.095	1.095	1.095	1.088	1.080	1.043	1.041	1.028	1.000	1.067	1.095	1.095	1.095	1.095
*	MWHS at Generation Level (Based on 1996 Data)	13,283,584	13,242	13,270,342	37,403	3,289,990	341,498	2,872,967	357,763	3,036,214	478,317	1,583,353	1,212,841	14	31,624	34,751	925	12,862
12	MWHS at Input Factor	100.000%	0.100%	99.900%	0.282%	24.767%	2.571%	21.628%	2.693%	22.857%	3.601%	11.769%	9.129%	0.000%	0.238%	0.262%	0.007%	0.097%
	Total Loss	877,259	434	876,825	3,555	312,722	32,460	251,820	29,527	151,327	23,097	53,879	10,817	1	3,006	3,303	88	1,223
12.2	Total Loss Factor	100.000%	0.049%	99.951%	0.405%	35.648%	3.700%	28.705%	3.366%	17.250%	2.633%	6.142%	1.233%	0.000%	0.343%	0.377%	0.010%	0.139%
	Transmission Loss	118,486	118	118,368	334	29,346	3,046	25,626	3,191	27,082	4,268	13,945	10,816	0	282	310	8	115

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COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Offset Number ---------->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Allocator Number	Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
12.4	Transmission Loss Factor	100.000%	0.100%	99.900%	0.262%	24.787%	2.571%	21.628%	2.693%	22.657%	3.601%	11.789%	0.129%	0.000%	0.238%	0.262%	0.007%	0.097%
	Distribution Loss Factor	758,733	316	758,457	3,221	283,378	29,414	226,194	28,338	124,245	18,831	39,934	1	1	2,724	2,993	80	1,108
12.6	Distribution Loss	100.000%	0.042%	99.958%	0.425%	37.347%	3.877%	29.810%	3.471%	16.374%	2.482%	5.263%	0.000%	0.000%	0.359%	0.394%	0.011%	0.146%
*	Average Customers (Based on 1996 Data)	579,740	1	579,739	2,793	496,280	22,729	51,379	3,357	639	106	28	3	2	1	717	14	1,693
13	Customer Factor - P311/P304	100.000%	0.000%	100.000%	0.482%	85.604%	3.921%	8.862%	0.579%	0.110%	0.018%	0.004%	0.001%	0.000%	0.000%	0.124%	0.002%	0.292%
*	Total Number Of Customers (C10)	580,730	1	580,729	2,834	496,925	22,815	51,592	3,372	639	107	28	3	2	1	709	14	1,690
14	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.488%	85.509%	3.929%	8.884%	0.581%	0.110%	0.018%	0.004%	0.001%	0.000%	0.000%	0.122%	0.002%	0.291%
*	Total Number Of Network Customers (C21)	1,190	0	1,190	0	0	0	928	173	78	8	3	0	0	0	0	0	0
15	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.000%	0.000%	0.000%	77.983%	14.538%	6.555%	0.672%	0.252%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Total Number Of SubTrans/Network Customers (C30)	578,510	1	578,509	2,834	496,925	22,815	51,590	3,372	633	107	19	0	2	39,051	58,658	813	1,680
16	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.488%	73.238%	3.363%	7.603%	0.497%	0.093%	0.016%	0.003%	0.000%	0.000%	5.755%	8.646%	0.120%	0.249%
*	Total Number Of Secondary less series Customers (C31)	637,240	1	637,239	2,834	496,925	22,815	50,263	3,130	99	10	0	0	2	0	58,658	813	1,690
17	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.445%	77.981%	3.580%	7.888%	0.491%	0.016%	0.002%	0.000%	0.000%	0.000%	0 000%	9.205%	0.128%	0.265%
*	Total Number Of Secondary less St. Ltg. Customers (C32)	578,077	1	578,076	2,834	496,925	22,815	50,263	3,130	99	10	0	0	0	0	0	0	0
18	Class Percentages (Based on 1996 Data)	100.000%	0 000%	100.000%	0.492%	86.260%	3.960%	8.725%	0.543%	0.017%	0.002%	0.000%	0.000%	0 000%	0.000%	0.000%	0.000%	0.000%
*	Direct - Street Lighting Account 373 (CXP1)	$21,788,039		$21,788,039											6,532,484	15,253,555		
19	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0.000%	0 000%	0 000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0 000%	29.985%	70.015%	0 000%	0 000%
*	Direct - Install On Cust. Premises Account 371 (CXP2)	$37,793		$37,793				4,564		13,825		2,218	17,186					
20	Class Percentages (Based on 1996 Data)	100.000%	0.000%	100.000%	0 000%	0.000%	0.000%	12.076%	0.000%	36.581%	0.000%	5.869%	45.474%	0 000%	0 000%	0.000%	0 000%	0.000%
*	Gross Receipts Allocator	$810,280,857	857,283	$809,423,574	3,349,885	374,878,804	25,788,408	145,921,021	21,733,422	98,000,872	28,066,583	88,984,883	27,559,461	841	3,093,842	12,256,677	185,787	1,815,290
21	Class Percentages (Based on 1996 Data)	100.000%	0.106%	99.894%	0.413%	46.265%	3.183%	18.008%	2.682%	12.095%	3.217%	8.514%	3.401%	0.000%	0.382%	1.513%	0.020%	0.199%
	D10 Changes To NCP Percent		4.976%		4.405%	4.405%	0.564%	-3.777%	-13.251%	0.114%	4.783%	-0.924%	-0.924%	7.479%	7.479%	7.479%	7.479%	7.479%
*	D10 Allocator	3,008,658	2,926	3,005,731	10,990	866,745	109,793	774,309	89,152	574,444	101,869	231,365	229,033	4	7,885	8,446	225	1,571
32	D10 Allocator From NCP	100.000%	0.097%	99.903%	0 365%	28.809%	3 649%	25.736%	2.963%	19.093%	3.389%	7.690%	7.612%	0.000%	0.255%	0.281%	0.007%	0.052%

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COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Offset Number ---------->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Allocator Number	Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Customer maintenance and service cost		1.000		1.000	1.000	1.000	3.227	3.380	9.682	9.154	17.802	25.298	0.000	0.000	0.000	0.000	0.000
*	Customer Service Costs	706,599	1	706,598	2,783	498,280	22,729	165,820	11,281	6,187	870	483	76	0	0	0	0	0
39	Customer Service Factor	100.000%	0.000%	100.000%	0.395%	70.235%	3.217%	23.467%	1.598%	0.876%	0.123%	0.068%	0.011%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Weighted Customer Meters Investment (CWI)	1,187,689	100	1,187,589	2,834	498,925	22,815	538,820	37,345	51,840	9,290	7,800	1,920	0	0	0	0	0
40	Customer Meter Investment Factor	100.000%	0.009%	99.991%	0.243%	42.558%	1.954%	45.973%	3.198%	4.440%	0.796%	0.668%	0.164%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Transmission Plant Account Direct Assignment (P352A)	114,448	0	114,448	0	0	0	15,247	0	0	0	99,201	0	0	0	0	0	0
60	Class Percentages (Based On 1992 COSS))	100.000%	0.000%	100.000%	0.000%	0.000%	0.000%	13.322%	0.000%	0.000%	0.000%	86.678%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Transmission Plant Account Direct Assignment (P352D)	2,398,001	0	2,398,001	0	0	0	0	0	0	0	2,398,001	0	0	0	0	0	0
61	Class Percentages (Based On 1992 COSS))	100.000%	0.000%	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Transmission Plant Account Direct Assignment (P364A)	6,595,063	0	6,595,063	0	0	0	97,389	0	0	0	6,497,674	0	0	0	0	0	0
62	Class Percentages (Based On 1992 COSS))	100.000%	0.000%	100.000%	0.000%	0.000%	0.000%	1.477%	0.000%	0.000%	0.000%	98.523%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Distribution Plant Account Direct Assignment (P362A)	43,268,966	0	43,268,966	0	180,901	0	2,744,634	17,328	10,916,019	169,947	29,240,137	0	0	0	0	0	0
63	Class Percentages (Based On 1992 COSS))	100.000%	0.000%	100.000%	0.000%	0.418%	0.000%	6.343%	0.040%	25.228%	0.393%	67.578%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
*	Distribution Plant Account Direct Assignment (P368A)	13,892,831	0	13,892,831	0	1,881,921	114,455	3,526,887	872,144	6,197,677	1,299,947	0	0	0	0	0	0	0
64	Class Percentages (Based On 1992 COSS))	100.000%	0.000%	100.000%	0.000%	13.548%	0.824%	25.385%	6.278%	44.611%	9.357%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
	CALCULATED ALLOCATORS																	
*	Sum Production Plant	2,306,398,721	2,309,065	2,304,089,636	8,171,583	668,582,339	82,849,039	595,660,714	69,243,806	464,055,188	80,889,437	195,238,257	165,071,708	3,259	5,837,665	6,580,691	175,045	1,380,915
100	Production Plant Factor	100.000%	0.098%	99.902%	0.354%	28.253%	3.501%	25.172%	2.926%	19.610%	3.418%	8.250%	7.821%	0.000%	0.253%	0.278%	0.007%	0.058%
*	Sum Transmission Plant	312,186,756	294,076	311,892,678	847,900	73,091,533	6,359,067	81,814,322	7,900,816	64,338,635	11,324,125	40,848,332	24,789,158	90	173,099	190,218	5,081	212,303
101	Transmission Plant Factor	100.000%	0.094%	99.906%	0.272%	23.413%	2.037%	26.207%	2.531%	20.608%	3.627%	13.085%	7.940%	0.000%	0.055%	0.061%	0.002%	0.068%
*	Sum Distribution Plant	1,233,225,730	359,992	1,232,865,738	4,411,052	475,848,599	42,042,559	313,302,816	37,918,335	175,090,817	26,820,438	85,275,511	11,275,923	1,748	18,384,998	41,268,085	289,185	908,618
102	Distribution Plant Factor	100.000%	0.029%	99.971%	0.358%	38.586%	3.409%	25.405%	3.075%	14.198%	2.175%	6.915%	0.914%	0.000%	1.491%	3.349%	0.023%	0.074%
*	Sum Prod, Trans, Dist Plant	3,911,811,207	2,963,155	3,908,848,052	13,430,535	1,217,520,471	131,250,665	990,777,851	115,063,757	703,482,638	119,034,000	321,362,100	221,136,789	5,098	24,545,980	48,068,994	469,271	2,499,834

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COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Number	Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	PE	RH	OS/OM	OMH	OI	OLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
	Allocator Offset Number ---------->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
103	Prod,Trans,Dist Plant Factor	100.000%	0.076%	99.924%	0.348%	31.124%	3.355%	26.328%	2.941%	17.984%	3.043%	8.215%	5.853%	0.000%	0.627%	1.229%	0.012%	0.084%
	* Sum Production O&M Expense	341,691,907	337,306	341,354,602	1,075,859	90,110,353	10,247,344	78,474,298	9,589,180	72,993,845	12,018,559	34,679,968	29,135,351	411	937,002	919,814	24,478	270,342
104	Production O&M Factor	100.000%	0.099%	99.901%	0.315%	26.372%	2.999%	23.269%	2.807%	21.362%	3.517%	10.149%	8.527%	0.000%	0.245%	0.269%	0.007%	0.079%
	* Total Power Expense	32,651,933	32,542	32,619,391	92,215	8,100,353	842,984	7,075,504	880,345	7,450,792	1,176,038	3,829,381	2,975,747	35	77,781	85,483	2,276	31,488
105	Total Power Expense Factor	100.000%	0.100%	99.900%	0.282%	24.806%	2.582%	21.669%	2.696%	22.819%	3.599%	11.728%	9.114%	0.000%	0.238%	0.262%	0.007%	0.096%
	* Sum Transmission O&M Expense	11,112,079	10,702	11,101,377	30,857	2,859,951	231,420	2,974,410	297,627	2,341,342	412,108	1,240,499	902,128	3	6,299	6,922	184	7,726
106	Transmission O&M Factor	100.000%	0.096%	99.904%	0.278%	23.937%	2.083%	26.787%	2.588%	21.070%	3.709%	11.164%	8.118%	0.000%	0.057%	0.062%	0.002%	0.070%
	* Sum Distribution O&M Expense	38,801,510	9,031	38,592,479	146,425	15,496,637	1,419,441	9,685,560	1,031,431	4,706,860	504,223	1,921,942	1,934,383	63	575,506	1,212,155	11,541	34,333
107	Distribution O&M Factor	100.000%	0.023%	99.977%	0.379%	40.145%	3.677%	25.091%	2.698%	12.199%	1.306%	4.720%	5.011%	0.000%	1.491%	3.140%	0.030%	0.089%
	* Total Net Plant	2,117,723,954	1,517,613	2,116,206,341	7,400,380	671,027,416	71,158,479	538,985,816	62,956,173	377,373,942	63,299,382	174,802,157	110,382,211	2,773	12,598,835	24,592,016	273,923	1,376,0
110	Total Revenue Factor	100.000%	0.072%	99.928%	0.349%	31.686%	3.360%	25.451%	2.973%	17.820%	2.989%	8.254%	5.211%	0.000%	0.595%	1.161%	0.013%	0.065%
	Steam Production Plant Accts. 311-316 Ratio (P3116)	832,093,588	613,031	831,280,557	2,906,363	233,290,518	26,851,181	207,819,281	24,227,731	164,853,661	26,537,429	70,470,511	65,752,785	1,129	2,097,788	2,305,438	61,327	505,459
112	Sum of Account 311-316 Factor	100.000%	0.099%	99.902%	0.349%	28.037%	3.443%	24.961%	2.912%	19.812%	3.430%	8.469%	7.902%	0.000%	0.252%	0.277%	0.007%	0.061%
	Nuclear Production Plant Accts. 321-325 Ratio (P3216)	1,482,781,041	1,445,883	1,481,315,158	5,278,603	420,522,824	52,338,272	374,857,369	43,493,872	288,285,655	50,600,899	120,723,237	115,365,117	2,057	3,758,788	4,130,932	109,880	647,853
113	Sum of Account 321-325 Factor	100.000%	0.098%	99.902%	0.356%	28.361%	3.530%	25.281%	2.933%	19.510%	3.413%	8.142%	7.780%	0.000%	0.253%	0.279%	0.007%	0.057%
	Other Production Plant Accts. 341-346 Ratio (P3416)	42,505,725	41,382	42,464,343	153,603	12,165,190	1,528,776	10,857,945	1,254,180	8,190,171	1,444,783	3,349,460	3,265,763	60	108,225	118,941	3,184	23,083
114	Sum of Account 341-346 Factor	100.000%	0.097%	99.903%	0.361%	28.620%	3.599%	25.545%	2.951%	19.268%	3.399%	7.880%	7.683%	0.000%	0.255%	0.280%	0.007%	0.054%
	Transmission Plant Accounts 352-353 Ratio (P3523)	132,931,406	126,231	132,805,175	383,955	31,374,008	2,720,592	35,065,858	3,391,368	27,818,032	4,880,788	10,513,708	10,640,565	39	74,302	81,650	2,172	91,129
116	Sum of Account 352-353 Factor	100.000%	0.095%	99.905%	0.274%	23.602%	2.053%	26.379%	2.551%	20.775%	3.657%	12.423%	8.005%	0.000%	0.056%	0.061%	0.002%	0.069%
	Transmission Plant Accounts 354-358 Ratio (P3546)	118,261,625	106,497	118,155,128	307,059	26,489,344	2,302,978	29,089,311	2,861,199	23,298,848	4,100,915	17,938,117	8,977,138	33	62,686	68,885	1,833	76,883
117	Sum of Account 354-358 Factor	100.000%	0.092%	99.908%	0.284%	22.787%	1.981%	25.537%	2.461%	20.040%	3.527%	15.429%	7.721%	0.000%	0.054%	0.059%	0.002%	0.066%
	Distribution Plant Accounts 361-362 Ratio (P3612)	359,045,676	180,074	358,865,602	1,238,624	97,974,483	12,721,887	93,317,744	10,764,461	64,584,982	8,328,651	60,757,837	6,843,227	474	981,105	1,196,162	24,786	173,380
118	Sum of Account 361-362 Factor	100.000%	0.050%	99.950%	0.345%	27.287%	3.543%	25.990%	2.998%	17.982%	2.319%	16.922%	1.906%	0.000%	0.268%	0.333%	0.007%	0.048%
	Distribution Plant Accounts 364-365 Ratio (P3645)	386,959,683	77,248	388,882,437	1,834,176	207,881,577	17,503,358	90,875,197	9,974,607	19,457,612	3,101,042	4,819,450	0	810	9,892,131	20,996,404	211,345	554,428

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COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Offset Number ---------->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Allocator Number	Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	BA	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
119	Sum of Account 364-385 Factor	100.000%	0.020%	99.980%	0.474%	53.717%	4.523%	23.433%	2.678%	5.028%	0.801%	1.245%	0.000%	0.000%	2.556%	5.426%	0.055%	0.143%
	Distribution Plant Accounts 366-367 Ratio (P3667)	187,377,878	49,591	187,328,287	410,667	36,090,662	4,189,172	59,885,632	8,387,321	64,659,542	9,038,888	12,081,901	0	169	557,667	1,073,730	18,420	74,618
120	Sum of Account 366-367 Factor	100.000%	0.026%	99.974%	0.219%	19.261%	2.235%	31.948%	5.010%	29.117%	4.824%	6.448%	0.000%	0.000%	0.298%	0.573%	0.010%	0.040%
	Distribution Plant Accounts 368 Ratio (P368)	150,946,402	37,361	150,909,041	471,443	60,464,733	3,933,196	32,529,400	4,926,713	30,825,432	5,385,669	6,215,374	3,621,588	168	177,747	2,219,658	33,253	84,668
121	Sum of Account 368 Factor	100.000%	0.025%	99.976%	0.312%	40.057%	2.606%	21.550%	3.264%	20.421%	3.575%	4.118%	2.399%	0.000%	0.118%	1.470%	0.022%	0.083%
	Distribution Plant Accounts 369 Ratio (P369)	57,792,430	6,955	57,785,475	268,907	44,712,331	2,108,546	6,602,453	600,026	1,881,770	296,222	706,814	667,240	10	17,643	19,390	518	3,608
122	Sum of Account 369 Factor	100.000%	0.012%	99.988%	0.465%	77.367%	3.648%	11.261%	1.038%	3.256%	0.513%	1.223%	1.155%	0.000%	0.031%	0.034%	0.001%	0.006%
	Total General Plant Production	147,528,887	143,956	147,384,941	521,911	41,881,570	5,165,075	37,135,402	4,316,669	28,930,691	5,042,907	12,171,780	11,537,985	203	373,303	410,261	10,913	86,091
123	Sum of General Plant Production	100.000%	0.098%	99.902%	0.354%	28.253%	3.501%	25.172%	2.926%	19.610%	3.418%	8.250%	7.821%	0.000%	0.253%	0.278%	0.007%	0.058%
	Total General Plant Transmission	5,818,906	5,481	5,813,425	15,804	1,382,368	118,528	1,524,952	147,265	1,189,182	211,072	761,380	462,050	2	3,226	3,546	84	3,9
124	Sum of General Plant Transmission	100.000%	0.094%	99.906%	0.272%	23.413%	2.037%	26.207%	2.531%	20.606%	3.627%	13.085%	7.940%	0.000%	0.055%	0.061%	0.002%	0.068%
	Total General Plant Distribution	91,896,155	26,825	91,869,330	328,698	35,458,812	3,132,881	23,348,381	2,825,631	13,047,224	1,998,576	6,354,466	640,247	130	1,389,993	3,077,404	21,548	67,558
125	Sum of General Plant Distribution	100.000%	0.029%	99.971%	0.358%	38.586%	3.409%	25.405%	3.075%	14.198%	2.175%	6.915%	0.914%	0.000%	1.491%	3.349%	0.023%	0.074%
	Total Net Production	1,137,452,066	1,109,631	1,136,342,236	4,026,443	321,486,387	39,854,978	286,437,303	33,291,213	222,944,433	38,874,662	93,723,363	88,912,906	1,568	2,878,691	3,163,691	84,153	662,434
126	Sum of Production	100.000%	0.098%	99.902%	0.354%	28.264%	3.504%	25.182%	2.927%	19.600%	3.418%	8.240%	7.817%	0.000%	0.253%	0.278%	0.007%	0.058%
	Total Net Transmission	175,060,869	165,151	174,895,718	476,172	41,047,488	3,571,202	45,949,953	4,437,022	36,130,830	6,359,518	22,676,020	13,921,351	51	97,211	106,824	2,842	119,227
127	Sum of Transmission	100.000%	0.094%	99.906%	0.272%	23.448%	2.040%	26.248%	2.535%	20.639%	3.633%	12.953%	7.952%	0.000%	0.056%	0.061%	0.002%	0.068%
	Total Net Distribution	805,211,019	242,831	804,968,388	2,897,765	308,493,524	27,730,300	208,588,580	25,227,939	116,296,879	18,065,201	58,402,775	7,527,955	1,155	9,822,732	21,321,501	186,928	593,378
128	Sum of Distribution	100.000%	0.030%	99.970%	0.360%	38.312%	3.444%	25.659%	3.133%	14.092%	2.244%	7.253%	0.935%	0.000%	1.195%	2.648%	0.023%	0.074%
	Non-Fuel Power Production + Expenses	697,738,811	649,887	697,088,744	2,450,236	200,715,960	24,085,991	175,338,388	20,412,627	135,050,559	23,346,522	58,078,278	51,651,061	946	2,283,210	3,212,721	58,187	421,099
129	Production less (ECR) Fuel Related Costs Allocator	100.000%	0.093%	99.907%	0.351%	28.767%	3.452%	25.130%	2.926%	19.358%	3.346%	8.324%	7.403%	0.000%	0.324%	0.460%	0.008%	0.060%
	Average demand	1,516	50.33%															
	Peak demand	3,013																

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COST OF SERVICE STUDY

(Allocation Table - 1996)

Allocator Offset Number ----->		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Allocator Number / Description	Total Utility	FERC JURIS.	PA PUC JURIS.	RA	RS	RH	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	TRAFFIC SIGNALS
Actual Revenues 1996 (FERC P304, P311)	$1,086,506,920	$857,283	$1,085,649,637	$3,349,885	$374,678,804	$26,788,406	$274,794,266	$27,070,932	$201,573,273	$29,104,628	$82,353,498	$49,601,005	$1,323	$3,093,642	$12,258,677	$185,787	$1,815,290

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Schedule E

Derivation of Production
Based on Ancillary Services
(Pages 1-2)

DERIVATION OF PRODUCTION BASED ANCILLARY SERVICES

		Total	Fossil Steam	Nuclear	Combustion Turbine
Revenue Requirement by Fuel	a/	679,777,573	219,559,623	452,668,508	7,549,442
MW of Capacity		2,522	1,809	659	54
Ancillary Services					
Reactive from Generation allocated to type of production by net plant	b/ c/	4,021,675	1,342,054	2,604,821	74,800
Regulation and Frequency Response 43 MW from 1809 MW fr. steam revenue requirement		5,187,040	5,187,040		
Operating Reserves-Spinning 73.9 MW from balance of Steam	d/	8,913,265	8,913,265		
Operating Reserves–Supp. (Q.S.) 54 MW from BI; 20 MW balance from Steam	e/	9,887,219	2,412,577		7,474,642
Capacity Losses					
Transmission 22 MW from balance of Steam	f/	2,653,834	2,653,834		
Distribution 153 MW from balance of Steam	g/	18,456,212	18,456,212		
Total Production Capacity Based Ancillary Services & Losses Costs		49,119,245	38,964,982	2,604,821	7,549,442

a/ functionalized based on data presented in Mr. Clayton's testimony.

b/ Proportion of total plant investment derived from investment in facilites at each plant related to production of reactive power and power factor; proportion applied to total revenue requirement as described in testimony.

c/ Net plant:

Gross Book	2,366,398,721	840,120,348	1,483,378,944	42,899,429
Accum. Dep	1,081,527,382	411,352,041	651,173,531	19,001,810
Net Book	1,284,871,339	428,768,307	832,205,413	23,897,619
Percentage	100.00%	33.37%	64.77%	1.86%

d/ e/ 3% ECAR Requirement for each spinning and/or quick start * 1996 peak of 2463 MW;

f/ Transmission Loss Factor minus one–(1.009-1) * 1996 peak of 2463;

g/ (Total Loss Factor minus one–(1.071-1) * 2463 MW) less 22 MW transm loss;

DERIVATION OF NON FUEL PRODUCTION COSTS

1	Total Production Cost	880,176,055	
2	less Other Rev	17,725,476	
3	Total Retail Prod Cost incl. fuel	862,450,579	(1)-(2)
	Fuel Portion of Production Cost		
4	Fuel (ECR Rider 15)		
5	Acct 501 Fuel	156,405,163	
6	acct 509 allowances	2,068,025	
7	Acct 518 Nuclear Fuel	25,704,809	
8	Acct 521 Steam Exp	0	
9	Acct 547 Fuel	201,637	
10	Acct 555 Purch Pwr	32,269,274	
11	Subtotal	216,648,908	Sum (4)-(10)
12	less Off System Rev.	33,975,902	
13	Total Net Fuel	182,673,006	(11)-(12)
14	Production Cost excl. Net Fuel	679,777,573	(3)-(13)

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Duquesne Light Company) Docket No. ER96-1573-000

SUPPLEMENTAL DIRECT TESTIMONY
OF
PETER A. WYBIERALA

Q. Please state your name and business address.

A. My name is Peter A. Wybierala and my business address is 411 Seventh Avenue, Pittsburgh, Pennsylvania 15230-1930.

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

A. I am employed by Duquesne Light Company ("Duquesne") as Supervisor, Business Planning Department, Regulatory and Economic Analysis Unit.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Duquesne.

Q. Mr. Wybierala are you responsible for the development of the Ancillary Service charges?

A. Yes.

Q. What ancillary services is Duquesne proposing to offer to transmission customers?

A. Duquesne is offering the ancillary services the FERC directed transmitting utilities to provide in Order No. 888.

Q. What are those services?

A. Those services are:

1. Scheduling, System control and dispatch
2. Reactive Supply and voltage control from Generation Sources
3. Regulation and Frequency Response
4. Energy Imbalance
5. Operating Reserve-Spinning Reserve
6. Operating Reserve - Supplemental

Q. Please describe in more detail what Duquesne proposes as to each ancillary service it is offering including how the charge was developed, what the charge is, and how the charge will be assessed against each user.

A. I will discuss each of the six ancillary services included in Order 888.

Q. Please discuss scheduling service.

A. Duquesne is not proposing to charge for system control and dispatch service at this time. Duquesne, however, is proposing to charge for scheduling service. Scheduling service can be provided in one of two ways - manually or dynamically. To the extent customers want to schedule on a dynamic basis, there is likely to be set-up costs for computer equipment and tele-communication lines, the cost of which will vary by customer. As a result, Duquesne proposes to charge for these costs on an as incurred basis at the time a particular request is received.

Duquesne has established a charge for scheduling service assuming scheduling is done on a manual basis. Manual scheduling requires that personnel in Duquesne's system operation center be available to make the necessary schedule changes and perform the required accounting functions for the transmission customer. Therefore, in determining the schedule charge, I have divided an appropriate amount of annual labor expense by the number of transactions scheduled across and out of Duquesne's control area.

The annual labor expense was computed using data from FERC account #556 and is based on an allocated share of salaries associated with transmission scheduling. Duquesne has estimated that amount to be $823,204. I then applied an adjustment factor of 1.21 to account for fringe benefits bringing the total allocated labor expense to $996,077. Dividing this value by the number of hourly schedules in the year (8760) yields a unit cost of $113.71. I propose to charge $100 for each schedule and change in schedule submitted by a transmission customer. If scheduling charges were set on a flat monthly fee basis, transmission customers would have no incentive to economize on the number of schedule changes that they could effect since there would be no difference in cost whether they requested 1 or 20 schedule changes during the day.

Q. Please describe reactive support from generation service?

A. I will but first let me discuss certain aspects of generation that are common for the remaining five ancillary services. First, generation is associated

in one way or another, in varying degrees, with all of these services. Putting aside scheduling and dispatch (which I have already discussed), all other ancillary services involve providing either energy or power which ultimately come from generation sources.

Q. Do the current FERC accounts break-out these generation-related costs attributable to the provision of these ancillary services?

A. Not entirely. FERC accounting is sufficient to determine total plant investment, but is not adequate, without more, to determine specific plant investment and plant related costs associated with the production. For example, the FERC accounts do not detail the investment and operating costs associated with the production of real and reactive power. In addition, investment in facilities that provide scheduling capability also perform many other functions relative to the day-to-day operation of an electric power system.

Q. Is it necessary therefore to estimate what proportion of generating equipment is used to provide for

the various services ancillary to the provision of transmission service?

A. Yes. In identifying the charges for reactive and voltage control, I began by identifying the equipment components of generation plant associated with the production of both real and reactive power. These components include:

- unit step-up transformers,
- exciters,
- voltage regulators, and
- generators

The plant investment for each component was obtained from Duquesne company internal plant and property records. Once these individual plant investment costs were collected, I then totaled them for each generating unit and allocated them between real and reactive components based on individual unit power factor ratings.

Q. Before you proceed please explain what you mean by real and reactive power?

A. What is commonly called "Power", but what engineers often refer to as "real power" as an electrical

quantity, is defined as the product of voltage and current in which the current and voltage waveforms are in phase with each other. On an AC (alternating current) power system the waveforms of voltage and current are typically not in phase with each other, and therefore only part of the product of voltage and current actually is transmitted or consumed as real power. Real power is ultimately converted into useful work in applications such as pumping, lighting, or heating. Reactive power is the product of voltage and current waveforms that are 90° out of phase with each other. Reactive power establishes the magnetic fields that are essential for the transmission of real power, voltage transformations, and electric motor function.

Perhaps the best way to describe the relationship of how real and reactive power applies to generation is to describe what is known in AC electrical theory as the power triangle. The power triangle is a right triangle in which the base represents the real power and the vertical side represents the reactive power. Consistent with the

mathematics of geometry, the hypotenuse is equal to the square root of the sum of the squares of the other two sides. By dividing all of the sides by the hypotenuse, the real and reactive components of the triangle can be represented on a per unit basis where the sum of the squares of the two sides equal unity.

In designing a generator, manufacturer's define rated power factor as the point in which the generator will produce rated power most efficiently. Good utility practice is to operate generators at or near the manufacturer's rated power factor. The power factor represents on a per unit basis how much of the total output of the generator is real power. Based on the right triangle relationship, the square of the power factor represents the allocation of real power output. It follows that $1-(pf)^2$ represents the appropriate allocation of reactive power, and then multiplying the result by the total plant investment would yield the per unit amount that should be allocated to reactive cost. For example, under my approach assuming 0.90 power factor for a

generator, I would estimate 19% or $\{[1-(.9)^2]*100\}$ of plant investment as devoted to production of reactive power.

Q Why is reactive support important?

A. Maintaining acceptable voltage profiles across the transmission network is critical to insure reliable operation of the network. Transmission voltages must typically be regulated to +/- 5% of the nominal operating voltage. Voltage excursions outside this range can damage equipment and detrimentally affect the security of the interconnected transmission network. Generators not only supply and absorb reactive power but also regulate the injection and extraction of reactive power to maintain the desired voltage levels at specific points on the network. In addition, generators also have reserve reactive power capability that can be called upon to meet the sudden outages of other generating units or transmission lines that, if left unattended, would adversely affect the balance of power on the network.

Q. Now that you have explained reactive power, please explain how you estimated the associated costs, and

why it is important to the transmission system, please tell me how you estimated the reactive power charges Duquesne proposes to charge?

A. After I determined the total plant investment costs associated with the reactive support service by summing up the investment by plant ($14.3 million), I then divided this amount by the total generation plant investment ($1,087 million). This ratio (.013) of reactive plant to total plant was then multiplied by the annual revenue requirement ($368 million) for total generation plant derived and explained by Mr. Cater, in his testimony. The product ($4.8 million) yields the revenue requirement associated with the production of reactive power.

Q. Once you estimated the total annual revenue requirement associated with the production of reactive power from generation, how did you propose to charge for this service?

A. For billing purposes the monthly charge will be determined by allocating 1/12 of the annual revenue requirement and applying it to the customers load

ratio share. Monthly peak demand will be measured at the transmission customer's meter over a 15 minute demand interval. The allocated revenue requirement will then be adjusted up or down depending on the transmission customer's average power factor deviation around .95. The adjustment will be based on dividing .95 by the customers average power factor and then multiplying by the allocated revenue requirement. Average monthly power factor will be calculated by metering the transmission customer's monthly MWh and MVARh consumption and applying the formula provided in the tariff.

Q. How was 95% power factor chosen as the basis for adjusting demand.?

A. Consistent with industry practice, the monthly demand will be scaled either up or down by the ratio of .95 to the customers power factor. This effectively provides a credit for those customers who have a power factor greater then .95 and a penalty for those who have a power factor less than .95. A leading power factor will be credited as a unity power factor.

Q. Please define regulation and frequency control service?

A. Regulation and Frequency control is, as the FERC states, the service of load following (Order 888 slip op. at p. 212). As the FERC explains, someone must supply power to meet any difference between the customer's actual load and scheduled generation. Duquesne proposes to levy a demand charge equivalent to its own annual carrying cost of capacity applied to the maximum difference between scheduled generation and actual load. This represents capacity supplied by Duquesne as measured by the maximum monthly 15-minute metered demand.

Q. Duquesne does not have to schedule any power to meet those deviations in load so why should you charge the transmission customer a capacity charge?

A. As the FERC states in Order 888 slip op at p. 212 someone must supply power to meet any difference between a customer's actual and scheduled generation.

Q. Why shouldn't the transmission customer receive at least some credit for the capacity he is paying for when he pays or provides daily operating reserves?

A. The operating reserves are a function of load, they are not part of load. Thus if a customer attempts to use up some of the capacity committed to daily operating reserve at the time of the peak, Duquesne will be deficient from ECAR's point of view. To avoid the deficiency, the customer must purchase from Duquesne or otherwise supply capacity to cover any difference between actual and scheduled generation in addition to the capacity needed to cover the required operating reserves.

Q. Is this comparable to the treatment Duquesne's own native ratepayers receive?

A. It is, indirectly. Duquesne's planning criteria require it to maintain its own or purchase enough capacity to meet its load following capacity requirements and still meet ECAR operating reserve capacity requirements.

Q. Please explain whether Duquesne follows NERC guidelines in setting its load following or regulating

margins and how these guidelines are used in determining the load following charges you have estimated?

A. Certainly. Duquesne complies with NERC guidelines within the operational constraints of its ability to do so. Current NERC policies on control area performance are merely recommended standards at this time and are under review. NERC "A1" and "A2" standards are currently, recommendations that each control area maintain 90% compliance. NERC is currently reviewing whether these recommendations should be changed to requirements.

Q. Please explain what is meant by the terms "A1" and "A2"?

A. "A1" refers to the Area Control Error (ACE) and means that the control area return to zero every 10 minutes. "A2" dictates how far a control area's ACE can vary from zero. Duquesne has not explicitly incorporated the NERC guidelines into its charge for regulation and frequency control.

Q. Then how are you proposing to charge for this service?

A. I am proposing to charge for this service on the basis of the deviation between the transmission customers load and schedule. If a customer's load exceeds his schedule, Duquesne will then be required to use its own fossil and combustion turbine generating sources to supplement the customers schedule in order to meet load. The capacity related charge for this service will be computed by dividing the annual revenue requirements for Duquesne's fossil and combustion turbine units ($131,672,164) by 12 to get a monthly revenue requirement. This value will then be allocated on a load ratio share basis using the monthly maximum deviation expressed as a percentage of total load. Mr. Cater provides the support in his testimony for the development of annual revenue requirements.

In addition, I am proposing to assess a small energy charge, estimated to be $.007/Mwh. This charge represents the expected annual unitized energy costs for Duquesne in following load and meeting daily peak demands on its system for 1996. This cost was determined by running two production

cost simulations. I instructed that a base production cost simulation be run based on expected load and plant availability conditions for 1996. This run modeled the regulation requirements recognizing such things as minimum unit output and down times. Next I had another run prepared which ignored the regulation requirements. This run produced slightly lower production costs because of greater flexibility in following the daily load variations. The difference in annual production costs ($90,000) was then divided by the total projected MWh of energy deliveries (13,167.2 GWH) on the Duquesne system to produce a unitized value of energy cost associated with regulation.

Q. Please turn to energy imbalance service.

A. Energy imbalance refers to the accumulated error that results form the inability of the control area operator to perfectly follow instantaneous fluctuations in metered load. Stated another way, energy imbalance represents the difference between energy measured at the meter and the integration of scheduled power over time. When metered consumption is

greater than total scheduled energy, the local control area operator must provide the difference. Conversely, when measured consumption is less than total scheduled energy, the local control area operator must back off its own generating units, which may be less costly to run than the generation of the transmission customer.

Q. What is the cost to Duquesne of addressing energy imbalance?

A. The cost to Duquesne is the out-of-pocket cost for energy supplied or the opportunity cost.

Q. How does Duquesne propose to charge transmission customers for this service?

A. Ideally Duquesne would prefer there is no imbalance. Not withstanding the instantaneous variations in a customer's load, the problem is further aggravated in that Duquesne can only schedule power into or out of its system in 1 MW increments. Duquesne proposes to accept variations in energy up to 1.5% of the on-peak and off-peak energy scheduled. For energy supplied by Duquesne in this band Duquesne will charge based on the average system lambda λ. For

energy taken by Duquesne, the transmission customer will receive a credit of 90% of the average system lambda. For variations outside of the band, Duquesne proposes to charge $100/MWH for energy supplied and provide a credit of 70% of the average system lambda.

Q. Please describe operating reserve service.

A. Operating reserves is the amount of generation in excess of load that is either on-line (spinning) or can be accessed within 10 minutes (supplemental) to primarily supply power in the event of a sudden outage at a large generating unit anywhere within the ECAR region. Other factors considered in the determination of the amount of daily operating reserves are regulation requirements and load forecast error. Spinning reserves represent the total amount of generating capacity on-line that is in excess of system load but less than the maximum generating plant output. Supplemental or non-spinning reserves are the amount of generating capacity that can be brought on-line within 10 minutes. Non-

spinning reserves can be capacity such as combustion turbines, and, in some cases, interruptible load.

Q. What requirements does Duquesne maintain?

A. As a member of ECAR, Duquesne is required to demonstrate on a daily basis that it has sufficient operating reserves available in excess of predicted load for the day. One component of this requirement is the spinning reserve which provides for load regulation and system frequency fluctuations. The other component is supplemental or non-spinning reserves which provides for protection against an unexpected loss of generation. Duquesne's total operating reserve requirement is 6.6 %, of which at least 3% has to be in the form of spinning with the balance in the form of non-spinning reserves.

Q. Does Duquesne differentiate between spinning and non-spinning reserves?

A. Yes. Duquesne, however, typically satisfies its entire daily ECAR operating reserve requirement by carrying sufficient generation on its system in the form of spinning. While Duquesne has approximately 88 Mws of interruptible load under contract with

retail customers, it cannot be used in satisfaction of our supplemental operating reserve requirements. As a result, Duquesne can only credit its combustion turbine capacity for purposes of its non-spinning reserve requirement.

Q. In light of these requirements, please explain how they were used in determining your proposed charge for operating reserves?

A. I have developed the charge in two parts - a capacity component and an energy component. In developing the capacity component I used the plant investment costs of Duquesne's fossil units. I used the coal plants because these are the plants Duquesne uses to meet its spinning reserve requirements. Duquesne's nuclear units are strictly base-loaded units that are not used to meet this requirement and therefore should not be included in setting the charge for spinning reserves. The combined revenue requirements for the coal fired and combustion turbine plants was provided to me by Mr. Cater and determined to be $131,672,164. I then subtracted the annual revenue requirement for the combustion tur-

bine plant of $2,380,505 to arrive at a value of $129,291,659 for the fossil plants.

The capacity related charge for spinning reserves will be completed by dividing the annual revenue requirement for Duquesne's fossil units ($129,291,659) by 12 to get a monthly revenue requirement. This value was then multiplied times 3% to determine the revenue requirements associated with spinning. Customers will then be billed on the basis of their load ratio shares.

Q. Explain your proposal for charging transmission customers for supplemental or non-spinning reserves.

A. I am proposing to charge in a similar fashion. In setting the charge for non-spinning reserves, however, I have used our required 3.6% non-spinning reserve ratio, the revenue requirements for Duquesne's Brunot Island combustion turbine ($2,380,505). Customers will also be billed on the basis of load ratio shares. Again, Mr. Cater provided me with the necessary revenue requirement information for the combustion turbine plant.

There is also an energy component that represents the energy cost for no-load heat to maintain Duquesne's spinning reserves. On a monthly basis Duquesne will determine its total energy cost associated with providing spinning reserves. Duquesne will bill customers who purchase spinning reserves on the basis of their load ratio shares.

Q. Does this conclude your testimony?

A. Yes.

AFFIDAVIT

State of Pennsylvania)
) ss.
County of Allegheny)

I, Peter A. Wybierala, having been first duly sworn, state that the foregoing direct testimony is true and correct to the best of my knowledge, information and belief.

Subscribed and sworn to before me this 14 day of May, 1996.

NOTARIAL SEAL
KAREN M. KEAST, Notary Public
Pittsburgh, Allegheny County, PA
My Commission Expires March 6, 2000

Notary Public

My commission expires:

FILE CONTINUED