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SECRETARY BUREAU

PENNSYLVANIA POWER & LIGHT COMPANY

Statement 11-S

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Direct Testimony of Thomas C. Stathos

Docket No. R-00943271

DOCKETED

JUN 13 1995

1 Q. Please state your full name and business address.

2 A. Thomas C. Stathos, Two North Ninth Street, Allentown, Pennsylvania
3 18101.

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

5 A. I am currently the Manager-Customer Programs and Support for Pennsyl-
6 vania Power & Light Company (PP&L).

7 As Manager-Customer Programs and Support, I am responsible for
8 overseeing customer assistance programs throughout PP&L's service
9 territory and contacts between PP&L's regional customer service staff and
10 customers.

11 Q. What is your educational background?

12 A. I graduated from Lehigh University in 1973 with a Bachelor of Arts degree
13 in English. I received a Masters of Arts degree in Government from that
14 same institution in 1975. I also completed coursework toward a Doctor of
15 Arts degree in Government at Lehigh University and at the University of
16 Michigan.

17 Q. Please describe your professional experience.

18 A. I began my career in 1975, teaching various courses in Government from
19 1975 to 1979 at Lehigh University and at Pennsylvania State University,
20 while I was taking doctoral degree courses. After 1979, I continued
21 teaching these courses on a part-time basis through 1985. In 1979, I
22 began working for Youth Systems Development, a private, non-profit,
23 community-based agency providing research and analysis services to the

1 juvenile courts and children and youth agencies in Lehigh and
2 Northampton counties. In this position, I assisted in the development of a
3 database on the needs of youth in the Lehigh Valley. In 1980, I worked
4 briefly as a Senior Planner for the Lehigh Valley Manpower Program, the
5 Comprehensive Employment and Training Act Agency in the Lehigh
6 Valley. In this position, I developed contracts and job development
7 programs related to summer youth employment. Later in 1980, I was
8 hired by PP&L as a Specialist-Energy Education Programs to work with
9 teachers in grades K-12 to develop an energy education curriculum. In
10 November 1981, I was promoted to Energy Education Programs Director,
11 where I was responsible for both development and implementation of
12 energy education programs and materials for use in PP&L's service
13 territory. In May 1982, I became Education Consultant in PP&L's Human
14 Resources and Development Department where I provided educational
15 and career counseling for PP&L employees. I also coordinated
16 development of undergraduate and graduate college and university
17 programs for PP&L employees. In June 1986, I became a Regional
18 Personnel Representative in Hazleton where I provided human resources
19 information and assistance to field managers and assisted in meeting
20 staffing needs for PP&L's Susquehanna Steam Electric Station. In July
21 1987, I was promoted to Manager-Compensation Systems for PP&L
22 where I was responsible for development of wage and salary programs for
23 PP&L employees and overseeing employee benefit programs. In March

1 1990, I became Manager-Union Relations where I was PP&L's chief
2 spokesman and negotiator with PP&L's labor unions. I also was
3 responsible for labor arbitrations and disputes. In January 1995, I began
4 working in my current position of Manager-Customer Programs and
5 Support.

6 **Q.** Have you reviewed the direct testimony of Bernard C. Bujnowski, PP&L
7 Statement No. 11, filed at this docket on December 30, 1994?

8 **A.** Yes, I have.

9 **Q.** In your current position at PP&L, are you now responsible for the cus-
10 tomer and community needs programs that Mr. Bujnowski explains in
11 PP&L Statement No. 11.

12 **A.** Yes I am. Mr. Bujnowski is no longer responsible for these customer and
13 community needs programs in his new position as Manager-Customer
14 Contacts.

15 **Q.** Do you now adopt the testimony of Mr. Bujnowski, PP&L Statement No.
16 11, as your own?

17 **A.** Yes, I do.

18 **Q.** Does this conclude your direct testimony?

19 **A.** Yes, it does.

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Exhibit DAK 1
1994-95 Construction Budget

Witness: Douglas A. Krall
Docket No. R-00943271

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1994-1995 CONSTRUCTION BUDGET
PENNSYLVANIA POWER & LIGHT COMPANY

OCTOBER 1993

1994-1995 CONSTRUCTION BUDGET
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Appendix A. 1994 List of Projects

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CHAPTER 1
INTRODUCTION

INTRODUCTION

A. GENERAL DISCUSSION

This report:

- o Presents a discussion of the 1994 and 1995 Construction Budgets, the five- and ten-year construction programs and the major factors that influenced their development.
- o Provides an estimate of exposure to additional capital financing. This exposure includes specific expenditures which are highly uncertain.

The purpose of the Construction Budget and its related cost data is to identify the capital requirements to support existing Company facilities and necessary expansions, and to establish a basis for financial and manpower planning. Further, the construction budget is a major document in developing future test year plant additions and retirements for rate case purposes. It also provides a process for early identification of projects which facilitates an orderly process of engineering, construction and long-term system development.

The recommended construction program is based on the loads resulting from PP&L's Least Cost Plan (LCP) filed with the Pennsylvania PUC May 1, and reflects an average annual compounded peak load growth rate of 1.8% for the period 1993 to 2003. With these loads, there is no need for new generating capacity and associated expenditures within the next five years. An analysis is included of the effect of higher loads than those resulting from the LCP.

The construction budget is based in large measure on a set of fundamental planning guidelines known as the Reliability Principles and Practices. These principles are intended to encourage imaginative solutions to planning problems while assuring a degree of uniformity in planning decisions and providing a balance between cost of service and reliability. These principles evolved over many years and were committed to writing in

the late 1960's. They are constantly under review to determine needed refinements which reflect current thinking on load supply philosophies and recent advances in technology. A review of the Electrical Planning Principles and Practices was completed in 1988. Principles and Practices for Existing Fossil and Hydro Generating Stations are currently under review.

As business strategies continue to evolve in anticipation of a more competitive future, one of PP&L's objectives continues to be to maintain a stable, competitive price for our service. A key element in accomplishing this objective is a program of cost effective management which is applied to operating, payroll and capital budgets. The intent of this program is to assure that these budgets address the operational strategies and objectives of the Company and, at the same time, provide a mechanism to revise those strategies and objectives should their "cost" be inconsistent with financial and rate-making strategies.

The explanatory material included herein describes a Construction Program which, consistent with operational strategies, seeks to maintain the historically good performance of our existing facilities, and, also make additions and modifications where it is cost effective to do so. In support of financial objectives, however, certain projects were deferred beyond their desired in-service date. Projects which have been deferred fall into one of the following general categories:

1. Performance improvements at fossil and hydro generating stations.
2. Transmission and distribution improvements which are not required to meet customer loads but could involve some exposures to increased interruption frequency and restoration times in the event of an equipment failure or maintenance outage.
3. Replacements in all categories where timing is a matter of judgement and deferral is judged not to incur significant risk.
4. Selected building-type projects in accordance with the 10-year General Buildings Program.

CHAPTER 2

SUMMARY

CHAPTER 2
1994-1995 CONSTRUCTION BUDGET
SUMMARY

A. GENERAL DISCUSSION

The Construction Budget provides for expenditures (excluding nuclear fuel purchases) of \$471.2 million in 1994, and \$397.6 million in 1995. Requirements of \$2135.4 million are anticipated for the five-year period from 1994 through 1998. The dollar expenditures for the 1994-1998 five-year period are shown in Table 2-1.

Table 2-2 shows a comparison of estimates by budget category to those prepared in October 1992, for the 1994-2003 ten-year period.

A comparison of the 1994 budget estimate of \$471.5 million with the estimate prepared in October 1992 of \$544 million, shows a decrease of \$72.5 million. This decrease is discussed by category in each of the following chapters.

Nuclear fuel purchases are included in Tables 2-1 and 2-2 for information purposes.

All data have been adjusted to reflect the effect of escalation. The rate used to escalate expenditures beyond 1994 was 3.5% per year through 2003. This rate is based on the 1993-1994 Corporate Planning Assumptions issued in July, 1993. Shown below is the estimate of escalation included in the 1994-98 Construction Program.

<u>\$ MILLION ESCALATION INCLUDED</u> <u>ABOVE 1994 PRICE LEVEL</u>	
1994	-
1995	13
1996	28
1997	43
1998	53

The detailed financial data for the 1994 and 1995 Capital Construction Budgets are included as follows:

1994 Construction Budget

Table 2-3	Summary - Major Projects
2-4	Summary - Construction Budget
2-5	Expenditures By Class of Property
2-6	Additions and Retirements to Plant

1995 Construction Budget

Table 2-7	Summary - Major Projects
2-8	Summary - Construction Budget
2-9	Expenditures By Class of Property
2-10	Additions and Retirements to Plant

Tables 2-11 and 2-12 show the committed funds associated with each of the annual construction budgets. These estimates reflect funds necessary to complete the projects started prior to and during the respective budget years.

Listings of the individual projects included in the 1994 and 1995 Budgets are shown as Appendix A and B respectively. Included in Appendix C are the bulk power system map and seven regional maps. Each of these show the existing and planned bulk power and regional supply facilities and area substations through 1997.

In addition to the capital construction program of approximately \$2135.4 million for the 1994-1998 period, there is an exposure to additional capital financing which is discussed in detail in Chapter 11 and listed in Table 11-1 on Page 11-2.

TABLE 2-1
1994-1998 CONSTRUCTION PROGRAM
ESTIMATED CONSTRUCTION EXPENDITURES
\$ MILLIONS (ESCALATED)

<u>Budget Category</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>TOTAL 1994-1998</u>	<u>% OF TOTAL</u>
New Generation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Generation Nuclear	54.0	50.0	45.0	46.8	46.8	242.6	11.4
Existing Generation Fossil and Hydro	182.6	116.9	139.9	188.5	164.8	792.7	37.1
Bulk Power	18.8	13.6	10.8	8.1	8.5	59.8	2.8
Regional Supply	45.6	38.8	50.0	49.6	53.2	237.2	11.1
Area Supply	47.7	53.9	52.5	38.9	40.9	233.9	11.0
Revenue Work	81.8	86.8	89.0	89.0	85.0	431.6	20.2
Sites and R/W	0.7	0.7	0.7	0.8	0.8	3.7	0.2
Buildings	20.8	3.9	5.4	1.5	1.6	33.2	1.6
(1) Other	19.2	33.0	29.1	11.6	7.8	100.7	4.6
Total New Construction	471.2	397.6	422.4	434.8	409.4	2,135.4	100.0
Nuclear Fuel Purchases	42.8	55.4	80.6	48.2	63.6	290.6	
Grand Total	514.0	453.0	503.0	483.0	473.0	2,426.0	

(1) Includes rounding adjustment.

TABLE 2-2
1994-2003 CONSTRUCTION PROGRAM
ESTIMATED ANNUAL EXPENDITURES
\$ MILLIONS (ESCALATED)

<u>Budget Category</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>TOTAL 1994-2003</u>
New Generation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Existing Generation Nuclear	54.0	50.0	45.0	46.8	46.8	50.1	51.8	53.6	55.5	57.4	511.0
	54.0	50.0	46.0	46.8	48.4	50.1	51.8	53.6	55.5	57.4	513.6
Existing Generation Fossil and Hydro	182.6	116.9	139.9	188.5	164.8	224.5	193.3	131.6	75.0	99.2	1,516.3
	258.6	101.1	109.6	128.1	229.3	224.5	193.3	131.6	75.0	99.2	1,550.3
Bulk Power	18.8	13.6	10.8	8.1	8.5	8.8	9.1	9.4	9.8	10.1	107.0
	12.5	10.0	8.9	9.8	10.2	10.6	11.0	11.5	11.9	12.1	108.5
Regional Supply	45.6	38.8	50.0	49.6	53.2	55.1	57.0	59.0	61.1	63.2	532.6
	60.2	42.5	59.5	56.3	54.0	56.2	58.4	60.7	63.1	64.3	575.2
Area Supply	47.7	53.9	52.5	38.9	40.9	45.0	46.6	48.2	49.9	51.6	475.2
	45.3	45.0	44.0	42.4	44.1	45.9	47.7	49.6	51.6	52.6	468.2
Revenue Work	81.8	86.8	89.0	89.0	85.0	80.0	80.0	80.0	80.0	80.0	831.6
	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	800.0
Sites and RW	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	8.4
	1.6	1.4	1.4	1.5	3.2	3.3	3.5	3.6	3.7	3.8	27.0
Buildings	20.8	3.9	5.4	1.5	1.6	1.6	1.3	---	---	---	36.1
	14.6	9.2	5.4	3.5	1.8	5.3	1.3	0.5	0.5	4.5	46.6
Other	19.2	33.0	29.1	11.6	7.8	7.7	8.7	8.5	8.5	8.8	142.9
	17.5	18.8	15.7	10.8	13.1	13.3	14.0	14.9	15.3	14.7	148.1
Total New Construction	471.2	397.6	422.4	434.8	409.4	473.7	448.7	391.2	340.8	371.3	4,161.1
	544.3	358.0	370.5	379.2	484.1	489.2	461.0	406.0	356.6	388.6	4,237.5
Nuclear Fuel Purchases	42.8	55.4	80.6	48.2	63.6	92.3	50.3	66.8	93.2	55.7	648.9
	46.7	62.0	92.5	53.8	68.9	102.8	58.0	74.0	108.4	64.4	731.5
Grand Total	514.0	453.0	503.0	483.0	473.0	566.0	499.0	458.0	434.0	427.0	
	591.0	420.0	463.0	433.0	553.0	592.0	519.0	480.0	465.0	453.0	
Cumulative Grand Total	514.0	967.0	1,470.0	1,953.0	2,428.0	2,992.0	3,491.0	3,949.0	4,383.0	4,810.0	
	591.0	1,011.0	1,474.0	1,907.0	2,480.0	3,052.0	3,571.0	4,051.0	4,516.0	4,969.0	

TABLE 2-3
1994 SUMMARY - MAJOR PROJECTS

<u>Major Projects - Four Million Dollars or More in 1994</u>	Cost-Thousands	
	1994 Budget Year	Project Total
Martins Creek SES - Unit #1 - Install Low NOx Burners	4,510	4,943
Martins Creek SES - Unit #2 - Install Low NOx Burners	4,158	4,541
Martins Creek SES - Unit #3 - Replace Generator Rotor	5,403	5,984
Martins Creek SES - Unit #4 - Replace Generator Rotor	4,320	5,984
Brunner Island SES - Unit #2 - Replace Boiler Control System	6,188	9,381
Brunner Island SES - Unit #3 - Replace Boiler Control System	6,599	10,380
Brunner Island SES - Unit #2 - Install Low NOx Burners	13,252	14,270
Brunner Island SES - Unit #3 - Install Low NOx Burners	15,227	16,108
Brunner Island SES - Add Dry Fly Ash Handling System	5,924	25,365
Brunner Island SES - Install Slurry Wall and Cap on Basin #3	5,768	6,598
Montour SES - Unit #1 - Install Low NOx Burners	6,000	17,095
Montour SES - Unit #2 - Install Low NOx Burners	16,587	17,417
Conemaugh SES - Unit #1 - Install Flue Gas <i>Desulfurization with Spare</i>	13,280	36,750
Susquehanna SES - Unit #2 - Purchase of GSU's System Facilities Center	8,800	9,000
Division Operations Department - Information Strategic Plan	13,915	37,912
Nuclear Department - Information System	5,300	46,400
	4,020	10,970
Total Major Projects	139,251	279,098

TABLE 2-4
 1994 SUMMARY - CONSTRUCTION BUDGET
 THOUSANDS OF DOLLARS - ESCALATED

	<u>1994 Budget Year</u>
<u>Major Projects - Subtotal from Table 2-3</u>	139,251
<u>Production - Additions, Replacements and Improvements to Generating Facilities</u>	119,789
<u>Transmission - Additions, Replacements and Improvements to Transmission Facilities</u>	9,785
<u>Distribution - Additions, Replacements and Improvements to Distribution Facilities</u>	86,890
<u>Revenue - Supply Additional Residential, Commercial, Industrial and Street Lighting Loads, Including Transformers and Meters</u>	79,450
<u>Buildings</u>	6,885
<u>General</u>	<u>10,280</u>
Total New Construction	452,330
<u>Net Removal Costs</u>	<u>19,170</u>
Total Construction Including Removals	471,500
<u>Nuclear Fuel Purchases</u>	<u>42,800</u>
Grand Total	514,300

TABLE 2-5
1994 CONSTRUCTION BUDGET *
BY CLASS OF PROPERTY
THOUSANDS OF DOLLARS-ESCALATED

<u>Class of Property</u>	<u>Prior to Budget Year</u>	<u>During Budget Year</u>	<u>After Budget Year</u>	<u>Total</u>
<u>Production</u>				
Nuclear	66,646	53,778	84,364	204,788
Fossil/Hydro	112,077	183,438	512,931	808,446
Sub-Total	178,723	237,216	597,295	1,013,234
<u>Transmission</u>				
	7,558	19,248	14,992	41,798
<u>Distribution</u>				
	30,906	176,596	165,462	372,964
<u>General</u>				
	23,875	38,433	3,922	66,230
Sub-Total	241,062	471,493	781,671	1,494,226
<u>Nuclear Fuel</u>				
		42,800	247,800	290,600
TOTAL	241,062	514,293	1,029,471	1,784,826

* Includes Removal Costs.

TABLE 2-6
1994 ESTIMATE OF ADDITIONS AND RETIREMENTS
FROM PLANT DURING BUDGET YEAR
THOUSANDS OF DOLLARS

<u>Class of Property</u>	*	<u>Additions To Plant</u>	<u>Retirements</u>
<u>Production</u>			
Nuclear		33,290	3,130
Fossil/Hydro		212,410	17,400
	Sub-Total	245,700	20,530
<u>Transmission</u>			
		18,740	1,120
<u>Distribution</u>			
		168,770	18,030
<u>General</u>			
		9,700	330
	TOTAL	442,910	40,010

* Excludes Removal and Salvage Costs.

TABLE 2-7
1995 SUMMARY - MAJOR PROJECTS

Major Projects - Four Million Dollars or More in 1995

Cost-Thousands

	1995 Budget Year	Project Total
Susquehanna SES - Production Facilities Addition	4,500	11,507
Martins Creek SES - Unit #3 - Convert to Gas Co-Firing	5,974	14,116
Brunner Island SES - Unit #2 - Replace Horizontal Reheater and Superheater	5,590	5,980
Brunner Island SES - Add Dry Fly Ash Handling System	9,237	25,365
Brunner Island SES - Unit #2 - Replace Economizer	3,792	4,134
Montour SES - Unit #1 - Install Low NOx Burners	9,910	16,445
Montour SES - Unit #1 - Install Flue Gas Desulfurization	11,220	297,120
Holtwood HES - Install Fish Passage Facilities	6,377	10,627
Susquehanna T-10 Tap 230 KV Switchyard	5,193	12,360
Division Operations Department - Information Strategic Plan	20,100	46,400
Total Major Projects	81,893	444,054

TABLE 2-8
 1995 SUMMARY - CONSTRUCTION BUDGET
 THOUSANDS OF DOLLARS - ESCALATED

	<u>1995 Budget Year</u>
<u>Major Projects - Subtotal from Table 2-7</u>	81,893
<u>Production - Additions, Replacements and Improvements to Generating Facilities</u>	102,890
<u>Transmission - Additions, Replacements and Improvements to Transmission Facilities</u>	7,997
<u>Distribution - Additions, Replacements and Improvements to Distribution Facilities</u>	87,030
<u>Revenue - Supply Additional Residential, Commercial, Industrial and Street Lighting Loads, Including Transformers and Meters</u>	84,450
<u>Buildings</u>	3,900
<u>General</u>	<u>13,400</u>
Total New Construction	381,560
<u>Net Removal Costs</u>	<u>16,240</u>
Total Construction Including Removals	397,800
<u>Nuclear Fuel Purchases</u>	<u>55,400</u>
Grand Total	453,200

TABLE 2-9
1995 CONSTRUCTION BUDGET *
BY CLASS OF PROPERTY
THOUSANDS OF DOLLARS-ESCALATED

<u>Class of Property</u>	<u>Prior to Budget Year</u>	<u>During Budget Year</u>	<u>After Budget Year</u>	<u>Total</u>
<u>Production</u>				
Nuclear	69,660	50,000	42,642	162,302
Fossil/Hydro	96,315	117,302	505,815	719,432
Sub-Total	165,975	167,302	548,457	881,734
<u>Transmission</u>				
	9,112	14,141	9,011	32,264
<u>Distribution</u>				
	31,963	180,879	164,106	376,948
<u>General</u>				
	42,485	35,528	6,337	84,350
Sub-Total	249,535	397,850	727,911	1,375,296
<u>Nuclear Fuel</u>				
	42,800	55,400	192,400	290,600
TOTAL	292,335	453,250	920,311	1,665,896

* Includes Removal Costs.

TABLE 2-10
1995 ESTIMATE OF ADDITIONS AND RETIREMENTS
FROM PLANT DURING BUDGET YEAR
THOUSANDS OF DOLLARS

<u>Class of Property</u>	*	<u>Additions To Plant</u>	<u>Retirements</u>
<u>Production</u>			
Nuclear		78,210	3,100
Fossil/Hydro		137,650	12,900
	Sub-Total	215,860	16,000
<u>Transmission</u>			
		18,630	910
<u>Distribution</u>			
		168,660	19,430
<u>General</u>			
		30,370	300
	TOTAL	433,520	36,640

* Excludes Removal and Salvage Costs.

TABLE 2-11
 FUNDS COMMITTED IN 1994 *
THOUSANDS OF DOLLARS-ESCALATED

	<u>Prior To 1994</u>	<u>During 1994</u>	<u>After 1994</u>
Projects started prior to 1994 and completed during 1994	113,452	223,026	
Projects started prior to 1994 and completed after 1994	127,610	111,753	345,335
Projects to be started and completed during 1994		125,956	
Projects to be started in 1994 and completed after 1994		10,758	436,336
TOTAL	<u>241,062</u>	<u>471,493</u>	<u>781,671</u>
		1,253,164	

TABLE 2-12
 FUNDS COMMITTED IN 1995 *
THOUSANDS OF DOLLARS-ESCALATED

	<u>Prior To 1995</u>	<u>During 1995</u>	<u>After 1995</u>
Projects started prior to 1995 and completed during 1995	193,077	137,528	
Projects started prior to 1995 and completed after 1995	56,458	97,330	560,432
Projects to be started and completed during 1995		158,770	
Projects to be started in 1995 and completed after 1995		4,222	167,479
TOTAL	<u>249,535</u>	<u>397,850</u>	<u>727,911</u>
		1,125,761	

* Excludes Nuclear Fuel.

B. ENVIRONMENTAL EXPENDITURES

The costs of facilities included in the budget which are attributable to environmental preservation and enhancement for the 1994-1998 period are as follows:

TABLE 2-13
ENVIRONMENTAL EXPENDITURES
\$ MILLIONS - ESCALATED

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>Total 1994-1998</u>
Air Quality	3.4	1.1	0.8	1.2	0.0	6.5
Water Quality	9.0	2.6	2.8	2.0	0.0	16.4
Solid Waste Disposal	12.1	16.4	15.5	8.5	19.2	71.7
Clean Air Act	108.4	32.3	83.7	151.6	123.9	499.9
Aesthetics	2.0	2.0	2.0	2.0	2.0	10.0
Other	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>2.5</u>
TOTAL '94-95 BUDGET	135.4	54.9	105.3	165.8	145.6	607.0
TOTAL '93-'94 BUDGET	207.6	83.7	84.4	99.9	100.0	575.6

The primary reason for the significant decrease in the environmental costs from the 1993-1997 Construction Program is due to the refinement of the compliance plan to meet the Clean Air Amendments, and rescheduling of projects. A more detailed discussion is included in Chapter 5, Existing Generation - Fossil and Hydro.

There are additional exposures to environmental costs identified in Chapter 11 which are not included in Table 2-13.

The environmental expenditures shown in Table 2-13 have been segregated into six categories. They are:

- o The Air Quality category represents costs to maintain facilities at the generating plants to monitor and control emissions to meet existing state and federal regulations.

- o The Water Quality category represents costs to build and maintain facilities at the generating plants to meet state and federal regulations for waste and thermal discharge and ground water contamination.
- o The Solid Waste category represents costs to build and maintain facilities at the generating plants to permanently store solid wastes such as fly ash, bottom ash, and mill rejects.
- o The Clean Air Act category represents costs to add equipment at the generating stations to meet new federal regulations governing sulfur dioxide and nitrous oxide emissions.
- o The Aesthetics category represents costs for transmission and distribution facilities which are spent for environmental enhancement. These costs are for substation landscaping to blend with the surroundings, covered overhead conductors, upswept crossarms, and installation of underground facilities.
- o The "Other" category is for miscellaneous facilities such as modifications made at the recreation areas or to general properties (service centers, etc.) to comply with environmental regulations.

C. NET REMOVAL COSTS

Net removal costs refer to the removal costs less salvage recovered for capital property that is being retired. The project cost estimates for the 1994-1995 Budgets presented in this report include these net removal costs in the total project estimates.

With the significant amount of equipment replacements at fossil and hydro plants, the potential for large removal costs at Susquehanna SES, and the continuing improvements being made to the electrical system, removal costs have increased to a significant level (actual removal costs less salvage amounted to \$20.8 million in 1992).

The Financial Department has requested that these costs be identified separately for budgeting and reporting purposes.

CHAPTER 3

BUDGET DISCUSSION - NEW SUPPLY/DEMAND-SIDE EXPENDITURES

CHAPTER 3
BUDGET DISCUSSION - NEW SUPPLY/DEMAND-SIDE EXPENDITURES

A. OVERVIEW

The objective of system development is to ensure a reliable and economic energy supply now and in the future. Developing and maintaining a system that provides a reliable and economic energy supply continues to be a challenge, given the uncertainty in key planning assumptions (such as load growth and fuel prices) and the changing regulatory and economic environment. PP&L's strategy to deal with these uncertainties is to maintain a flexible mix of resource options, balancing supply-side and demand-side options. The optimal use of existing resources will continue to be a priority.

PP&L files a 20-year projection of resource needs, along with the supply-side and demand-side options to meet those needs, with the Pennsylvania Public Utility Commission (PPUC) in May of each year. This is the so called Least Cost Plan (LCP).

The current supply-side and demand-side efforts:

- continue to support the long-term corporate objective to defer the need for additional central station generation into the 21st century.
- recognize that PP&L has sufficient capacity resources to continue with its strategy of bulk power marketing for the 1990s.

PP&L plans no new generating facilities in the Construction Budget. However, PP&L has several capital projects under way that will result in improved efficiency and output of existing generating units. These projects are the uprate of the Susquehanna SES units (PP&L's share is 90 MW) and the rebuild of the Sunbury Units 1 and 2 steam turbines (about 9 MW). PP&L is moving ahead with the regulatory approval process and technical analyses of converting the two oil-fired generating units at

Martins Creek plant to allow use of gas for up to 50% of capacity on an interruptible basis.

Demand-side management (DSM) is an important element of PP&L's strategy to meet customer electric energy needs. DSM includes conservation and load management programs. In December 1992, PP&L filed a comprehensive DSM plan with the PPUC. The plan included programs encompassing industrial, commercial, and residential customers. PP&L's resource planning process helps ensure that the most appropriate DSM programs are pursued. PP&L will continue to evaluate DSM programs and make changes as required. A revised DSM plan will be filed with the PPUC in the fourth quarter of this year.

As part of a generic investigation into DSM, the PPUC conducted hearings on DSM cost recovery mechanisms and may take final action by the end of 1993. A recommended decision was issued by the Administrative Law Judge in July 1993. This decision rejected a special DSM cost recovery mechanism.

There are capital expenditures included in the Construction Budget specifically for the DSM program on area lighting. However, most programs are currently in the Operating Budget. Other individual projects in the Capital Budget contribute to DSM efforts by improving efficiency in energy use in PP&L system facilities as a result of equipment upgrade or replacement for other reasons (for example, the replacement of failed transformers with low-loss transformers because that option is economically justified).

The optimal use of existing resources (including generating capacity and transmission capability) will involve meeting system needs along with bulk power marketing to others. Each of these efforts must recognize the trend in the utility industry toward a more competitive market. For instance, PP&L plans to review various utility requests for proposals (RFP) for capacity and energy and participate if bids would be in PP&L's best interest.

B. CURRENT EFFORTS

The following describe PP&L's current supply-side and demand-side efforts in support of long-term objectives and the current resource utilization efforts.

1. Supply-Side Efforts

Although PP&L plans for no new generating facilities in the budget, PP&L has several projects under way which are intended to maintain or improve the capability of existing generating units, improve their availability, or increase the economic incentive to dispatch their generation.

a. Susquehanna SES

PP&L has completed studies that show it is economically and technically feasible to uprate these units to increase the output by about 5 percent. Based on these studies, PP&L has notified the Nuclear Regulatory Commission of the Company's intent to proceed with the development of a power uprate license amendment submittal. Engineering and related activities are proceeding and it is estimated that the uprate for Unit 2 will be completed in mid-1994 and for Unit 1 in mid-1995. PP&L's share of the uprate totals 90 MW. PP&L's share of the costs are estimated to be \$36 million.

b. Sunbury SES

Units 1 and 2 steam turbine components, which are in excess of 40 years of age and deteriorated, are being replaced to eliminate risk of a failure of these components and resultant lengthy outage. These replacements will also result in a 9 MW (6 percent) increase in output. Work on Unit 2 has recently been completed and construction on Unit 1 is scheduled to be complete in mid-1995. The total cost of the turbine projects for both units is estimated to be approximately \$25 million.

c. Martins Creek Units 3 and 4 Co-fire

Recent analyses have indicated that modifying the two oil-fired generating units at the Martins Creek plant to burn both oil and natural gas will offer economic benefits, benefits of diversity and flexibility in fuel supply, and environmental advantages.

Natural gas at the well-head, and natural gas transportation are plentiful during the non-peak heating months of November through March. This seasonal availability usually gives natural gas a competitive price advantage over oil during that time. Additionally, PP&L is in a relatively favorable position since it can receive gas transportation services from three interstate pipelines, as well as one local distribution company. Plans are to provide capability for gas co-firing up to 50% on an interruptible basis. Providing greater than 50% of the heat input from gas would require costly modifications of heat transfer surfaces which make that option less economically attractive.

While moving ahead with the regulatory approval process that would allow gas co-firing, PP&L is also working toward completion of technical analyses related to gas supply and equipment for the conversion. These activities are proceeding such that the modification of Unit 3 could be complete in December 1994, and Unit 4 in March 1995. Delays of about a year, however, are expected because of intervention in the regulatory approval process and potential litigation. Capital costs associated with both the boiler modifications and required in-plant distribution piping for 50% gas co-firing are estimated to be about \$22 million.

2. Demand-Side Efforts

DSM represents an important element of PP&L's strategy to meet customer electric energy needs. DSM helps achieve long-term

corporate objectives to maintain base rate stability, provide a fair return on common equity, and defer the need for additional central station generation.

PP&L filed a comprehensive DSM plan with the PPUC in December 1992 that included programs encompassing industrial, commercial and residential customers. PP&L's activities in DSM continue to evolve as existing programs are monitored, new programs are developed, and market research data is gathered. As evidence of this evolution, PP&L plans to modify and refile its proposed DSM plan in the fourth quarter of 1993.

The PPUC conducted hearings on a proposed DSM cost recovery mechanism during June, August and September 1992. A recommended decision from the administrative law judge was issued in July 1993. The decision rejected a special DSM cost recovery mechanism and the recovery of lost revenues and incentives. The recommended decision allows recovery of program costs through a balancing account. PP&L supports a cost recovery mechanism that provides the opportunity to recover incremental costs, and lost or foregone revenues resulting from approved programs. Exceptions to the recommended decision have been filed. A final decision by the PPUC could occur later in 1993.

PP&L's DSM objectives will continue to be to design and implement programs that: promote the profitability and comfort of our customers by meeting their electric energy needs, increase sales (within the overall policy objectives of the PPUC to manage demand), defer more costly supply-side resources, and increase both supply and end-use efficiencies.

PP&L's DSM plan affects the Company's budgets, particularly the Operating Budget. The continuation of existing programs is already reflected in the Company's budgets. This budget does not reflect allocations for expansion of new programs beyond the pilot stage.

3. Resource Utilization Efforts

One avenue for PP&L to optimize use of its resources is to pursue various utility RFPs for capacity and/or energy. PP&L is currently evaluating utility RFPs as opportunities become available. Further, a team, consisting of System Operating and System Planning personnel, has been formed to visit regional utilities to determine potential bulk power marketing opportunities, both conventional and unconventional.

C. PLANNING BASIS

"Base Case" conditions for this budget review are PP&L's 1993 LCP loads and other current assumptions. The LCP loads reflect an overall peak load growth rate of 1.8% for the period 1993 to 2003. Other key assumptions include:

- The PJM reserve requirement will be 21.5% through May 1994, 21% through May 1996, 20.5% through May 1997 and 20% thereafter.
- Traditional and non-traditional bulk power sales that affect either PP&L's capacity or obligation will remain at current contract levels, unless specific changes are known or planned.
- The output of NUG within PP&L service area will remain at the current level of 504 MW.
- The Clean Air Act will not significantly affect available capacity resources in the 1990s. By the year 2001, PP&L's installed capacity will be derated by about 45 MW as a result of SO₂ scrubber energy requirements.

The discussion that follows provides a review of:

- o PP&L's existing generating capability, including NUG output.
- o DSM programs.
- o PP&L's Resources/Obligations (R/O) for the LCP loads and for the LCP High Loads and LCP Low Loads as exposure cases.

D. PP&L'S EXISTING GENERATOR CAPABILITY (INCLUDING NUG OUTPUT)

Existing PP&L generation capability for the summer and winter is shown in Table 3-1. Included in the summary is 504 MW of NUG output.

E. PP&L'S EXISTING DEMAND-SIDE MANAGEMENT

DSM is both a factor in the resource planning process and an opportunity to respond to customers' electric energy needs.

A managed growth strategy is an important part of PP&L's current DSM efforts to optimize use of our existing resources while meeting our customers' needs. PP&L's DSM programs emphasize efficient use of electrical energy. These programs promote energy audits, off-peak heating systems, high efficiency heat pumps, and industrial and commercial energy efficiency improvements.

PP&L's DSM programs also include an interruptible load option for our larger customers. PP&L has established tariffs for interruptible load customers, whereby PP&L may interrupt all or part of their load for system reliability or for economic conditions. (PP&L does not currently expect to interrupt for economics, however, PP&L will require interruptions for test purposes.) Tables 3-2, 3-3, and 3-4 show an estimated 185 MW of interruptible load in 1993, and beyond.

Under PJM procedures, PP&L maximizes the benefits available from interruptible load by allowing PJM to coordinate the interruption of these customers during capacity emergencies. The PJM procedure allows PP&L to claim the interruptible load plus an additional approximately 20% as a capacity resource to reflect the company reserves that otherwise would have been needed.

F. PP&L'S RESOURCES/OBLIGATIONS

Considerations that influence future R/O are discussed below and are integrated in the R/O summaries that are presented later.

1. Use of Existing Capacity

PP&L currently has no plans to retire any of its existing generating units for the period 1993-2012. Continuing the operation of PP&L's generating plants can be preferable to their retirement and replacement with new generating capacity. PP&L has projects under way that are intended to improve or avoid reductions in the availability and efficiency through the addition of new equipment. Projects also are under way to replace old and deteriorated equipment to restore performance or avoid performance degradation. As discussed in Section B, two such projects are the Susquehanna SES Unit 1, and 2 uprate and Sunbury Units 1 and 2 turbine rebuilds.

2. Load Growth

o LCP Loads

The LCP loads reflect the expected level of customer sales and peak load growth. The thrust of PP&L's LCP is to achieve peak demand and sales levels that will result in the lowest revenue requirements in ¢/KWH over the twenty-year time frame of the plan.

o Exposure Case - LCP High Loads 2.3% Peak Load Growth

This case has been developed as an alternate to the LCP loads and is presented to illustrate the impact of peak load growth that exceeds current expectations. The high loads exposure case assumptions include increased market share, higher customer average use, and higher service area population growth. This exposure case assumes that the annual growth rate will average 0.5% (40 MW/year) higher than the LCP base case growth rate.

o Exposure Case - LCP Low Loads 1.3% Peak Load Growth

This case has been developed as an alternate to the LCP loads

and is presented to illustrate the impact of peak load growth that does not meet current expectations. The low loads exposure case assumptions include loss of market share, lower customer average use, and a slower service area population growth. This exposure case assumes that the annual growth rate will average 0.5% (40 MW/year) less than the LCP base case growth rate.

For reference, growth rates associated with the projections noted above are summarized in the table below:

	<u>Peak Growth Rates</u>	
	<u>%</u>	<u>1993-2003 MW/Year</u>
LCP	1.8	125
High Loads Exposure	2.3	165
Low Loads Exposure	1.3	85

3. PP&L's Obligation to PJM

The PJM pool's installed capacity requirement is apportioned among PJM member companies according to rules and procedures prescribed within the PJM Agreement. Based on the PJM Reserve Requirements of between 21%-22%, PP&L remains in a favorable position with its PJM obligation of about 8%-12% above its winter peak throughout the study period. PP&L's obligation to PJM (in percent above winter peak) is expected to remain at this level over time. This relatively low reserve requirement is primarily due to PP&L being a winter peaking company in a summer peaking pool.

4. Bulk Power Sales (Traditional) and Purchases

In addition to meeting the needs of PP&L's customers, PP&L is marketing to others to the extent PP&L has capacity and/or energy available.

PP&L's net resources reflect PP&L transactions (capacity and energy) with Atlantic Electric (AE), Jersey Central Power & Light (JCP&L), Baltimore Gas & Electric (BG&E), and NUGs.

a. Atlantic Electric (AE) Sale

In June 1983, PP&L and AE signed a contract under which AE agreed to purchase approximately 125 MW (129 MW based on winter ratings) of PP&L's coal-fired capacity from October 1991 through September 2000.

b. Jersey Central Power & Light (JCP&L) Sale

In 1985, PP&L entered into a long-term sales agreement with JCP&L, a General Public Utilities (GPU) subsidiary. Under the terms of this sale, PP&L provides JCP&L with 945 MW of PP&L's electrical generating capacity and related energy through the end of 1995. This sale involves an equal percentage entitlement to capacity and associated energy from all generating units in which PP&L has an ownership or lease interest. After 1995, the sale decreases uniformly (at 20% per year) until the expiration of the contract in December 1999.

The return of this sale to PP&L presents several opportunities because these resources will be available for customer use and/or new bulk power sales.

c. Baltimore Gas & Electric (BG&E) Sale

In 1988, BG&E agreed to purchase, for 10 years commencing in October 1991, the 126 MW portion of SSES previously sold to AE. Pursuant to this agreement and a 1989 supplement, BG&E has the option to purchase capacity credits from PP&L. Information regarding capacity credits sales is provided in Section F5.

d. NUG Purchase

PP&L currently has 504 MW of NUG output nominated as a capacity resource for PJM installed capacity accounting purposes. The NUG contracts are of various lengths with the longest being about 20 years. Some contracts begin to expire in five to eight years. This may have an effect on PP&L's need for new capacity. For planning purposes, it is assumed that the contracts will be extended or replaced by unidentified capacity to at least span the study period.

5. Other Sales - Non-Traditional

There has been a change in the nature of sales arrangements reflecting emphasis on capacity needs as well as energy needs. To meet these changing trends in sales arrangements, PP&L has undertaken unique forms of marketing its resources beyond current needs. PP&L is well positioned in both type and amount of bulk power resources to continue marketing through the 1990s.

PP&L has signed contracts and continues to negotiate new contracts for the sale of various system entitlements. These contracts can generally be classified into the following types:

a. Capacity Credits

Capacity credit sales allow a PJM company, which might otherwise be short of its capacity obligation to PJM, to claim

the selling company's capacity credits to contribute toward satisfying the buying company's capacity obligation. The capacity credits sold are from the total system capacity, not from specific generating units, and do not entitle the buying company to any energy and are therefore not reflected as a reduction in PP&L's net resources. Instead, capacity credit sales are reflected as additional PP&L obligations.

- A sale of this type was packaged with the Susquehanna capacity and energy sale to BG&E (discussed earlier). The sale allows BG&E to take up to 275 MW of capacity credits October 1991 through May 2001.
- PP&L entered into an agreement with GPU in December 1989 for the sale of NUG energy plus 390 MW of capacity credits June 1991 through May 1995.
- In addition, agreements also signed in 1991 with BG&E, GPU and AE provide for periodic capacity credit sales as mutually agreed upon.

b. Martins Creek Output Reservations

A market outside of PJM has developed under which non-PJM companies reserve generating plant output and occasionally purchase the output on call. Buyers pay a non-refundable reservation charge for PP&L's making the output available and also pay PP&L's cost for any output that is purchased including lost PJM savings. PP&L retains the right to recall the output when needed for PJM emergencies. Such agreements were signed with Northeast Utilities, Niagara Mohawk, Public Service of New Hampshire and Orange & Rockland for short-term purchases. Because the output available through these transactions is recallable, it is not reflected as a reduction to resources.

c. Transmission Entitlements

Another type of sale involves PP&L's share of the right to use the PJM transmission system for importing economical energy from systems to the west of PJM. PP&L's share of this transmission capability can be sold at a price benefiting both the buyer and seller. This transmission capability is being offered in whole or part to all PJM companies at monthly auctions or through two-party agreements. Such sales have no effect on PP&L's R/O.

The maximum sales that can result from these arrangements is dependent, in part, on the continuing needs of PJM companies and companies external to PJM and, in part, on the actions of other utilities that may have capacity and energy available for sale.

6. Resources/Obligations - Charts/Tables

The charts (Charts 3-1, 3-2, and 3-3) and tables (Tables 3-2, 3-3, and 3-4) at the end of this chapter provide R/O details for the LCP Loads, High Loads and Low Loads cases as previously discussed.

The charts provide a graphical representation of PP&L's R/O for the 1993 to 2003 time period. They also indicate the need for and timing of new resources and opportunities for bulk power transactions. The two-page summary tables show PP&L's R/O for the 1993 to 2012 period.

For ease of comparison, a combination chart (Chart 3-4) shows PP&L's R/O for each of the three cases graphed side-by-side.

a. R/O Summary - LCP Loads

Table 3-2 and Chart 3-1 show PP&L's R/O Summary based on the June 1993 LCP loads. Net resources reflect sales and purchases, NUG output, and interruptible load. PP&L's total obligations include PP&L's obligation to PJM and capacity

credit sales.

This base case indicates that PP&L does not have a need for new capacity until 2010. PP&L has sufficient resources available to make additional bulk power sales in most years and to have a margin available for higher-than-forecast load growth.

b. R/O Summary - LCP High Loads Peak Growth Exposure Case

Table 3-3 and Chart 3-2 show PP&L's R/O Summary based on the LCP High Loads Peak Growth projections previously described.

As capacity returns from the various sales, a surplus between 620 MW and 240 MW is projected from 1995 to 2003. However, beginning in 2005, it is projected that PP&L has an exposure to a long-term deficiency.

c. R/O Summary - LCP Low Loads Peak Growth Exposure Case

Table 3-4 and Chart 3-3 show PP&L's R/O Summary based on the LCP Low Loads Peak Growth projections previously described.

It is projected that PP&L has a significant surplus of capacity through 2012.

d. Other Exposures

BG&E Capacity Credit Sale -- PP&L has contracted to provide up to 275 MW of capacity credits to BG&E through May 2001. Because BG&E is not required to firm up its required capacity credit until two years in advance of a planning year, PP&L must project BG&E's needs and the availability and cost of capacity credits from others to assess PP&L's resources. The R/O cases assume PP&L's obligation to BG&E at 100 MW for the planning period 1995-2000. In 1994, BG&E asked for 50 MW under this contract since they found capacity available from

others at a more attractive rate. This estimated amount of BG&E's need is a function of BG&E's anticipated peak load growth and performance of its nuclear plant, Calvert Cliffs, as well as the availability of other economic resources in the pool. In 1993, BG&E agreed to purchase 186 MW of capacity credits for the 1995-96 planning year. There is an exposure that BG&E could require the full 275 MW of capacity credits if the peak load growth is higher than expected or Calvert Cliffs does not perform as expected. PP&L's available resources for PJM installed capacity accounting would decrease by the amount of capacity credits BG&E requires. The amount of capacity credits BG&E elects to take from PP&L will be a function of their need and the availability and price of capacity from others.

NUG -- There is an exposure that a few NUGs on the PP&L system face an uncertain financial future. In addition, as the NUG contracts expire, there is an exposure that some NUG may not renew contracts with PP&L. A NUG failure and/or contract termination would directly affect PP&L resources.

TABLE 3-1

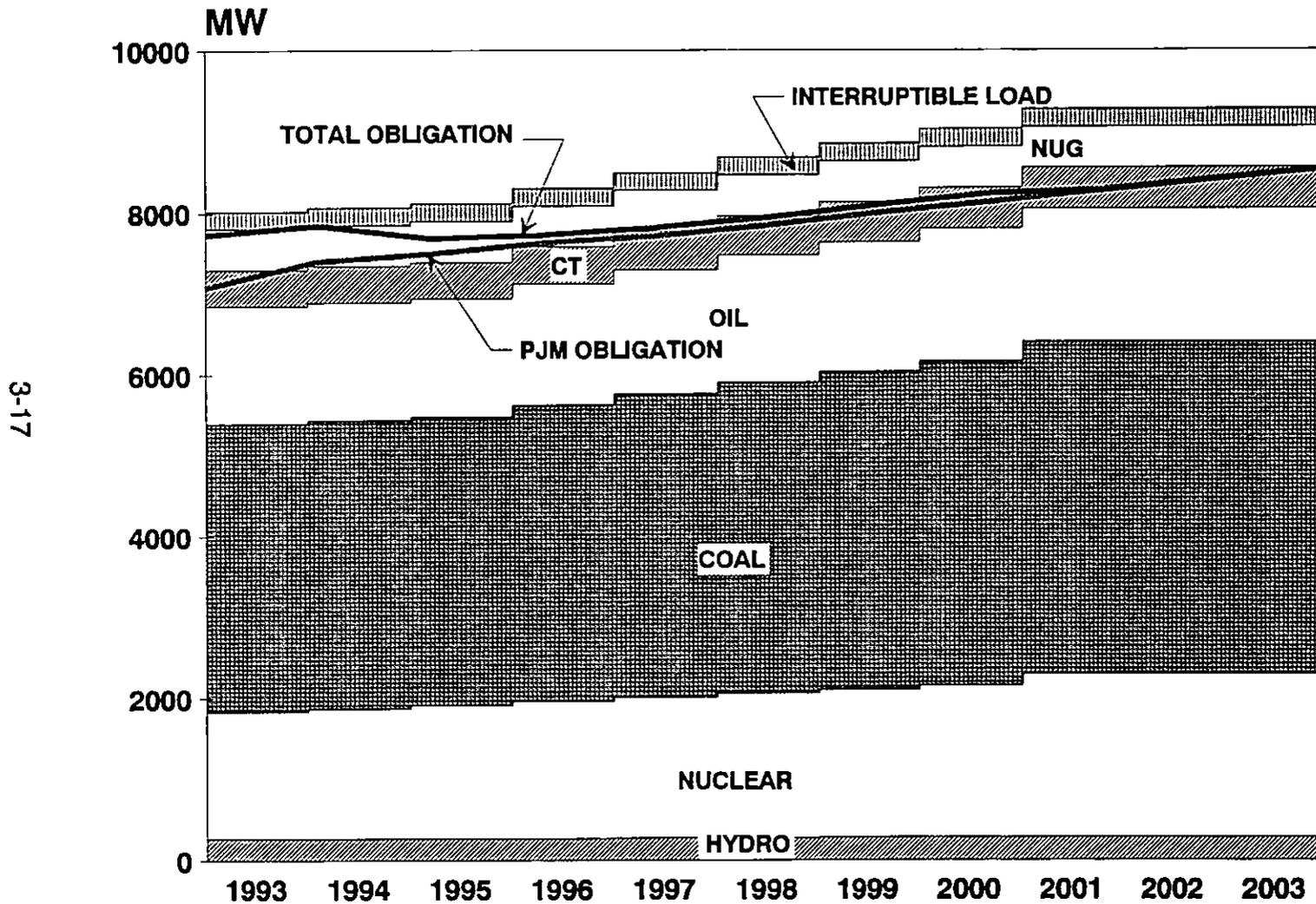
PENNSYLVANIA POWER & LIGHT COMPANY
 GENERATION CAPABILITY AS OF JULY 1993⁽¹⁾
NET MW

	<u>Station</u>	Net Capability -- MW	
		<u>Summer</u>	<u>Winter</u>
<u>Hydro</u>	1. Holtwood SES	102	102
	2. Wallenpaupack HES	44	44
	3. Safe Harbor HES (PP&L Share)	<u>139</u>	<u>139</u>
	Total Hydro	285	285
<u>Nuclear</u>	4. Susquehanna	1,876	1,905
<u>Coal</u>	5. Brunner Island	1,434	1,469
	6. Montour	1,505	1,525
	7. Sunbury	362	389
	8. Martins Creek Units 1 and 2	280	300
	9. Holtwood	72	73
	10. Keystone (PP&L Share)	210	210
	11. Conemaugh (PP&L Share)	<u>194</u>	<u>194</u>
	Total Coal	4,057	4,160
<u>Oil</u>	12. Martins Creek Units 3 and 4	1,640	1,640
	13. Diesels	22	22
	14. Combustion Turbines	<u>374</u>	<u>486</u>
	Total Oil	2,036	2,148
<u>NUG</u>	15. Non-Utility Generation	<u>504</u>	<u>504</u>
	TOTAL CAPABILITY (Effective 7/29/93)	8,758	9,002

(1) PP&L has sales arrangements with AE, JCP&L, GPU and BG&E, which reduce the capacity levels indicated for the term of the sales.

PP&L RESOURCES / OBLIGATIONS 1993 LCP LOADS

CHART 3-1



TOTAL OBLIGATION INCLUDES CAPACITY CREDIT SALES AND PJM OBLIGATION

TABLE 3-2
PP&L's Resources / Obligations Summary
1993 LCP MEDIAN LOADS

PJM Reserve Requirement - 21.5% (1994-1995), 21% (1996), 20.5% (1997), 20% (1998-2012)

Planning Year	(1) Peaks		(2) Net Resources	P P & L O B L I G A T I O N S				(5) TOTAL OBLIG.	(6) RESOURCES OVER TOTAL OBLIG.	
	Summer	Winter		To PJM (3)	Capacity Credits (4)	GPU	MW		%	
			MW (Est.)	% Over Winter Peak	BG&E (Est.)					
1993	5,395	6,465	8,024	7,073	9.4%	9	640	7,722	300 (7)	3.9%
1994	5,540	6,570	8,067	7,399	12.6%	50	390	7,839	230 (7)	2.9%
1995	5,655	6,695	8,113	7,492	11.9%	186	0	7,678	440	5.7%
1996	5,776	6,830	8,301	7,622	11.6%	100	0	7,722	580	7.5%
1997	5,900	6,965	8,490	7,710	10.7%	100	0	7,810	680	8.7%
1998	6,020	7,110	8,679	7,836	10.2%	100	0	7,936	740	9.3%
1999	6,145	7,235	8,853	7,993	10.5%	100	0	8,093	760	9.4%
2000	6,260	7,360	9,026	8,125	10.4%	100	0	8,225	800	9.7%
2001	6,375	7,485	9,271	8,266	10.4%	0	0	8,266	1,010	12.2%
2002	6,490	7,605	9,271	8,399	10.4%	0	0	8,399	870	10.4%
2003	6,600	7,725	9,271	8,531	10.4%	0	0	8,531	740	8.7%
2004	6,705	7,840	9,271	8,658	10.4%	0	0	8,658	610	7.0%
2005	6,810	7,955	9,271	8,785	10.4%	0	0	8,785	490	5.6%
2006	6,915	8,060	9,271	8,901	10.4%	0	0	8,901	370	4.2%
2007	7,010	8,165	9,271	9,017	10.4%	0	0	9,017	250	2.8%
2008	7,100	8,260	9,271	9,122	10.4%	0	0	9,122	150	1.6%
2009	7,185	8,355	9,271	9,227	10.4%	0	0	9,227	40	0.4%
2010	7,270	8,450	9,271	9,332	10.4%	0	0	9,332	-60	-0.6%
2011	7,350	8,535	9,271	9,426	10.4%	0	0	9,426	-150	-1.6%
2012	7,425	8,610	9,271	9,508	10.4%	0	0	9,508	-240	-2.5%

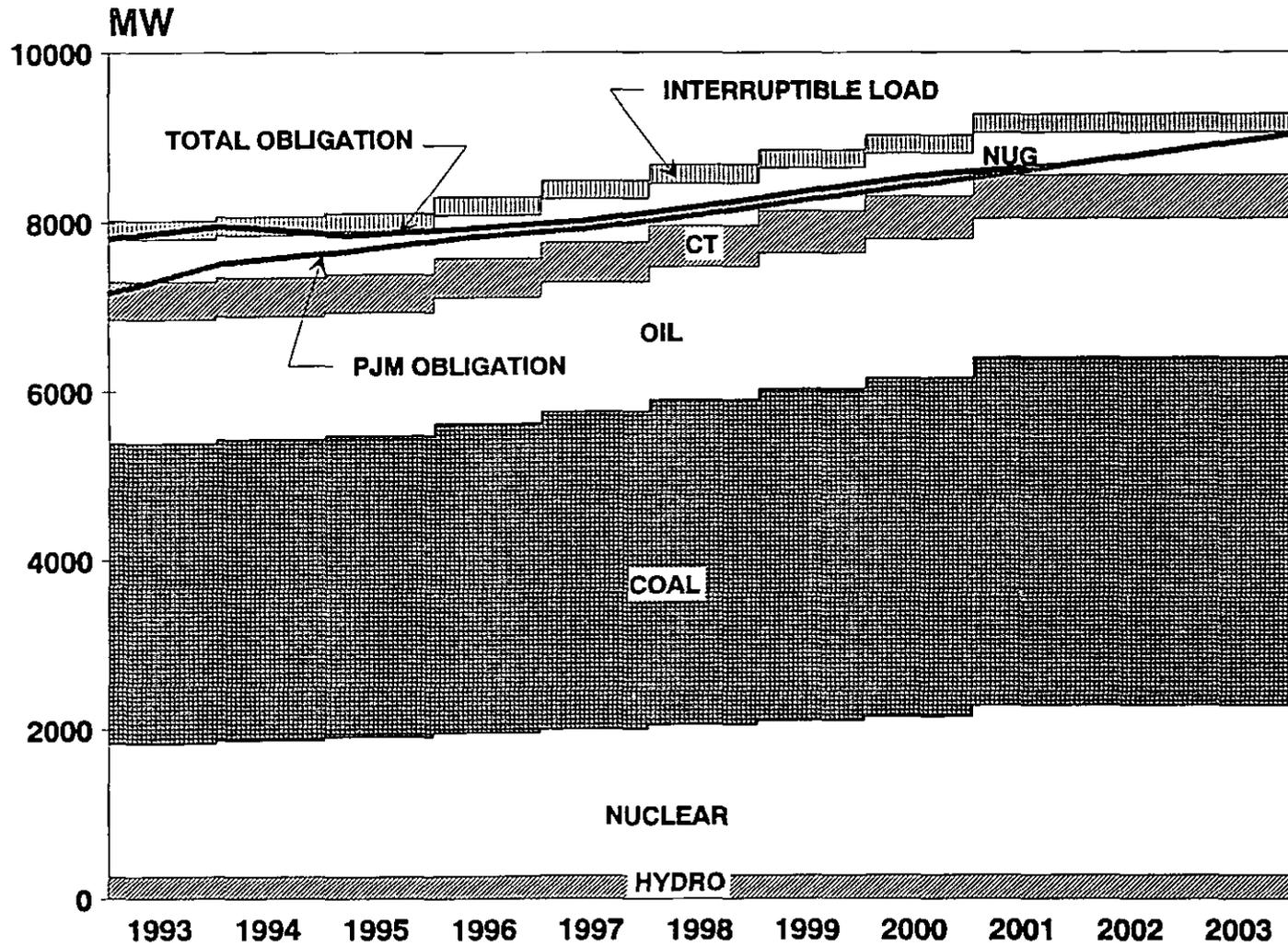
Notes:

- (1) Peaks include expected transactions with Luzerne Electric and other FERC customers. The peak load data is for PL System it is NOT PL Group.
- (2) This column reflects the net effect of Capacity and Energy arrangements with AE, BG&E, and JCP&L and includes the additional resources (NUG output and Interruptible Load).
- (3) PP&L's allocated share of PJM's installed generating capacity requirements as determined in the PJM Agreement. The estimated forecast obligation shown was determined using reserve margin of PL Group (PL & LU). Obligations are customarily presented in terms of summer rated capacity. The "Winter" obligation is an equivalent value the 244 MW difference between PL Summer and Winter installed capacity. 1992 and 1993 are estimated based on the latest after the fact obligation calculation. Obligation for 1995-2002 is based on the PJM Load and Capacity Forecast and the Allocation of Forecast Requirements dated July 17, 1993. Obligation for years 2002-2011 calculated assuming a 10.4% over winter peak (same as 2002)
- (4) PP&L's additional obligations are those resulting from capacity credit sales arising from two party agreements. The sales to BG&E are considered maximums. BG&E's forecast of capacity credit need is shown in the table below. The GPU sale of 390 MW is considered firm.
- (5) PP&L's Total Obligation is the sum of its PJM Obligation and Capacity Credit Sales.
- (6) Net Resources over Total Obligations is PP&L's Net Resources in excess of PP&L's Total Obligations.
- (7) The net resources shown for 1993 and 1994 are based on a PJM obligation calculated on an after-the-fact accounting method which uses the latest PP&L peak load forecast.

PP&L RESOURCES / OBLIGATIONS 1993 HIGH LOADS

CHART 3-2

3-20



TOTAL OBLIGATION INCLUDES CAPACITY CREDIT SALES AND PJM OBLIGATION

TABLE 3-3
PP&L's Resources / Obligations Summary
1993 LCP HI LOADS

PJM Reserve Requirement -- 21.5% (1994-1995), 21% (1996), 20.5% (1997), 20% (1998-2012)

Planning Year	(1) Peaks		(2) Net Resources	PP&L OBLIGATIONS				(5) TOTAL OBLIG.	(6) RESOURCES OVER TOTAL OBLIG.	
	Summer	Winter		To PJM (3)	Capacity Credits (4)		MW		%	
			MW (Est.)	% Over Winter Peak	BG&E (Est.)	GPU				
1993	5,458	6,540	8,024	7,155	9.4%	9	640	7,804	220 (7)	2.8%
1994	5,633	6,680	8,067	7,523	12.6%	50	390	7,963	100 (7)	1.3%
1995	5,777	6,840	8,113	7,654	11.9%	186	0	7,940	270	3.4%
1996	5,927	7,010	8,301	7,823	11.6%	100	0	7,923	380	4.8%
1997	6,055	7,148	8,490	7,913	10.7%	100	0	8,013	480	6.0%
1998	6,213	7,338	8,679	8,087	10.2%	100	0	8,187	490	6.0%
1999	6,368	7,498	8,853	8,284	10.5%	100	0	8,384	470	5.6%
2000	6,522	7,668	9,026	8,465	10.4%	100	0	8,565	460	5.4%
2001	6,676	7,838	9,271	8,656	10.4%	0	0	8,656	620	7.2%
2002	6,834	8,008	9,271	8,844	10.4%	0	0	8,844	430	4.9%
2003	6,987	8,178	9,271	9,031	10.4%	0	0	9,031	240	2.7%
2004	7,139	8,348	9,271	9,219	10.4%	0	0	9,219	50	0.5%
2005	7,301	8,528	9,271	9,418	10.4%	0	0	9,418	-150	-1.6%
2006	7,462	8,698	9,271	9,606	10.4%	0	0	9,606	-330	-3.4%
2007	7,622	8,878	9,271	9,804	10.4%	0	0	9,804	-530	-5.4%
2008	7,777	9,048	9,271	9,992	10.4%	0	0	9,992	-720	-7.2%
2009	7,927	9,218	9,271	10,180	10.4%	0	0	10,180	-910	-8.9%
2010	8,086	9,398	9,271	10,379	10.4%	0	0	10,379	-1,110	-10.7%
2011	8,240	9,568	9,271	10,566	10.4%	0	0	10,566	-1,300	-12.3%
2012	8,329	9,658	9,271	10,666	10.4%	0	0	10,666	-1,390	-13.0%

Notes:

(1) Peaks include expected transactions with Luzerne Electric and other FERC customers. The peak load data is for PL System it is NOT PL Group.

(2) This column reflects the net effect of Capacity and Energy arrangements with AE, BG&E, and JCP&L and includes the additional resources (NUG output and Interruptible Load).

(3) PP&L's allocated share of PJM's installed generating capacity requirements as determined in the PJM Agreement. The estimated forecast obligation shown was determined using reserve margin of PL Group (PL & LU). Obligations are customarily presented in terms of summer rated capacity. The "Winter" obligation is an equivalent value the 244 MW difference between PL Summer and Winter installed capacity. 1992 and 1993 are estimated based on the latest after the fact obligation calculation. Obligation for 1995-2002 is based on the PJM Load and Capacity Forecast and the Allocation of Forecast Requirements dated July 17, 1993. Obligation for years 2002-2011 calculated assuming a 10.4% over winter peak (same as 2002)

(4) PP&L's additional obligations are those resulting from capacity credit sales arising from two party agreements. The sales to BG&E are considered maximums. BG&E's forecast of capacity credit need is shown in the table below. The GPU sale of 390 MW is considered firm.

(5) PP&L's Total Obligation is the sum of its PJM Obligation and Capacity Credit Sales.

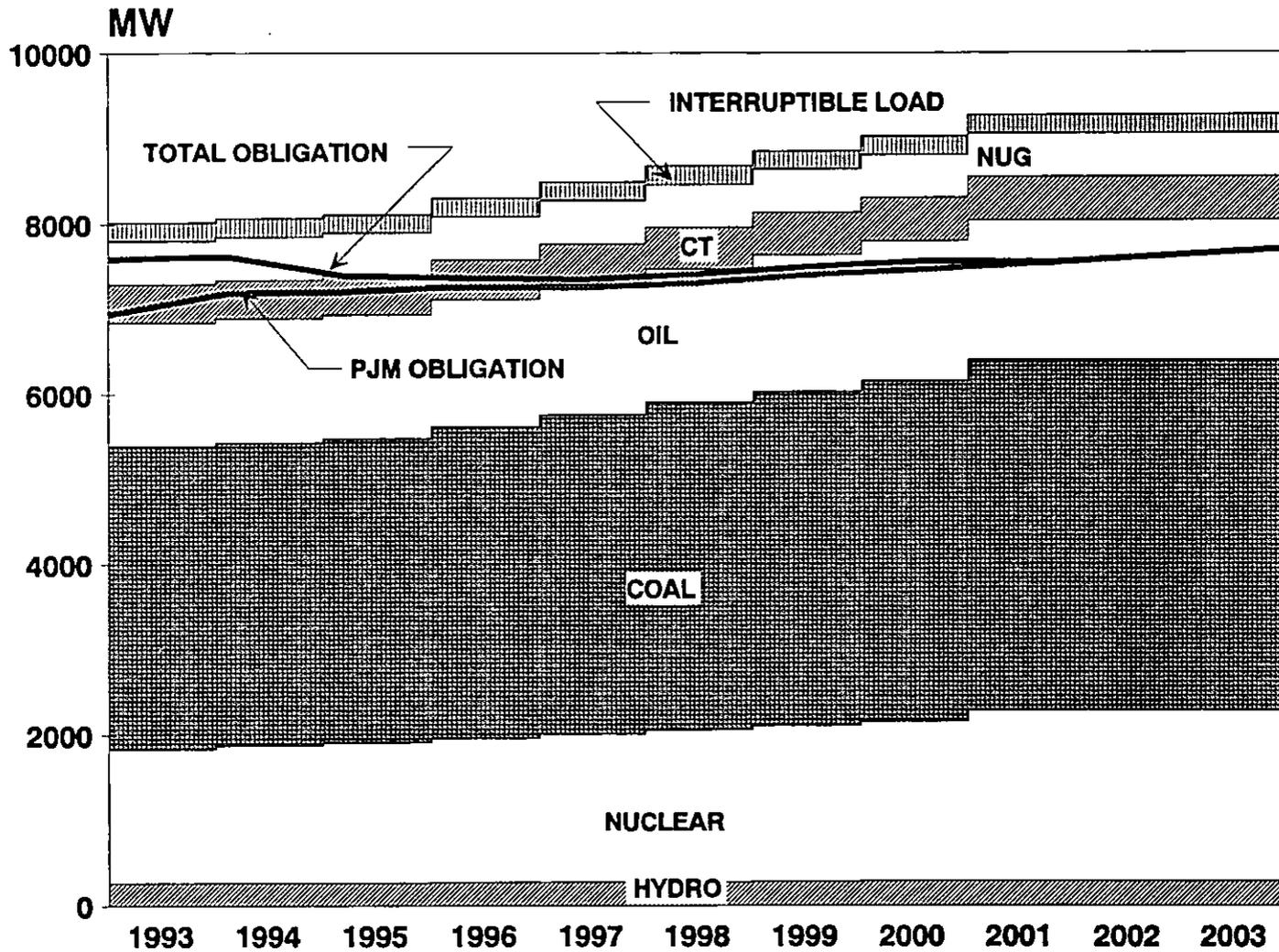
(6) Net Resources over Total Obligations is PP&L's Net Resources in excess of PP&L's Total Obligations.

(7) The net resources shown for 1993 and 1994 are based on a PJM obligation calculated on an after-the-fact accounting method which uses the latest PP&L peak load forecast. Using the before-the-fact accounting method, PP&L's obligation to PJM for 1993, 1994.

PP&L RESOURCES / OBLIGATIONS

1993 LOW LOADS

CHART 3-3



3-23

TOTAL OBLIGATION INCLUDES CAPACITY CREDIT SALES AND PJM OBLIGATION

TABLE 3-4
PP&L's Resources / Obligations Summary
1993 LCP LOW LOADS

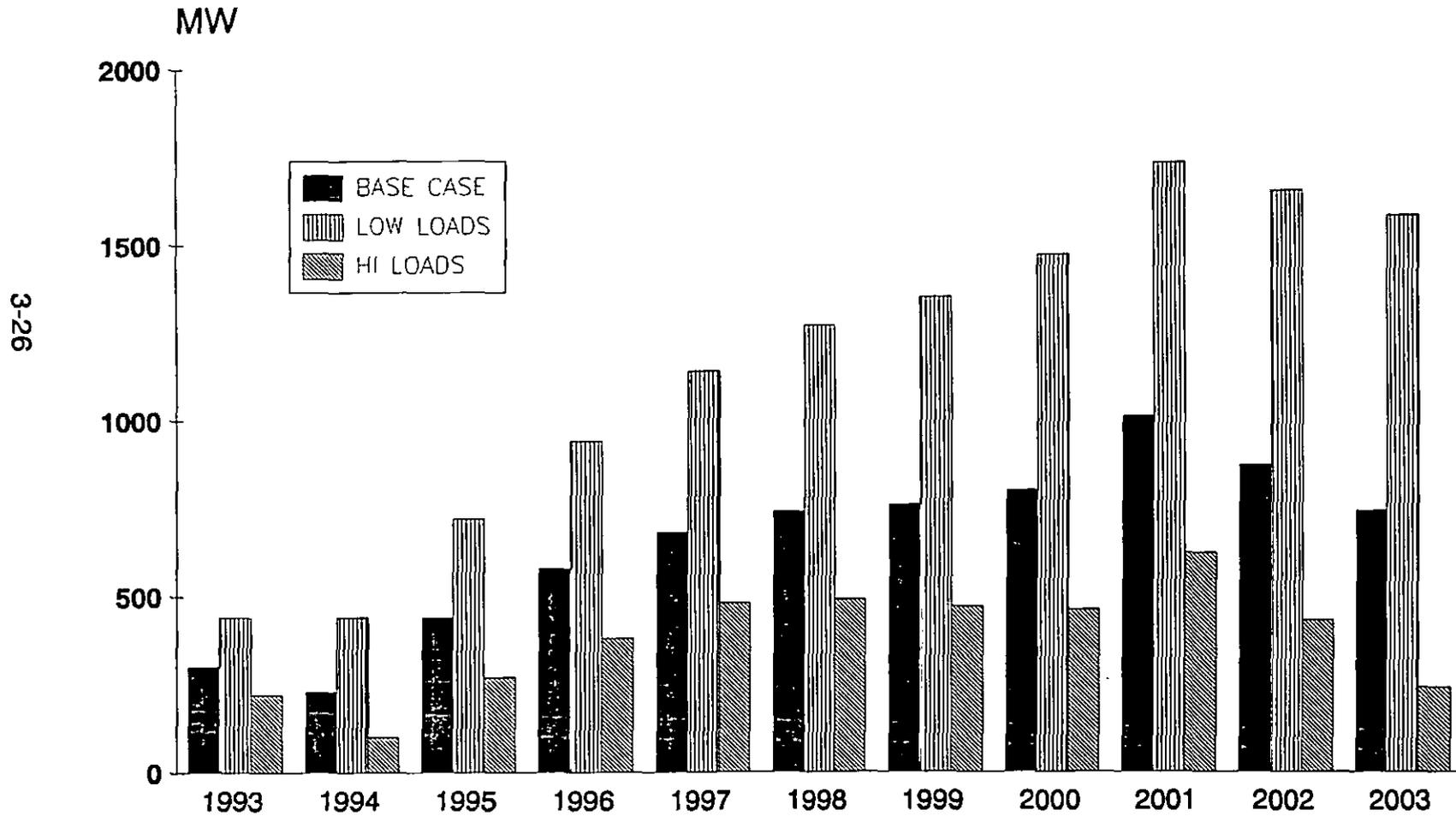
PJM Reserve Requirement ~ 21.5% (1994-1995), 21% (1996), 20.5% (1997), 20% (1998-2012)

Planning Year	(1) Peaks		(2) Net Resources	PP&L OBLIGATIONS				(5) TOTAL OBLIG.	(6) RESOURCES OVER TOTAL OBLIG.	
	Summer	Winter		To PJM (3)	Capacity Credits (4)	GPU	MW		%	
			MW (Est.)	% Over Winter Peak	BG&E (Est.)					
1993	5,291	6,340	8,024	6,938	9.4%	9	640	7,585	440 (7)	5.8%
1994	5,380	6,380	8,067	7,185	12.6%	50	390	7,625	440 (7)	5.8%
1995	5,440	6,440	8,113	7,207	11.9%	186	0	7,393	720	9.7%
1996	5,504	6,510	8,301	7,265	11.6%	100	0	7,365	940	12.8%
1997	5,547	6,548	8,490	7,248	10.7%	100	0	7,348	1,140	15.5%
1998	5,612	6,628	8,679	7,305	10.2%	100	0	7,405	1,270	17.2%
1999	5,689	6,698	8,853	7,400	10.5%	100	0	7,500	1,350	18.0%
2000	5,748	6,758	9,026	7,460	10.4%	100	0	7,580	1,470	19.4%
2001	5,815	6,828	9,271	7,540	10.4%	0	0	7,540	1,730	22.9%
2002	5,887	6,898	9,271	7,618	10.4%	0	0	7,618	1,650	21.7%
2003	5,953	6,968	9,271	7,695	10.4%	0	0	7,695	1,580	20.5%
2004	6,019	7,038	9,271	7,772	10.4%	0	0	7,772	1,500	19.3%
2005	6,093	7,118	9,271	7,861	10.4%	0	0	7,861	1,410	17.9%
2006	6,167	7,188	9,271	7,938	10.4%	0	0	7,938	1,330	16.8%
2007	6,231	7,258	9,271	8,015	10.4%	0	0	8,015	1,260	15.7%
2008	6,299	7,328	9,271	8,093	10.4%	0	0	8,093	1,180	14.6%
2009	6,362	7,398	9,271	8,170	10.4%	0	0	8,170	1,100	13.5%
2010	6,434	7,478	9,271	8,258	10.4%	0	0	8,258	1,010	12.2%
2011	6,500	7,548	9,271	8,336	10.4%	0	0	8,336	940	11.3%
2012	6,570	7,618	9,271	8,413	10.4%	0	0	8,413	860	10.2%

Notes:

- (1) Peaks include expected transactions with Luzerne Electric and other FERC customers. The peak load data is for PL System it is NOT PL Group.
- (2) This column reflects the net effect of Capacity and Energy arrangements with AE, BG&E, and JCP&L and includes the additional resources (NUG output and Interruptible Load).
- (3) PP&L's allocated share of PJM's installed generating capacity requirements as determined in the PJM Agreement. The estimated forecast obligation shown was determined using reserve margin of PL Group (PL & LU). Obligations are customarily presented in terms of summer rated capacity. The "Winter" obligation is an equivalent value the 244 MW difference between PL Summer and Winter installed capacity. 1992 and 1993 are estimated based on the latest after the fact obligation calculation. Obligation for 1995-2002 is based on the PJM Load and Capacity Forecast and the Allocation of Forecast Requirements dated July 17, 1993. Obligation for years 2003-2012 calculated Obligation for years 2002-2011 calculated assuming a 10.4% over winter peak (same as 2002)
- (4) PP&L's additional obligations are those resulting from capacity credit sales arising from two party agreements. The sales to BG&E are considered maximums. BG&E's forecast of capacity credit need is shown in the table below. The GPU sale of 390 MW is considered firm.
- (5) PP&L's Total Obligation is the sum of its PJM Obligation and Capacity Credit Sales.
- (6) Net Resources over Total Obligations is PP&L's Net Resources in excess of PP&L's Total Obligations.
- (7) The net resources shown for 1993 and 1994 are based on a PJM obligation calculated on an after-the-fact accounting method which uses the latest PP&L peak load forecast. Using the before-the-fact accounting method, PP&L's obligation to PJM for 1993, 1994.

PP&L NET RESOURCES OVER OBLIGATIONS



CHAPTER 4

EXISTING GENERATION - NUCLEAR

CHAPTER 4
BUDGET DISCUSSION - EXISTING GENERATION-NUCLEAR

This chapter includes a discussion of the capital projects identified for Susquehanna SES during the 1994-1998 five-year period. All of the estimated costs discussed in this chapter reflect PP&L's 90% share of Susquehanna, and are in escalated dollars.

A. GENERAL DISCUSSION

Estimated expenditures for 1994 are \$54.0 million and for the five-year period 1994-1998, \$242.6 million. These estimates reflect a detailed review of work anticipated in 1994 and the ongoing portion of these projects that extends into future years. Expenditure levels beyond 1994 represent continuation of existing projects and emergent work. This capital budget includes allowances within individual projects to provide a level of assurance that the amount budgeted will not be exceeded for constant scope. Scope growth or emergent work will be funded from a reserve for that purpose. A breakdown of the estimated costs for the five-year period 1994-1998 is shown in Table 4-1.

The capital work at Susquehanna can be categorized as project-related or baseline activities. The project-related work generally has a defined start, finish, scope and cost. Baseline activities do not have a specific start or finish. Cost and scope of baseline activities are determined annually during the planning process. Examples of baseline work activities are Spare Parts, Minor Work Projects, Furniture, Tools and Equipment.

B. PROJECT-RELATED CAPITAL

Major Projects are significant investments made by the Nuclear Department toward improvement of the plant. Each of the Major Projects selected for implementation satisfies one or more of the department's five-year objectives. For tracking purposes, the project is categorized by the primary objective. Most projects also satisfy secondary objectives.

TABLE 4-1
 BREAKDOWN OF EXISTING GENERATION NUCLEAR PROJECTS
 FIVE YEAR EXPENDITURES
 BY CATEGORY
 \$ MILLIONS - ESCALATED

	# of Projects	1994	1995	1996	1997	1998	Total 1994-1998	% of \$
<u>Specific Projects</u>								
Maximum Electric Production	17	22.4	29.8	18.0	11.5	1.6	83.3	34
Safe Operation	14	10.1	7.7	5.5	2.0	5.2	30.5	13
Improvement Through People	1	1.8	4.6	4.8			11.2	5
Improve Cost Performance	13	3.6	0.5	1.2	1.9	2.0	9.2	4
Public Trust and Confidence	4	1.8	0.8				2.6	1
Subtotal	49	39.7	43.4	29.5	15.4	8.8	136.8	57
<u>Baseline Activities</u>								
Capital Furniture		0.1	0.1	0.1	0.1	0.1	0.5	0
Capital Equipment		0.9	0.9	1.0	1.0	1.1	4.9	2
Capital Spare Parts		1.5	1.6	1.6	1.7	1.8	8.2	3
Capital Tools		0.9	0.9	1.0	1.0	1.1	4.9	2
Maintenance - Capital Replacements		0.8	0.5	0.5	0.5	0.5	2.8	1
Minor Work Projects - Capital		0.9	0.9	1.0	1.0	1.1	4.9	2
Pooled Inventory Management		0.2	0.2	0.2	0.2	0.3	1.1	0
Site Services - Capital		1.1	1.1	1.1	1.2	1.2	5.7	2
Subtotal		6.4	6.2	6.5	6.7	7.2	33.0	12
<u>Other</u>								
Unidentified		7.9	0.4	9.0	24.7	30.8	72.8	31
TOTAL		54.0	50.0	45.0	46.8	46.8	242.6	100

TABLE 4-2
EXISTING GENERATION NUCLEAR MAJOR PROJECTS
FIVE-YEAR BUDGET PLAN
\$ MILLIONS - ESCALATED

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>Total 1994-1998</u>
MAXIMUM ELECTRIC PRODUCTION						
Power Uprate Project - Unit 1	2.7	1.7				4.4
Power Uprate Project - Unit 2	2.7	1.7				4.4
Plant Computer Upgrade - Unit 1	2.3	2.8	2.9	2.0		10.0
Plant Computer Upgrade - Unit 2	2.3	2.8	2.9	2.0		10.0
Power Uprate Modifications - Unit 1	2.0	0.5				2.5
Power Uprate Modifications - Unit 2	2.0	0.5				2.5
Erosion/Corrosion Pipe Replacement - Unit 1	0.4	3.7	4.3			8.4
Erosion/Corrosion Pipe Replacement - Unit 2	2.7	3.7	0.5	5.0		11.9
SUBTOTAL	<u>17.1</u>	<u>17.4</u>	<u>10.6</u>	<u>9.0</u>	<u>0.0</u>	<u>54.1</u>
SAFE OPERATION						
Containment Radiation Monitors - Unit 1	1.5					1.5
Containment Radiation Monitors - Unit 2	1.5					1.5
Spent Fuel Storage Additions	2.3	2.3	3.4	0.2		8.2
Valve Compliance Program - Unit 2	1.9					1.9
SUBTOTAL	<u>7.2</u>	<u>2.3</u>	<u>3.4</u>	<u>0.2</u>	<u>0.0</u>	<u>13.1</u>
IMPROVEMENT THROUGH PEOPLE						
Production Facility Upgrade	1.8	4.7	4.8			11.3
SUBTOTAL	<u>1.8</u>	<u>4.7</u>	<u>4.8</u>	<u>0.0</u>	<u>0.0</u>	<u>11.3</u>
IMPROVE COST PERFORMANCE						
Snubber Elimination - Unit 2	0.9					0.9
Heat Exchangers - Long Term	0.7					0.7
SUBTOTAL	<u>1.6</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>1.6</u>
PUBLIC TRUST AND CONFIDENCE						
Real Time Dose Tracking	0.7					0.7
Vent Stack Monitoring - Phase 2	0.5	0.3				0.8
SUBTOTAL	<u>1.2</u>	<u>0.3</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>1.5</u>
TOTAL	<u>28.9</u>	<u>24.7</u>	<u>18.8</u>	<u>9.2</u>	<u>0.0</u>	<u>81.6</u>

The Nuclear Department Strategic Plan for 1994-1998 contains five major objectives, each supported by strategies and Major Goals. Each objective is a measure of our long-term commitment to achieving excellence in operation, maintenance, and support of Susquehanna and being recognized as one of the best nuclear utility organizations in the United States. The five key objectives are:

- Operate Susquehanna Steam Electric Station Safely
- Continuously Earn the Trust and Confidence of Our Publics
- Achieve Maximum Electrical Production
- Improve Cost Performance
- Improvement Through People

Work is further categorized as APPROVED, UNAPPROVED, or SCOPING. Approved work has received department approval for design and installation and are specifically listed in this budget. Projects under scoping have been approved for design activities to fully determine the required scope, schedule, and the conceptual estimate of cost. The funding authorized to complete the scoping effort as well as projected cost of the final project are specifically listed in this budget. Unapproved projects are those that have not received departmental approval for any design or installation efforts. Unapproved projects are not specifically discussed in this budget. A detailed five-year project plan listing all projects under consideration and tentative schedule dates has been developed and is available under separate cover. Allowances for unapproved work (emergent projects) have been included in this budget to fund projects that are considered and approved for work during the year, and for required scope changes on currently approved projects.

A brief discussion of each objective and the approved projects which support them follows:

1. OPERATE SUSQUEHANNA STEAM ELECTRIC STATION SAFELY

Safe operation, as it relates to the Nuclear Department activities, applies equally to personnel, nuclear, and radiological safety. Due to the critical importance of safe operations in these categories, many of these projects are considered to be non-discretionary.

The 1994 budget includes fourteen projects associated with the Safety objective. The key projects (valued at \$1 million or greater in 1994) and their projected 1994 spending are:

Containment Radiation Monitors	\$3.0 million
Spent Fuel Storage Additions	\$2.3 million
Valve Compliance	\$1.9 million

2. CONTINUOUSLY EARN THE TRUST AND CONFIDENCE OF OUR PUBLICS

PP&L and the Nuclear Department serve many publics. These publics include employees, state, local and federal regulators, customers, members of the community, corporate management, the board of directors, shareholders, and the public at large. Our success as a company and as a department depends to a large degree on how well we satisfy our many publics.

The Nuclear Department considers many of these costs as non-discretionary, as loss of public confidence will result in removal of our authorization to operate.

The 1994 budget includes four projects associated with this objective. The two largest projects in terms of projected 1994 spending are:

Real Time Dose Tracking	\$0.7 million
Vent Stack Monitoring Phase 2	\$0.5 million

3. ACHIEVE MAXIMUM ELECTRICAL PRODUCTION

The Nuclear Department mission calls for reliably and efficiently generating the maximum amount of electricity without compromising public or employee safety. Although highly desirable from a business standpoint, these projects are considered discretionary because postponing implementation will not cause operations to be suspended.

Seventeen projects budgeted in 1994 are related to this objective. The key projects (greater than \$1 million in 1994 spending) and their expected spending in 1994 are:

Power Uprate Base	\$5.4 million
Plant Computer Upgrade	\$4.5 million
Power Uprate Modifications	\$4.1 million
Erosion/Corrosion Pipe Replacement	\$3.1 million

4. IMPROVE COST PERFORMANCE

The Nuclear Department operates and maintains the Company's largest single asset, the Susquehanna Steam Electric Station. Cost effective operations, maintenance, and support of SSES contribute a great deal to the Company's ability to succeed in an increasingly competitive environment. Although highly desirable from a business standpoint, these projects are considered discretionary because postponing implementation will not cause operations to be suspended.

Thirteen major projects are primarily associated with this objective. The two largest projects budgeted in terms of 1994 spending are:

Snubber Elimination	\$0.9 million
Heat Exchangers - Long-term	\$0.7 million

5. IMPROVEMENT THROUGH PEOPLE

This strategic objective is intended to provide department focus on the critical importance of our personnel resources with respect to fulfilling our mission and successfully achieving other strategic objectives. These strategies are intended to keep us aware of the importance in providing opportunities for our people to achieve their maximum potential which in turn will enable the department to reach its maximum capabilities.

Although highly desirable from a business standpoint, these projects are considered discretionary because postponing implementation will not cause operations to be suspended.

One major project is associated with this objective in the 1994 budget. This project and the budgeted amount is:

Production Facility Upgrade	\$1.8 million
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C. BASELINE ACTIVITIES

Work activities, which do not have a specific start or finish date, are considered baseline activities. Baseline activities constitute approximately 12% of the 1994 Capital Budget. This is similar to the 1993 budget on a percentage basis. The baseline activities include:

CAPITAL SPARE PARTS - This is used to purchase Major Capital Spare Parts with long lead times that would lead to extended outages if the spares were not available. The funding level is based on historical needs along with current forecasts of required spares. The 1994 budget includes \$1.5 million.

SITE SERVICES - CAPITAL - This category includes minor building and grounds improvements which are outside the realm of plant operations. Individual work items in this category of work generally cost less than \$0.1 million each and are authorized by the Vice President-Nuclear Operations. The 1994 budget includes \$1.1 million for this item.

CAPITAL EQUIPMENT - This consists of all equipment to be purchased at SSES. The Plan Review Team has set the 1994 budget at \$0.9 million.

CAPITAL TOOLS - This item includes all large tools to be purchased for use by the Nuclear Department. The 1994 budget is \$0.9 million.

MINOR WORK PROJECTS - CAPITAL - Minor work projects are small projects which are authorized under subordinate ERs and are expected to cost under \$0.1 million each. The 1994 budget includes \$0.9 million which is a decrease from the 1993 level.

MAINTENANCE - CAPITAL REPLACEMENT - This is comprised of all maintenance activities associated with the replacement of retirement units. The 1994 budget includes an allowance of \$0.8 million for these replacements.

POOLED INVENTORY MANAGEMENT (PIM) - PP&L, in partnership with other power companies, is participating in a program designed to partially fund the purchase of high-risk, expensive, long lead-time spare equipment. The intent of this program is to minimize SSES downtime by maintaining a "pool", shared by others, of items that could significantly affect the plant. The 1994 budget includes \$0.2 million for this activity. Included in the plan for 1994 are the procurement of a large pump motor and valves.

CAPITAL FURNITURE - Furniture to be purchased and used at SSES, including the Susquehanna Training Center. The 1994 budget contains \$0.1 million of furniture purchases.

D. UNAPPROVED PROJECTS

Unapproved projects are not specifically included in the 1994 budget due to the level of uncertainty concerning their scope, schedule and cost. The Nuclear Department has developed a comprehensive five-year plan based on plant needs, project prioritization, and work scheduling issues. These projects enter the final approval process and are considered based on the parameters of need, benefits, and priorities

outlined in the Department's priority system. If these parameters are satisfied and funding is available in "Reserve for Emergent Scope," the project is approved.

E. NUCLEAR FUEL

PP&L has established a trust which allows PP&L to lease its 90% share of nuclear fuel for the Susquehanna units. For 1994, PP&L will be able to lease a maximum of \$160 million worth of fuel from this trust. This cap is in line with the current expectations for fuel cost during the budget year. Under the lease arrangement the nuclear fuel purchased by the Company is sold to the trust and leased back. When the net investment of the lessor exceeds \$160 million, PP&L will then own and finance any additional nuclear fuel purchases. As quarterly lease payments are made to the trust, additional PP&L-owned fuel will be sold to the trust.

Included in the projected fuel purchase are full allowances for additional requirements resulting from the Power Uprate Project, and planned higher capacity factors.

Table 4-3, column 2, shows nuclear fuel purchases projected for the period 1994 through 2003. Column 3 represents the end-of-year total dollars under the trust agreement. Column 4 contains the PP&L-owned portion of nuclear fuel at year end. Column 5 shows the estimated annual financing requirements which exceed the limit of the trust agreement. The year-end value of PP&L-owned fuel, column 4, from 1994 through 1998 is zero. Therefore, no additional financing is required in this period.

TABLE 4-3
 PROJECTED NUCLEAR FUEL PURCHASES
 90% OWNERSHIP SHARE
 \$ MILLIONS - ESCALATED

<u>Year</u>	<u>Fuel Purchases</u>	<u>Under Lease @ Year End</u>	<u>PP&L Owned @ Year End</u>	<u>Required Financing</u>
1993		168.3	0.0	
1994	42.8	143.0	0.0	0.0
1995	55.4	139.0	0.0	0.0
1996	80.6	157.4	0.0	0.0
1997	48.2	144.4	0.0	0.0
1998	63.6	150.5	0.0	0.0
1999	92.3	177.9	0.0	0.0
2000	50.3	159.2	0.0	0.0
2001	66.8	163.3	0.0	0.0
2002	93.2	185.1	0.0	0.0
2003	55.7	167.5	0.0	0.0

CHAPTER 5

EXISTING GENERATION - FOSSIL AND HYDRO

CHAPTER 5
BUDGET DISCUSSION-EXISTING GENERATION - FOSSIL AND HYDRO

A. GENERAL DISCUSSION

Projects at existing Fossil and Hydro generating plants are classified as three basic types of work: 1) regulatory projects, most of which are related to maintaining environmental compliance, 2) equipment replacements to continue the operation of plants, and 3) improvement projects. Because of their significant magnitude, expenditures to comply with the 1990 Clean Air Act Amendments are categorized separately. Also, improvement projects are further categorized as projects to improve economic performance and projects to improve working conditions. A breakdown of existing generation costs by category for the five-year period 1994-1998 is shown in Table 5-1. A summary of large projects follows in Table 5-2.

Estimated expenditures for 1994 are \$182.6 million and for the five-year period 1994-1998 are \$792.7 million. It was reported in the 1993-94 Budget that estimated expenditures for 1993 and 1994 were significantly higher than estimated in October 1991 for the 1992-93 Budget. Advancing low NO_x burner installations on seven Clean Air Act Title IV, Phase II units to May 31, 1995 from January 1, 2000 as required by Title I and the identification of needed turbine and generator parts were significant contributors to the increase in costs. Since the 1993-94 Budget was prepared in October, 1992, a refined Clean Air Act compliance plan has reduced 1994 expected expenditures, although not nearly down to the level of the 1992-93 Budget. Consistent with the strategies discussed in Chapter 1, projects are scheduled within the five-year period based on consideration of the consequences of deferral, timing of outages, and the need for coordination among projects and outages with the following exceptions:

1. Projects to IMPROVE AVAILABILITY and REDUCE OPERATING AND MAINTENANCE costs which do not recover capital and capital-related costs within five years are deferred beyond the five-year period.
2. BUILDINGS projects at power plants are scheduled on the basis of senior management's review of all corporate buildings projects.

**TABLE 5-1
BREAKDOWN OF EXISTING GENERATION PROJECTS
BY CATEGORY
\$ MILLIONS - ESCALATED**

	# of Projects	1994	1995	1996	1997	1998	Total 1994-1998	% of \$
Regulatory/Environmental	32	26.0	26.6	21.2	11.6	18.9	104.3	13
Replacements	101	69.6	51.5	11.2	22.5	2.1	156.9	20
Improvements								
Economic Improvements	12	4.9	6.7	20.0		0.3	31.9	4
Working Conditions/Safety Improvements	11	3.0	0.9				3.9	0
Subtotal	156	103.5	85.7	52.4	34.1	21.3	297.0	37
Clean Air Act Compliance	23	86.5	26.3	82.9	149.4	121.6	466.7	59
Keystone & Conemaugh Clean Air Act	4	21.9	5.8				27.7	4
Subtotal – Clean Air Act	27	108.4	32.1	82.9	149.4	121.6	494.4	63
Subtotal	183	211.9	117.8	135.3	183.5	142.9	791.4	100
Asbestos Abatement Program		2.4	3.9	2.2	1.8		10.3	
Keystone & Conemaugh		5.8	6.0	6.2	6.5	6.7	31.2	
Unanticipated Replacements		3.0	3.1	3.2	3.3	3.4	16.0	
Minor Replacements		2.0	2.1	2.1	2.2	2.3	10.7	
Minor Additions		0.7	0.7	0.7	0.8	0.8	3.7	
Subtotal		225.8	133.6	149.7	198.1	156.1	863.3	
Uncommitted		2.0	10.0	20.0	30.0	40.0	102.0	
Adjustment *		(45.2)	(26.7)	(29.8)	(39.6)	(31.3)	(172.6)	
TOTAL		182.6	116.9	139.9	188.5	164.8	792.7	

* Adjustment for unanticipated future carryovers and/or project deferrals.

**TABLE 5-2
EXISTING GENERATION LARGE PROJECTS
ANNUAL EXPENDITURES GREATER THAN \$2 MILLION
\$ MILLIONS - ESCALATED**

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>Total 1994-1998</u>	<u>Project Total</u>
Martins Creek							
Units 3&4 - Turbine Governors	3.0	2.8				5.8	6.1
Units 3&4 - Gas-Oil Co-Firing	0.7	6.7	19.4			26.8	26.8
Units 3&4 - Generator Rotors	9.7	1.1				10.8	12.0
Clean Air Act	21.4					21.4	25.0
Sunbury							
Unit 1 - Turbine Rehabilitation	0.4	3.7				4.1	12.6
Unit 1 - Boiler Rehabilitation	0.5	10.5				11.0	12.5
Unit 1 - Generator	2.9	1.0				3.9	4.0
Unit 4 - Turbine	0.1	0.2	0.3	5.6		6.2	6.2
Unit 4 - Boiler		0.2	1.8	5.1		7.1	7.1
Unit 4 - Generator	0.1	0.2	2.5	0.5		3.3	3.3
Clean Air Act	5.8	3.6			0.4	9.8	20.0
Brunner Island							
Unit #2 - Boiler	0.7	10.8				11.5	11.5
Unit #2 - Boiler Controls	6.2					6.2	9.4
Unit #3 - Boiler Controls	6.6					6.6	10.4
Unit #3 - IP Rotor	2.6					2.6	3.4
Dry Fly Ash Conversion & Disposal	8.9	11.3	4.2	1.9		26.3	34.1
Basin Closures	6.2	0.4	5.1	5.3	1.9	18.9	20.1
Clean Air Act	33.1					33.1	35.1
Montour							
Unit 1 - Boiler Controls	1.0	4.0				5.0	5.1
Unit 2 - Boiler Controls	0.3	0.6	3.5			4.4	4.6
Units #1&2 - Feedwater Heaters	3.2	3.1				6.3	6.6
Basin Closures	0.6	3.1	4.2	0.2	4.5	12.6	12.9
Clean Air Act	26.1	22.7	82.8	149.3	120.6	401.5	454.4
Holtwood							
Hydro Electrical Renovation	6.6	0.6				7.2	25.1
Fish Passage	1.5	6.6	2.2			10.3	11.0
Conemaugh							
Clean Air Act	18.6	2.5				21.1	50.5
TOTAL	166.8	95.7	126.0	167.9	127.4	683.8	829.8
TOTAL EXISTING GENERATION (COMMITTED)	225.8	133.6	149.7	198.1	156.1	863.3	

B. ENVIRONMENTAL EXPENDITURES (Other Than Clean Air Act)

Most projects in this category during the 1994-98 period are to maintain compliance with existing regulations. A major exception is the conversion to dry fly ash disposal at Brunner Island. A combination of anticipated stricter regulations and lack of available disposal areas makes dry conversion the least cost alternative for ash disposal. The conversion to dry ash handling and storage at Brunner Island is budgeted for \$34 million. Total environmental expenditures for 1994-98, other than those for the Clean Air Act, are \$94 million.

C. CLEAN AIR ACT COMPLIANCE

The 1994-98 Construction Program includes costs to comply with the ozone non-attainment provision (Title I) and the acid rain provision (Title IV) of the 1990 Clean Air Act Amendments. The ambient ozone non-attainment provision of Title I specifically requires Reasonably Available Control Technology (RACT) for NO_x emissions from all PP&L fossil-fueled boilers by May 31, 1995. While RACT has not yet been defined, we expect it will require low NO_x burners where such installations are technically and economically feasible. Although burners with close-coupled overfire air alone might meet the presumptive limit for NO_x, separated over-fire air is also being installed as a cost-effective reduction in NO_x emissions, and as such could be viewed as reasonably available.

Title IV has two phases of compliance. PP&L's Phase I compliance plan is to burn lower sulfur coal and install low NO_x burners on the seven affected units by the compliance date of January 1, 1995. Compliance with Phase II, which takes effect January 1, 2000, anticipates scrubbers on Montour Unit 1 and 2 and Brunner Island Unit 3.

The total capital cost of compliance with the Clean Air Act is projected to be \$595 million. If required, a scrubber at Brunner 3 would cost an additional \$220 million. Exposures to additional Title I NO_x controls and to air toxics controls under Title III are discussed in Chapter 11.

Compliance costs associated with the jointly owned Keystone and Conemaugh Stations are discussed in Section F of this chapter.

D. REPLACEMENTS

Projects which maintain unit performance by replacing deteriorated or obsolete equipment with functionally similar equipment are termed "replacements."

A major effort during the 1994-98 period is replacing combustion controls on Brunner Island 2 & 3 and Montour 1 & 2, and replacing turbine controls on Martins Creek 3 & 4. These control systems are obsolete and have deteriorated to where the equipment cannot be operated safely and reliably. Combustion controls will become even more critical with the installation of low NO_x burners. A total of \$28 million is included in the five-year period for this work.

E. IMPROVEMENTS

Projects to maintain and improve generating plant availability, capacity and efficiency, and maintain and reduce operating costs are developed from a review of each power plant. This review reflects: 1) analyses of problems at the plants that have caused outages and inefficiencies in the past; 2) analyses which indicate the likelihood of losses in the future; and 3) information concerning other utilities' experience as reported by manufacturers and at industry meetings. About \$32 million during the five-year period is currently committed to 12 performance improvements, currently scheduled during 1994-96.

A large project in this category is the conversion of Martins Creek 3 & 4 to gas/oil co-firing (also discussed in Chapter 3). Natural gas is available outside the winter heating season at a lower cost than #6 fuel oil. Firing these units with gas will result in substantial savings in fuel costs. The conversion accounts for \$26.8 million of planned expenditures during the five-year period.

Another type of improvement project is related to improved working conditions and safety. During the 1994-98 period, \$3.8 million is committed for 11 specific working conditions and safety projects at existing generating stations. Also, procedures for dealing with the large amounts of asbestos insulation in existing fossil-fueled power plants are complex and expensive. Plans are being developed to address asbestos removal, however, they are not yet complete. In order to give visibility to this work, a pool is funded to reflect the level of expenditures currently anticipated. Individual Expenditure Requisitions will be issued for each project.

F. KEYSTONE AND CONEMAUGH

During the 1994-98 period, \$31.2 million is included to cover PP&L's share of projects identified in the Keystone and Conemaugh capital budgets (Table 5-1). These budgets have been reviewed and approved by the Keystone and Conemaugh Owners Committee. Individual Expenditure Requisitions are issued for each project.

Clean Air Act compliance projects at Keystone and Conemaugh will incur large costs during 1994-98. Low NO_x burners and scrubbers will be installed at Conemaugh for Phase I. Low NO_x burners will be installed at Keystone as a result of Title I. A total of \$27.7 million is allocated for PP&L's share of these projects during the five-year period. This allocation is in addition to the \$31.2 million noted above for the "normal" plant projects.

G. UNANTICIPATED REPLACEMENTS

This pool is funded to allow large in-kind replacements to be made expeditiously. (An allocation for smaller replacements to be administered by each plant is described in Section H, "Minor Items.") The need for many replacements cannot be identified until inspections are performed during a unit's annual overhaul or until failure actually occurs. The amount allocated reflects historical spending for replacements that could not be anticipated at the start of the budget year.

H. MINOR ITEMS

Three pools are funded to cover various replacements, additions, and property retirements at generating stations which cost \$50,000 or less. Individual Subordinate Expenditure Requisitions are issued for each project. The replacement pool is intended to allow relatively small, in-kind replacements to be made expeditiously. The allocation for this pool is based, in part, on a list of known work. The remainder is based on the amount of unanticipated work of this type which historically arises during the year. The allocation for minor replacements for 1994 is \$2.0 million with \$10.7 million included in the 1994-98 period (Table 5-1). The allocation for the additions pool for the budget year is based on a list of anticipated work which is prepared by Power Production and on the funding criteria which have been established for the Capital Construction Budget. The allocation for additions for 1994 is \$0.7 million with \$3.7 million included in the 1994-98 period (Table 5-1).

I. UNCOMMITTED

The uncommitted portion of the budget provides for two types of future needs. The first is for potential projects which are identified, but have not been included as specific projects in the budget because their timing, scope, or cost have not yet been adequately defined. Most of the funds in uncommitted are allocated for these potential projects. The second need is for projects that are unidentified. The impact of unidentified items on the two-year budget is small in comparison to that of the identified potential projects.

A total of 73 potential projects have been identified and are currently under study with potential capital requirements of \$59 million for the five-year period. These projects are relatively well defined through Budget Item requests, but require a final estimate and evaluation before they can be considered for inclusion in the budget as specific projects. As they are evaluated, many of these projects will prove to be unjustified or be scheduled beyond the five-year period.

A total of \$102 million is allocated over the five-year period for potential projects under study which may materialize and for projects which are presently unidentified (Table 5-1).

Tabulated below are some of the major potential projects and their estimated costs for which funds have been allocated in the five-year period under uncommitted.

		<u>Possible In-Service Date</u>	<u>Estimated Total In-Service Cost</u>
o	Brunner Island Bottom Ash Dewatering and Storage	1997	\$ 7.0 million
o	Sunbury Wastewater Treatment Facility	1996	\$ 6.0 million

While funds have been allocated for these projects and others under uncommitted, no commitments have been made to these projects at this time. Each project must receive an individual go/no go evaluation prior to inclusion in the budget or expenditure of funds.

J. ADJUSTMENT

The total budget amount for projects at existing Fossil and Hydro generating plants has been adjusted downward by \$27 to \$45 million per year for the five-year period, based on a straight 20% of the total budget. This adjustment is intended to reflect the amount of spending which typically does not materialize due to changes in project costs, changes in schedules, and shifting priorities which cannot be anticipated. The size of the adjustment is large, both as a percentage and in absolute dollars, for several reasons. The sheer volume of work suggests uncertainty. There are large projects budgeted which have not yet been given final approval. Schedules are subject to change as outage schedules are forced to change.

CHAPTER 6
BULK POWER SUPPLY

CHAPTER 6
BUDGET DISCUSSION - BULK POWER SUPPLY

A. GENERAL DISCUSSION

The bulk power transmission system includes all 500 kV and 230 kV lines and switchyards, 500-230 kV substations and the high voltage side of step-down transformers to the 69 kV and 138 kV regional transmission systems.

Several major projects are included in the budget which will improve the reliability of the Susquehanna-related portion of the bulk power system, maintain the overall reliability of the bulk power system at an acceptable level and improve the economic operation of the bulk power system. A geographical summary of bulk power facilities planned for 1994-2003 is shown on a map in Appendix C of this report. A tabular summary of the facilities to be installed through 1998 follows:

TABLE 6-1
SUMMARY OF BULK POWER FACILITY ADDITIONS

	<u>'94</u>	<u>'95</u>	<u>'96</u>	<u>'97</u>	<u>'98</u>	<u>Total</u> <u>'94-'98</u>
Lines (circuit miles)		11				11
230 kV (Reconstruction)						
Circuit Breakers (#)						
230 kV	7	2	7	2		18
500 kV						

B. IDENTIFIED PROJECTS

The identified projects in the 1994-98 bulk power program are listed below.

1. Four new single phase generator step-up transformers (GSUs) for Susquehanna Unit 2 will be installed in 1994 to replace four defective GSU's which were part of the original configuration. The new GSU's are required to provide adequate capacity and reliability to accommodate the existing and uprated output of Susquehanna Unit 2.

2. A new control cubicle will be established in the Susquehanna 230 kV Switchyard in 1995 to increase the reliability of bulk power facilities associated with the Susquehanna plant to a high level consistent with the operational reliability of the plant.
3. In order to improve the reliability of the Susquehanna Unit 1 230 kV termination in the Susquehanna 230 kV Switchyard, the Jenkins 230 kV Line termination will be relocated from Bay 3 to Bay 4 and the Unit 1 230 kV circuit will be reterminated in a double breaker arrangement in 1995.
4. Four 230 kV circuit breakers, will be replaced at the Susquehanna 230 kV Switchyard in 1996. The 230 kV dual pressure gas circuit breakers which terminate the Susquehanna Unit 1 generator lead circuit in Bay 3 of the Susquehanna 230 kV Switchyard and the two air blast circuit breakers which terminate the T-21 (Susquehanna 500-230 kV transformer) 230 kV circuit in Bay 2 will be replaced with higher reliability single pressure gas circuit breakers in 1996.
5. A new Susquehanna Transformer #10 Tap 230 kV Switchyard will be established in 1995 on the west side of the Susquehanna River adjacent to the plant to improve the reliability and availability of the Transformer #10 connection.
6. The Primary #1 carrier-pilot relay systems on the Northern PL 500 kV transmission lines (Susquehanna-Alburtis, Susquehanna-Sunbury, and Sunbury-Juniata) will be upgraded by 1997. Based on preliminary study results, the Primary #1 carrier-pilot relaying on the Susquehanna-Alburtis line will be replaced with a fiber optic pilot relaying system. The Primary #1 carrier-pilot relaying on the Susquehanna-Sunbury-Juniata 500 kV line will either be upgraded with modern carrier relaying components or be replaced with a fiber optic relaying system. The final relaying requirements will be specified after the 4th quarter completion of the Northern PL 500 kV Primary #1 Pilot Relaying Study.

7. A spare single phase 500-230 kV transformer will be purchased and placed at Susquehanna plant. The current system spare transformer is located at Sunbury. Should a transformer failure occur at Susquehanna, the time required to transport the spare unit from Sunbury and the risk of damage during transport could have significant generator curtailment implications. Purchase of a spare will reduce this exposure.
8. Several projects are included in the construction program to upgrade the reliability and improve the flexibility to operate and maintain the Martins Creek 230 kV Switchyard. These projects include: installing a new breaker and one-half bay and reconfiguring the switchyard in 1994 to eliminate the exposure to single contingency thermal overloads when Martins Creek Units 3 and 4 are out of service during light load conditions, replacing three deteriorated and poor performing 230 kV circuit breakers in 1994, and upgrading relay and control facilities in 1994. Three additional 230 kV circuit breakers are budgeted for replacement in 1996.
9. The Hosensack-Buxmont 230 kV Line will be reconducted in 1995 to increase thermal loading capability. This will eliminate single contingency thermal loading limits on the line and increase transfer capability at the 230 kV interface with Philadelphia Electric Co.
10. Continuous monitoring fault recorders and Alarm Management Systems to analyze system performance during fault or disturbance conditions are installed at strategic locations on the bulk power system. Recorders will be installed at Siegfried 230-69 kV Substation in 1994 and at Lackawanna, Montour, Sunbury and other locations in later years to provide adequate system coverage for analysis of system disturbances.
11. Several projects are included in the later years of the construction program to upgrade deficient and unacceptable relaying on 230 kV facilities. Included in this group are the replacement of tone pilot relaying with power line carrier relaying, the upgrading of automatic breaker reclosing schemes, the elimination of continuously

energized auxiliary relays and the separation of primary and back-up bus differential relaying components.

C. CAPITAL REQUIREMENTS

The total capital requirements for bulk power facilities for 1994-1995 are \$32.4 million. This is approximately \$9.9 million more than projected in last year's construction program and is in large part due to the scope increase to replace two additional generator step up transformers, for the Susquehanna Unit 2 GSU project and an increase in the cost estimate for the Susquehanna T-10 Tap 230 kV Switchyard project. The total capital requirement for bulk power facilities for 1996-1998 is \$27.4 million. A summary of 1994-1998 bulk power capital requirements is shown in Table 6-2.

TABLE 6-2
SUMMARY OF BULK POWER CAPITAL REQUIREMENTS

<u>Project</u>	<u>Million \$'s Escalated</u>					<u>Total</u>
	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1994-1998</u>
Susquehanna - Related Projects	13.0	6.5	2.9			22.4
Martins Creek - Related Projects	3.3	0.1	1.4	0.9		5.7
Hosensack-Buxmont 230 KV Line	0.1	1.6				1.7
Monitoring Recorders/Alarm Management Systems	0.3	0.1	0.6	0.5		1.5
Relaying Upgrade	1.4	3.3	2.0	0.6		7.3
Other Specific Projects	0.4	0.6	0.3	0.1		1.4
Pools	0.3	0.4	0.4	0.5	0.5	2.1
Unidentified		1.0	3.2	5.5	8.0	17.7
TOTAL	18.8	13.6	10.8	8.1	8.5	59.8

CHAPTER 7
REGIONAL SUPPLY

CHAPTER 7
BUDGET DISCUSSION - REGIONAL SUPPLY

A. GENERAL DISCUSSION

The regional supply system transmits power from the bulk power transmission system to the area supply substations and directly supplies large power customers and accommodates Non-Utility Generators (NUGs). The regional supply system also provides outlets for a number of smaller generating stations and includes several interconnection points to neighboring systems.

The regional supply system includes all facilities from the high side of the regional transformers to the high side of the transformers of the area supply substations. These facilities include 500-138 kV, 230-138 kV, 230-69 kV, 138-69 kV, and 115-69 kV transformers, 138 kV, 115 kV and 69 kV transmission lines and switching stations, and 138 kV and 69 kV switching facilities associated with area supply substations. The system combustion turbine generators and various NUGs are also connected directly to the regional supply system.

Most of the regional supply work planned for 1994 and 1995 is required to provide additional capacity, meet regulatory requirements, improve safety or replace deteriorated equipment to prevent a decrease in the reliability of supply.

The estimated Regional Supply capital expenditures for 1994 and 1995 are \$45.6 million and \$38.8 million, respectively, and those for the 1994-98 period are \$237 million. This year's estimate of 1994 expenditures is \$14.6 million less than last year's estimate of \$60.2 million and for 1995 is \$3.7 million less than last year's estimate of \$42.5 million. This year's estimate of total 1994-98 expenditures is \$35.3 million less than last year's estimate.

The primary reason for the decreased cost for 1994 and 1995 is due to lower than expected load growth and changes in schedules due to siting difficulties and to match available resources.

Appendix C contains maps of the regional supply system. Facilities that will be placed in service in the 1994-98 five-year period are shown in red.

Table 7-1 summarizes these additions.

TABLE 7-1
SUMMARY OF REGIONAL FACILITY ADDITIONS

	<u>'94</u>	<u>'95</u>	<u>'96</u>	<u>'97</u>	<u>'98</u>	<u>Total</u> <u>'94-'98</u>
Added Transformer Capacity (MVA)	300	0	1200	0	750	2250
Lines (Circuit Miles)						
New	37.9	18.0	6.1	40.3	1.2	103.5
Rebuilt/Reconducted	51.8	47.1	58.2	121.2	49.2	327.5

B. MAJOR REINFORCEMENTS

Major reinforcements, for which funds are budgeted during the 1994-98 five-year period, include projects required to provide additional capacity and projects to maintain the standard quality of service. Additional capacity will be provided by installing transformation at one existing substation (Hummelstown 230-69 kV in 1998) and at each of three new substations (West Hempfield 230-138 kV in 1996, South Akron 230-138 kV in 1996, Lackawanna 230-138 kV in 1998), and by providing additional transmission line capacity. Additional system spare transformers will be purchased to maintain adequate spare transformer coverage for the system: 1994 - 300 MVA, 500-138 kV. Projects to maintain the standard quality of service include establishing two-way supply to several major area substations and rebuilding obsolete and deteriorated lines which have higher than acceptable failure rates.

Substation Reinforcements

In the Susquehanna Region, a 69 kV bus tie breaker will be relocated at Lycoming Substation in 1994. This will allow for the removal of the third 230-69 kV 150 MVA transformer at Lycoming Substation, which will be used as a system spare transformer. Also in Susquehanna, relaying upgrades are planned for Berwick Substation in 1995 and the replacement of control cables and upgrade of relay and control facilities at Sunbury Substation are planned for 1996.

In the Scranton Region, a 230-138 kV substation is planned at Lackawanna in 1998. This substation will facilitate the elimination of Peckville 230-69 kV Substation and is part of the overall Scranton Regional Reinforcement plan. A new 230-138 kV substation at Jenkins in 1999 will provide a second 138 kV supply source to the Scranton Region.

In the Harrisburg Region, the 69 kV relay and control facilities at Carlisle Substation are scheduled for modernization/replacement in 1995. This work is required to eliminate a deteriorated, non-standard control system. At Hummelstown 230-69 kV Substation, transformer 1 will be reconnected from the Dauphin 230 kv line to its own double breaker arrangement in 1996 to provide additional reliability and capacity in the Harrisburg east area. In 1998, the Hummelstown 75 MVA transformer 3 will be replaced with a 150 MVA transformer to provide additional capacity to supply the increasing load in this area of the division. A study is currently underway to define additional long term substation reinforcement needs in the Harrisburg Division.

In the Lancaster Region, 230-138 kV substations will be established at West Hempfield and South Akron in 1996. The Face Rock relay and control facilities will be upgraded by 1994 to provide for connection of the new Holtwood switchgear to the Face Rock 69 kV Switchyard. Protection and control equipment will be upgraded to modern standards at South Akron in 1996.

For increased spare coverage of regional power transformers, a spare 300 MVA 500-138 kV transformer will be purchased in 1994 to be utilized as a spare for Elroy and Wescosville Substations.

Line Reinforcements

Major line reinforcement projects are included in the 1994-1998 program to maintain adequate capacity and reliability in the regional system.

Six line reinforcements are planned for the Susquehanna Region:

1. The overhead ground wire on the Sunbury-Exchange #2 69 kV Line will be replaced in 1994 due to severe deterioration.
2. The Frackville-Fishbach #2 and #3 69 kV Lines will be reconstructed in 1995. Reconstruction of these lines will eliminate limiting conductor sections in order to provide adequate capacity for the load in the Fishbach Area.
3. Reconstruction of 3.2 miles of the Clinton-Muncy 69 kV Line (formed as part of the Clinton Substation project) to double circuit is planned for 1995. This reconstruction is necessary to provide adequate capacity and ensure reliable supply to the Muncy and Hughesville Area.
4. The existing 5.2 mile Sunbury to Point Tap section of the Sunbury-Columbia 69 kV Line will be reconducted in 1998. The line reconducting is required to prevent line overloads for several single contingency outage conditions.
5. The 25.7 mile Lycoming-Lock Haven 1 and 2 Lines will be reconstructed in two sections during 1996 and 1997. Existing line facilities are deteriorated and will require replacement to ensure reliable supply to the Lock Haven Area. This will also eliminate single contingency overload concerns.

6. The Sunbury-Frackville #1 69 kV Line will be reconstructed in 1995 to eliminate limiting conductor sections in order to provide adequate capacity in these circuits.

Eight major line reinforcement projects are planned for the Northeast Division:

1. The Peckville-Scranton and Lackawanna-Scranton 69 kV Lines will be established in the Scranton Region in three parts between 1989 and 1994 by replacing sections of the existing Suburban-Peckville and Suburban-Hoffman Lines. Construction on part two began in late 1988 and was completed in 1989. Part one will be completed in 1993 and part three in 1994. Larger conductors on these rebuilt lines will provide additional capacity to supply growing load.
2. The Hoffman-Minooka Line will be replaced with a new double circuit line in 1994. The double circuit line will provide additional capacity and voltage support to downtown Scranton. Also, the reconstruction will eliminate the limiting conductor portion of the double circuit path from Jenkins through Scranton to Lackawanna.
3. The first three miles of the Lackawanna-Scranton #1 and #2 Lines will be rebuilt in 1995. Reconstructing these lines will eliminate limiting conductor sections in order to provide adequate capacity for the load growth in the Scranton Region and provide a necessary path for the future conversion to 138 kV operation and the elimination of Peckville Substation.
4. The Lackawanna-Peckville #1 Line will be rebuilt for double circuit operation in 1997. This project will provide the two 69 kV lines needed to supply the Peckville-Varden and Peckville-Gouldsboro Lines upon elimination of Peckville Substation.

5. The East Palmerton-Wagners 69 kv Line will be reconstructed for double circuit operation in 1994 and 1995. The project is required to maintain acceptable voltage levels and provide needed additional load supply capacity for the western Pocono Area.
6. The Jenkins-Minooka #1 and #2 Lines will be upgraded for 138 kv construction in 1997. This project will complete the double circuit high capacity path from Jenkins to Lackawanna needed for the conversion to 138 kv operation in 1998-99.
7. The Lackawanna-East Carbondale line will be reconstructed to double circuit operation in 1998. The line reconstruction is required to prevent single contingency line overloads and low voltage conditions.
8. A 3.2 mile section of the Harwood-East Hazleton #2 line will be rebuilt in 1998. This project is required to prevent line overloads during peak winter conditions.

Six line reinforcement projects are planned for the Lehigh Region:

1. The Siegfried-Wescosville #2/Wescosville-Crackersport 69 kv double circuit line between Wescosville and the Trexlertown Tap will be replaced by a new double circuit 138 kv line (69 kv initially) in 1995. This reinforcement will provide additional capacity to prevent overloads for single contingency outages.
2. As part of the Southern Lehigh reinforcement, a double circuit line is planned in 1995 from Buxmont Substation to Richland Substation. This project involves installing two 69 kv circuit breaker terminals at Buxmont Substation and rebuilding about 5.0 miles of the existing Buxmont-Quakertown 69 kv Line. This line will reinforce the line capacity to prevent line overloads for an outage of the Hosensack-Coopersburg Line.

3. The 4 mile Hosensack-Upper Hanover 69 kV single circuit line between Hosensack and Upper Hanover Substation will be rebuilt for double circuit 138 kV construction in 1994. The second circuit will tap the Hosensack-Macungie 69 kV Line. This project will eliminate the exposure to contingency overloads for the loss of the Hosensack or Buxmont source.
4. The 12 mile Wescosville-Siegfried #1 and #2 69 kV Lines will be converted to 138 kV operation by November 1997. This will require constructing 2.1 miles of new 138 kV double circuit line at Wescosville Substation, converting Schnecksville Tap to 138 kV operation, and converting three area supply substations to 138-12 kV operation and one 69 kV customer to 12 kV operation. The remainder of the line is already built for 138 kV operation. This project will eliminate the exposure to contingency overloads on the 138-69 kV transformer at Wescosville Substation and the 230-69 kV transformers at Siegfried Substation by transferring the associated load to the 138 kV system. It will also reinforce the 138 kV network by creating a double circuit 138 kV loop between Siegfried and Wescosville Substations.
5. The Siegfried-Hauto #1 and #4 69 kV Lines will be reconducted in 1995 and 1997, respectively, to eliminate the limiting conductor sections to provide additional capacity to supply load in the Hauto Area.
6. A second circuit will be added to the Fogelsville Tap in 1995 to allow conversion of Fogelsville Substation to type "Twin A" to improve reliability of supply to this substation.

Eight line reinforcement projects are planned for the Harrisburg Region:

1. A 3.3 mile section of the Juniata-Richfield Line will be reconstructed between Juniata and Newport Substations in 1994. This reinforcement is required to relieve loading on the existing line between Juniata and Newport Substations. The reinforcement will also provide adequate voltage levels on the line section beyond Thompsettown.

2. A 0.4 mile section of the Juniata-Cumberland #2 Line between Juniata Substation and the tap to Benevenue Substation will be rebuilt in 1994. The existing #2/0 copper conductor line section will be loaded beyond acceptable normal load levels and the proposed rebuild will provide the necessary capacity reinforcement for this line.
3. The 8 mile Benvenue Tap will be rebuilt for double circuit 69 kV construction in 1995. This will eliminate deteriorated facilities and provide the capability of performing maintenance without removing the entire Benvenue Substation from service.
4. The 9.2 mile double circuit section of the West Shore-Carlisle #1 and #2 69 kV Lines between Mechanicsburg and Carlisle Substation will be reconductored/reconstructed in 1995. Without this project, these line sections will be loaded beyond acceptable levels for normal loading conditions and several single contingency conditions. The proposed project will provide the necessary capacity reinforcement for these conditions. In addition, several poles and a number of crossarms are in deteriorated condition and will require replacement in the mid 1990's. These deteriorated facilities will be replaced with this project. This project will also provide a high capacity tie line between the Cumberland & West Shore regional substations which will reduce extended load interruptions for a substation outage.
5. A 2.0 mile section of the double circuit West Shore-Harrisburg #1 and #2 69 kV Lines between Cedar and Harrisburg Substations will be rebuilt 1996. Without the project, this line section may be loaded beyond acceptable levels during several single contingency conditions. The proposed rebuilding will provide the necessary capacity reinforcement for these conditions.
6. The deteriorated facilities on the 8 mile Cumberland-Juniata #2, West Carlisle Taps, and Mt. Rock Tap 69 kV Lines will be replaced between 1994 & 1998. This will provide increased reliability of supply to customers in the West Carlisle Area. The wood structures on these lines have deteriorated to the point where reliability of

supply is a concern. This line section supplies five area supply substations and one 69 kV customer.

7. A 1.3 mile section of the West Shore-Harrisburg 1 & West Shore-Cumberland 1 69 kV lines between West Shore Sub & White Hill Taps will be reconductored with higher capacity conductor in 1997. The existing conductor will be loaded beyond acceptable emergency load levels for several single contingency outages. This proposed project will provide the necessary regional reinforcement.
8. A 9.3 mile section of the Juniata-Richfield 69 kV line between Newport and Thompsontown Substation will be rebuilt with a higher capacity 69 kV line in 1998. The existing line section will be loaded beyond acceptable normal load levels and the proposed rebuild will provide the necessary capacity reinforcement for this line.

Eight line reinforcement projects are planned for the Lancaster Region:

1. The second East Lancaster-Prince Tie circuit will be installed in 1995. This tie will establish a double circuit 138 kV line between West Hempfield and South Akron, which will be required to relieve West Hempfield transformer loading by enabling the transfer of Prince Substation load from West Hempfield to South Akron.
2. The 821/822 69 kV Line will be purchased from Met Ed Company in 1994. The 1.5 mile section between Berks Substation and the State Hill Tap will be rebuilt, and the second circuit will be installed on the State Hill Tap. The work will provide two-line supply to State Hill.
3. The 7.8 mile Morgantown 2-Kinzer 13 Tie will be reconductored in 1996 to reinforce back-up supply to the loads in the southern portion of the Lancaster Region for a double circuit line failure of the Face Rock-Kinzer Line.

4. In 1997, the 3.2 mile section of the West Hempfield-Hummelstown 69 kV Line between North Columbia Tap and Donegal Substation will be rebuilt to supply growing load in the northwestern corner of Lancaster Region.
5. The 10 mile section of the South Akron-Morgantown #2 69 kV Line from the Kinzer 13 Tie to Morgantown will be reconducted in 1997 to supply new loads in the Morgantown Area.
6. The 11 mile section of the South Akron-Morgantown #1 69 kv Line from the Earl #1 Tap to Morgantown Substation will be reconducted in 1997 to supply new loads in the Morgantown Area.
7. In 1997, 25 miles of 69 kV line will be converted to 138 kV operation to supply growing loads in the central core of Lancaster Region. Conversion to 138 kV operation will double the capability of these lines. Since most of the lines already are designed to operate at 138 kV, the major line portion of the project will consist of upgrading the Prince Tap off the West Hempfield-South Manheim #1 and #2 Lines.
8. A 1.6 mile 69 kV tie line will be constructed between the Kellogg Taps and Landisville Substation in 1998 to reinforce transfer capability between South Manheim and West Hempfield substations to supply the loads during outages of 230-69 kV transformers.

In addition to the regional line reinforcement projects, 10 area supply substations will be connected to the regional supply system in 1994 and 1995. An additional 8 substations will be connected from 1996 through 1998.

C. TRANSMISSION LINE CERTIFICATION

New and rebuilt transmission lines designed for operation at 100 kV and above must be certified by the Public Utility Commission (PUC) before construction may begin. PUC certification includes an analysis of the

necessity for the proposed line, a comparison with possible alternative reinforcements, and an evaluation of the environmental impacts of alternative line routes. A change in regulation was implemented in 1983 which provides for a letter of notification in lieu of a full application for lines less than two miles in length.

In 1994 and 1995, 18 applications or letters of notification are expected to be filed for regional supply lines. Ten of the proposed lines will be regional reinforcements, eight will provide transmission connections for supply to new area substations.

Approximately 20 applications or notices are scheduled to be filed in the 1996-98 period.

D. PROGRAM TO UPGRADE THE 69 KV CAPACITOR BANK CONTROLS AND PROTECTION SCHEMES

As a follow-up to the PCB Capacitor Bank Replacement Program, the 69 kV capacitor bank controls and protection schemes will be upgraded. This program, scheduled for completion in 1995, has an estimated total cost of approximately \$1.2 million for the 1994-98 period. The new control and protection schemes will provide improved capacitor bank reliability and will eliminate voltage transient conditions that can decrease capacitor can life and degrade voltage quality.

E. AIR BREAK SWITCH CONVERSION PROGRAM

The System Operating Department has identified a number of air break switches on the regional supply system that are not equipped with parallel break interrupters, but are sometimes required to break parallel current. A program has been established to modify or replace a significant number of these switches. The existing air break switches are not rated for parallel break capability and operating integrity may be compromised with the continued use of air break switches to break parallel current. Approximately 24 switches will be modified or replaced in 1994 and 1995 under Budget Item 81113 at an estimated cost of \$0.4 million.

F. LAMINATED WOOD UPSWEPT ARM REPLACEMENTS

Laminated wood upswept arms were purchased during the early 1970s for use on regional 69/138 kV lines. A program began in 1992 to replace a significant number of these wood upswept arms which have deteriorated. The deterioration lessens the mechanical strength of the arms and has resulted in some arm failures on the PP&L system. Recent analysis has shown that the deterioration is not as serious as first anticipated.

The deteriorated laminated wood arms will be replaced with the current standard upswept steel arms. Arm replacement work has been budgeted at \$0.4 million per year.

G. LOWER STRUCTURE GROUND RESISTANCE

The performance of some 69 kV and 138 kV circuits during T&L has been less than desirable. A program to improve performance by installing counterpoise to reduce structure ground resistance to minimize the number and frequency of flashovers on double circuit lines was begun in 1992 and is scheduled to continue through the 1994-98 period. Supply lines to a number of large customers have been tested and modified with positive results. Structure ground resistance reduction work has been budgeted at \$1.7 million for 1994-98.

H. CAPITAL REQUIREMENTS

Capital requirements for development of the regional supply system in the five-year period, 1994-1998, are projected to be \$237 million (escalated). The capital requirements for the first two years, 1994-1995, is \$84 million. The estimated capital requirement for the following three years, 1996-1998, is \$153 million. Table 7-2 at the end of this chapter summarizes the capital requirements for the five-year period.

During the five-year period, 1994-1998, approximately \$190 million (80%) is required for capacity reinforcement projects due to load growth, and \$47 million (20%) is required for system reliability projects which include improvements, relocations, regulatory requirements, NUG, and for the elimination, replacement or upgrade of deteriorated equipment.

TABLE 7-2
SUMMARY OF REGIONAL SUPPLY CAPITAL REQUIREMENTS

<u>Project</u>	Million \$'s Escalated					Total
	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1994-1998</u>
New 230-69 KV, 230-138 KV or 138-69 KV Subs.						
Lackawanna	0.3	1.3	1.4	5.8	0.3	9.1
Jenkins		0.1	0.3	0.2	1.1	1.7
Springfield	0.4	0.4	1.1	4.8	4.7	11.4
Carlisle					2.0	2.0
W. Hempfield	0.4	2.0	7.7			10.1
So. Akron	1.9	2.9	6.6			11.4
Major Line Projects						
East Mountain Tap	1.1					1.1
Ridge Road Tap	1.3	0.6				1.9
West Shore-Harrisburg #1&2	0.2	0.4	2.3			2.9
Lycoming-Lock Haven Pt. 1	1.1	1.0	4.4			6.5
Lycoming-Lock Haven Pt. 2	0.1	0.7	0.7	1.4	4.7	7.6
Peckville-Scranton	0.8					0.8
Hoffman-Minooka	3.6					3.6
Lackawanna-E. Carbondale		0.1	0.4	0.1	3.2	3.8
Frackville-Fishbach #3	0.1	0.1	0.1	0.2	1.5	2.0
Frackville-Pine Grove		0.1	0.1	0.6	0.9	1.7
E. Palmerton-Wagners Pt. 1	1.2	1.0				2.2
E. Palmerton-Wagners Pt. 2	0.5	2.5	2.0			5.0
Seidersville-Quakertown	0.4	0.8	2.0	4.6	6.0	13.8
Buxmont-Quakertown	1.9					1.9
Wescosville-Trexlerstown #3&4	1.3					1.3
Wescosville-Siegfried #1&2	1.9	2.3	3.1	2.2		9.5
West Shore-Carlisle #2	0.6	3.7				4.3
W. Shore-Harrisburg 1&2	0.2	0.4	2.3			2.9
Benevue Tap	1.5					1.5
Juniata-Richfield		0.1	0.3	2.2	1.0	3.6
E. Lancaster-Prince	2.2					2.2
So. Akron-Earl		0.2	0.2	2.1	2.1	4.6
So. Akron-Morgantown #2	0.2	1.4				1.6
E. Lancaster-Prince Tie	2.2					2.2
Berks-State Hill Tap	1.4					1.4
Major Substation Rehabilitation and Elimination Projects						
Sunbury			0.1	0.3	3.9	4.3
Conestoga		0.3	0.5	3.8	3.6	8.2
Berwick	0.8					0.8
Other Specific Projects	9.0	11.2	7.6	14.4	9.7	51.9
Pools	9.0	4.2	5.7	3.6	3.9	26.4
Unidentified	--	1.0	1.1	3.3	4.6	10.0
TOTAL	45.6	38.8	50.0	49.6	53.2	237.2

CHAPTER 8
AREA SUPPLY

CHAPTER 8
BUDGET DISCUSSION - AREA SUPPLY

A. GENERAL DISCUSSION

The Area Supply System links the regional supply system to the customer's point of delivery. Area supply facilities include 69-12 kV and 138-12 kV substations, 12 kV lines, 23 kV and 4 kV systems, and the 120/208 volt Low Tension Networks.

Most of the area supply work planned for 1994 and 1995 is required to provide additional capacity, to meet OSHA, EPA or other regulatory requirements, to improve the safety of the workplace or to replace excessively deteriorated facilities in order to prevent a decrease in reliability of supply. Reliability of supply will also be improved inherently by: having more substation sources to supply the distribution system; adding 12 kV lines at new and existing substations; converting 4 kV systems to 12 kV; and reconstructing distribution facilities to meet modern standards of performance and appearance.

As the area supply system grows older, many facilities are approaching the end of their useful lives. Work has begun in recent years to replace or upgrade deteriorated and obsolete facilities. Several projects involving the replacement or modernization of old and outmoded facilities such as completion of the conversion of the Scranton 4 kV LTN to 12 kV in 1994, LTN vault reconstruction projects systemwide and the replacement of deteriorated underground cables are included in this budget.

The estimated Area Supply capital expenditures for 1994 and 1995 are \$47.7 million and \$53.9 million, respectively, and those for the 1994-98 period are \$233.9 million. This year's estimate of 1994 expenditures is \$2.4 million more than last year's estimate of \$45.3 million and for 1995 is \$8.9 million more than last year's estimate of \$45.0 million. This year's estimate of total 1994-98 expenditures is \$13.1 million over last year's estimate. The increased costs for 1994 and the five-year period are due to projects that carried over into 1994, new projects and

increased scope changes which reduced the need for or facilitated delays to regional reinforcement projects, resulting in a \$35.3 million reduction for regional expenditures over the same five-year period.

The Area Supply total has been adjusted downward by \$4 million per year for the five-year period to reflect specific projects which will carry over from one year to the next as a result of resource limitations, material problems, difficulty in obtaining right-of-way or litigation.

B. IDENTIFIED PROJECTS

1. New Substations

New substation projects will provide additional capacity to supply existing and future loads, will improve reliability by providing additional 12 kV sources and shorter 12 kV lines, and will economically provide adequate voltage and protection on the distribution system.

Five new 69-12 kV substations are scheduled and budgeted for 1994. Provisions are also being made for engineering five new 69-12 kV substations for a 1995 completion. A total of \$22.6 million is budgeted for new or rebuilt substations in 1994 and 1995.

In addition to the 1994-95 program outlined above, 8 more new substations are estimated to be required by 1998 to supply increasing loads, 9 substations are scheduled to be converted from 69-12 kV operation to 138-12 kV operation and funds are budgeted in 1994 and 1995 for twenty-one substation reconstruction projects.

2. New 12 kV Lines and Terminals

New 12 kV lines and terminals are required to provide additional capacity to supply existing and future loads. As a by-product, they increase load transfer capability, improve voltage regulation, allow improved protection arrangements on the distribution lines, improve reliability by reducing 12 kV line exposure, and reduce line losses through lower average facility loading.

A total of 43-12 kV circuit breaker line terminals and associated line connections will be installed at new and existing area supply substations in 1994 and 1995.

Of the total, 20 line terminals costing \$6.0 million will be installed at existing 69-12 kV substations, and 23 line terminals will be installed at new 69-12 kV substations in 1994 and 1995 (costs for the 12 kV line terminals at new 69-12 kV substations are included in the total costs for new substations).

3. Reconductoring/Reconstruction, Additional Phase Conductors, Miscellaneous Tie Lines

These projects are required to provide additional capacity in the distribution system to supply existing and future loads. Inherent benefits of providing this capacity are improved reliability and improved voltage conditions. Some of these projects are being installed solely to bring voltage levels to within acceptable limits or to provide load relief for overloaded protective devices. A total of \$9.5 million has been included for these projects in 1994 and 1995.

4. 4-12 kV Conversions

Approximately \$4.0 million in 1994 and 1995 is budgeted for converting 4 kV distribution systems to 12 kV.

Many 4 kV systems have become severely deteriorated over the years and many of the facilities are approaching the ends of their useful lives. Replacement parts are becoming increasingly difficult to obtain.

Conversion of these systems will eliminate non-standard construction, provide a modern rebuilt distribution system, eliminate unnecessary transformations, reduce maintenance costs and also reduce distribution system losses. Current plans call for completion of the 4 kV conversions systemwide by 1997.

5. Low Tension Networks

This category includes specific projects which have been identified in the low-tension networks for additional capacity and reliability. A total of \$9.5 million is budgeted for 1994 and 1995 for these projects. About \$1.2 million of this is budgeted for 1994 for the conversion of the Scranton 4 kV LTN system to 12 kV.

A Low-Tension Network Rehabilitation Program is included in the above dollars to correct structural integrity, reliability, and OSHA and PP&L safety standards problems. Projects to correct major deficiencies have been identified and have been included in the Construction Program. Other newly identified projects in this category will be included in the Construction Program on an "as-required" basis.

C. AREA POOL ITEMS

1. Relocations Due To Right-Of-Way Requirements

Provision has been made for total expenditures of \$8.8 million in 1994 and 1995 for relocations due to right-of-way requirements. About \$4.3 million is budgeted in 1994 and \$4.5 million in 1995. This item is credited with reimbursement payments, and the net amount charged during any one calendar year can vary greatly from budget.

2. Replacement of Deteriorated Underground Distribution Cables

A total of \$7.7 million is the current estimate of funding required for 1994 and 1995 for the replacement of deteriorated underground distribution cables. Approximately \$3.8 million is budgeted in 1994 and \$3.9 million in 1995.

3. Replacement of Deteriorated Copperweld Conductor

A pool item was established to fund the replacement of deteriorated Copperweld Conductor which is beginning to fail. A total of \$1.0 million is budgeted for Copperweld conductor replacement in 1994 and 1995. Approximately \$0.5 million is budgeted in 1994 and \$0.5 million in 1995.

4. 69-12 kV and 138-12 kV Transformer Requirements

Transformer requirements are budgeted on an "as required" basis and these units are purchased and delivered according to required in-service dates. A total of \$1.3 million is budgeted in 1994 and \$0.4 million in 1995 for 69-12 kV transformers and \$0.3 million for 138-12 kV transformers in 1995.

5. Power Circuit Breakers

The \$0.8 million total allocated for 1994 and 1995 includes the purchase of all power circuit breakers for use at all new area supply substations, as well as additional terminals at existing area supply substations. Approximately \$0.4 million is budgeted in 1994 and \$0.4 million in 1995.

6. Other Pool Items

A total of \$2.9 million for 1994 and 1995 is allocated for Area Supply improvements which cover a number of minor miscellaneous distribution reinforcement projects for which specific budget items

are not necessary. Approximately \$1.5 million is budgeted in 1994 and \$1.4 million in 1995.

The pool item which encompasses costs associated with connecting NUG to the area supply system has a total budgeted amount of \$25,000 for 1994 and \$25,000 for 1995.

A pool item is included for the repair of failed 69-12 kV power transformers that are capitalized. Approximately \$0.3 million is allocated annually for these repairs in 1994 and in 1995.

A pool item is included for the replacement of Low Tension Network primary cables. These cables were generally installed in the 1960's and early 1970's and are expected to have a service life of 20 to 25 years. A total of \$0.1 million is allocated for 1994 and \$0.1 million for 1995.

D. AREA BLANKET ITEMS

The funds for each division's portion of each blanket are being authorized separately. This assures accountability for blanket spending at the division level.

1. Pole Replacements 23 kV and Under

A total of \$7.1 million has been allocated for 1994 and 1995 for pole replacements at 23 kV and under. About \$3.5 million is budgeted in 1994 and \$3.6 million in 1995. It is estimated that approximately 2,900 poles on the system will require replacement in 1994 due to deterioration. Those poles which must be replaced due to motor vehicle breakage are included in Distribution Department-Storms and Emergencies.

2. Distribution Capacitor Program

The distribution capacitor program is part of the total system reactive supply and voltage support program. Its aim is to supply

all area supply reactive loads and losses from within the area supply system while maintaining adequate voltage levels on the distribution lines. This is accomplished entirely with 12 kV shunt capacitors. About 70 MVAR of capacitors are required per year in 1994 and 1995 to attain an average of unity power factor at peak load on the high side of the 69-12 kV and 138-12 kV transformers at area supply substations. Capacitors will also be purchased in 1994 and 1995 for capacitor failures.

A total of \$0.8 million has been allocated for the installation of capacitors in 1994 and \$0.8 million in 1995.

3. Oil Circuit Reclosers

The allocation for OCRs is \$1.6 million for 1994 and \$1.7 million for 1995. In addition to installing new units, this budget item includes replacing worn out, damaged, overdutied or overloaded oil circuit reclosers on the distribution system. This work maintains service continuity, facilitates operation and maintenance, and reduces operating costs.

4. Distribution Department Minor - Lines

A total of \$4.9 million is budgeted for 1994 and \$5.0 million for 1995 for minor line items in the Distribution Department. This work includes minor additions and replacements of distribution line facilities required to facilitate maintenance and operation, to meet increased demand due to system load growth, to reduce operating costs and to maintain or upgrade reliability to acceptable levels.

5. Distribution Department Minor - Substations

This blanket is budgeted for a total of \$0.3 million in 1994 and \$0.3 million in 1995. This item provides funding for minor additions and replacements of distribution substation facilities. This work is required to facilitate operation and maintenance,

reduce operating costs, and to maintain or upgrade reliability to acceptable levels.

6. Distribution Department - Storms and Emergencies

This blanket is budgeted for a total of \$2.6 million in 1994 and \$2.7 million in 1995. This item covers all expenditures which can be classified as non-discretionary--in other words, those projects which are caused by forces outside the control of the division. This includes storms, relocations, and damage to facilities caused by motor vehicles.

7. Distribution Department - Install MOVs and MOVEs at Specific UG Cable Locations

This blanket is designed to significantly extend the life expectancy of underground (UG) cable by applying metal oxide varistors (MOVs) to underground development terminal poles and metal oxide varistor elbows (MOVEs) at normally open points on UG cable installations. The application of the MOVs and Elbow arrestors will provide improved surge protection which extends underground cable life by limiting the severity of overvoltages and retarding further cable degradation due to fault tree growth. Total funding for 1994 and 1995 is \$1.8 million. Approximately \$0.9 million is budgeted in 1994 and \$0.9 million in 1995.

8. Distribution Department - Replace Failed and/or Deteriorated, Non-Repairable Equipment

This program covers failed and deteriorated distribution equipment and allows improved tracking of the costs of these failures. Total funding for 1994 and 1995 is \$2.1 million (\$1.0 million in 1994 and \$1.1 million in 1995).

9. Distribution Department - Foreign Utility Work

This item separates work requested by foreign utilities from the Storm and Emergency blanket to provide improved tracking. Total funding for 1994 and 1995 is \$2.0 million (\$1.0 million in 1994 and \$1.0 million in 1995).

E. CAPITAL REQUIREMENTS

TABLE 8-1
AREA SUPPLY EXPENDITURES
\$ MILLIONS - ESCALATED

	<u>1994</u>	<u>1995</u>
New, Rebuilt and Modified Substations	8.6	14.0
Additional Lines & Terminals	2.3	3.7
Lines: Reconductor/Reconstruct/Add'l. Phases	3.9	5.6
4-12 KV Conversions	2.6	1.4
Low Tension Networks (incl. 4-12 KV convs.)	5.9	3.6
<u>Area Pool Items:</u>		
Relocation Due to R/W Req.	4.3	4.5
Replacement of Deteriorated UG Cable	3.8	3.9
Purchase 69-12 KV and 138-12 KV Xfmrs.	1.3	0.7
Purchase Power Ckt. Breakers	0.4	0.4
Replace Deteriorated Copperweld Conductor	0.5	0.5
Other Pool Items	1.5	1.4
<u>Area Blanket Items:</u>		
Pole Repls. - 23 KV & Under	3.5	3.6
Capacitors - 23 KV & Under	0.8	0.8
Oil Circuit Reclosers	1.6	1.7
Distr. Dept. Minor - Lines	4.9	5.0
Distr. Dept. Minor - Subs	0.3	0.3
Distr. Dept. - Emerg./Requested Changes	2.6	2.7
Distr. Dept. - Foreign Utility Work Program	1.0	1.0
Distr. Dept. - MOV's and Elbow Arrestors Installation	0.9	0.9
Distr. Dept. - Replace Failed Equipment	1.0	1.1
Adjustment for Future Deferrals & Carryovers	(4.0)	(4.0)
Unidentified		1.0
	<hr/>	<hr/>
TOTAL (Escalated)	47.7	53.8

The above Table 8-1 details the Area Supply expenditures required in 1994 and 1995.

In a less detailed format, the following Table 8-2 shows the expenditures for Area Supply facilities for the 1994-1998 period:

TABLE 8-2
AREA SUPPLY EXPENDITURES
\$ MILLIONS - ESCALATED

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	Total <u>1994-1998</u>
Specific Identified Projects	23.3	28.3	20.7	11.6	11.5	95.4
Area Pool Items	11.8	11.4	17.1	11.8	13.2	65.3
Area Blanket Items	16.6	17.1	17.7	17.3	17.9	86.6
Adjustment for Future Deferrals & Carryovers	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(20.0)
Unidentified	—	1.0	1.1	2.2	2.3	6.6
TOTAL	47.7	53.8	52.6	38.9	40.9	233.9

CHAPTER 9

REVENUE

CHAPTER 9
REVENUE EXPENDITURES

Items classified as "revenue work" include line extensions specifically built to connect new loads, street lighting installations, and the purchase of distribution transformers and meters. The estimated costs for items included in the revenue category are primarily based on statistical analysis of general information rather than specific identified load additions. Included in the analysis are forecasts of new construction activity and estimates of new dwelling units to be added, supplied by Rates and Market Research; and on historical per customer cost information for the different categories, provided by the Distribution Department. In addition, street lighting expenditures through 1994 recognize that a major impact of the Company's 20% reduction in the high-pressure sodium street lighting rate will be the conversion of many mercury vapor and incandescent lights to high-pressure sodium.

"Revenue Work" is performed by the same division personnel that handle the various area supply capital projects. Revenue work is very sensitive to the numbers of new dwelling units to be connected in an area, and thus is highly variable and localized. Since it is regarded as having the highest priority, it is often performed ahead of and frequently to the exclusion of other capital area supply projects. Large overbudget expenditures in "revenue work" tend to result in underexpenditures and delays in completing various area supply capital projects.

Initiatives were implemented in 1992 to better understand the nature of the costs classified as revenue expenditures and ways to control them effectively. Also, to promote further control, a conscious decision was made to not budget certain uncertain costs. For example, rather than reflecting all possible street lighting costs, only likely costs were budgeted. Other costs would be given unbudgeted approval if appropriate.

The result was establishing a target amount for revenue expenditures of \$80 million in 1992. Consistent with this approach to budgeting for 1992, the annual expenditure projections for the subsequent four years were capped at the same \$80 million per year level.

Actual expenditures as of August 31, 1993 were \$53.2 million. It is expected that the total 1993 expenditures will be near the \$80 million target.

Based on the present forecasts of construction activity, estimates of new dwelling units and the initiatives applied in 1992, the \$80 million target is going to continue to be applied for revenue expenditures in 1994 and the subsequent four years.

Power Conditioning Service

A new program is being proposed that will offer our customers a power conditioning service. This service would meet customer's power conditioning needs by addressing problems and concerns including surge protection and voltage fluctuations.

The program would be administered through a proposed rate schedule (PC) offering two types of service. They would be:

1. Basic Power Conditioning Service
2. Expanded Power Conditioning Service.

Capital costs associated with this service for the purchase and installation of surge suppression equipment in the Basic Power Conditioning Service program. The 5 year program is estimated at \$31.5 million. An amount of \$1.8 million is budgeted in 1994. Revenues will be collected through the normal billing process with the addition of a separate line item on the bills of these customers electing this service. The initial term for customers electing this service is one year with extensions available on a month-to-month basis.

Also, potential cost resulting from rate initiatives to steel customers are reflected as "Exposures" (see Chapter 11).

The following Table 9-1 shows the budgeted expenditures for Revenue work for the 1994-1998 period:

TABLE 9-1
REVENUE EXPENDITURES
\$ MILLIONS - ESCALATED

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	Total <u>1994-1998</u>
69 KV Revenue Extensions	1.5	1.5	1.5	1.5	1.5	7.5
12 KV Revenue Extensions						
Specific ER's	11.3	11.3	11.3	11.3	11.3	56.5
Subordinate ER's and WO's	46.0	46.0	46.0	46.0	46.0	230.0
Street Lighting						
Spec. ER's/Subord. ER's/WO's	2.5	2.5	2.5	2.5	2.5	12.5
Conversion Program	0.5	0.5	0.5	0.5	0.5	2.5
Distribution Transformers	14.0	14.0	14.0	14.0	14.0	70.0
Meters	4.2	4.2	4.2	4.2	4.2	21.0
Power Conditioning Program	1.8	6.8	9.0	9.0	5.0	31.6
TOTAL	81.8	86.8	89.0	89.0	85.0	431.6

CHAPTER 10

GENERAL BUILDINGS & OTHER CAPITAL

CHAPTER 10
BUDGET DISCUSSION
GENERAL BUILDINGS AND OTHER CAPITAL

A. GENERAL DISCUSSION

This chapter discusses the capital projects identified and budgeted in the General Buildings category, and all other capital expenditures not covered in previous chapters. Table 10-1 shows a breakdown of these expenditures for the 1994-1998 five-year period for each segment of this category.

B. GENERAL BUILDINGS PROGRAM

The building category includes all the facilities required to replace old deteriorated buildings requiring major repairs; to comply with OSHA regulations; to provide adequate space to meet personnel requirements; and to correct inefficient work operations. Included are all building projects other than those located at existing generating plants and bulk power substations. The buildings at the generating plants (including Transportation and Construction Department buildings) are included and identified in the lists of projects which support Chapter 4 - Existing Generation Nuclear and Chapter 5 - Existing Generation Fossil and Hydro.

As described in Chapter 1, target expenditure and manpower levels have been established for preparation of the 1994 and 1995 Capital Budgets and the 1994-1998 Capital Construction Program in order to promote stable and competitive rates. Consistent with the strategies discussed in Chapter 1, buildings projects are scheduled based on consideration of the consequences of deferral and the need for coordination among projects. For buildings projects, the scheduling of projects is over a ten-year horizon and includes expenditures at Susquehanna SES, existing fossil and hydro stations and substations. Those projects are, as noted above, budgeted within those specific categories.

A total of \$20.8 million is budgeted in 1994 and \$3.3 million in 1995. For the 1994-1998 five-year period, \$33.2 million is estimated.

**TABLE 10-1
BREAKDOWN OF GENERAL BUILDINGS
AND OTHER CAPITAL BY CATEGORY
\$ MILLIONS - ESCALATED**

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	Total <u>1994-1998</u>
<u>GENERAL BUILDINGS</u>						
o Major Projects - Div. Oper.	7.8	2.5	6.4			16.7
o Minor Projects - Div. Oper.	2.9	0.6	0.4			3.9
o System Facility Center	13.4	0.8				14.2
o General Office Complex	5.0	1.3	0.8	2.1	2.3	11.5
o Land Management	0.4	0.3				0.7
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
SUB-TOTAL	29.5	5.5	7.6	2.1	2.3	47.0
ADJUSTMENT	(8.7)	(1.6)	(2.2)	(0.6)	(0.7)	(13.8)
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	20.8	3.9	5.4	1.5	1.6	33.2
 <u>OTHER CAPITAL</u>						
o Sites & Right-of-Way	0.7	0.7	0.7	0.8	0.8	3.7
o General/Miscellaneous	19.5	33.2	29.3	11.4	7.9	101.3
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	20.2	33.9	30.0	12.2	8.7	105.0

NOTE:

* Excludes rounding adjustment.

1. DIVISION OPERATIONS

a. Major Projects

In June, 1993 the Hazleton Facilities Utilization Team completed their study and presented recommendations regarding the disposition of the South Poplar Street facility and establishing a Hazleton Service Center for the Hazleton Operating Area. The recommendation of the team, which has been accepted, was to renovate and expand the South Poplar Street facility for use as the Hazleton Service Center. The estimated total cost of the project is \$5.4 million, with an expected completion date of 1996. In 1994, \$2.5 million is budgeted for this project.

Three other major projects appearing in the 1994-95 period are the Hamlin Service Center, the Schuylkill Area Service Center and the Bethlehem Service Center. The Hamlin and Schuylkill projects are proceeding according to the schedule established last year. The completion date for the Bethlehem Service Center project was advanced from 1999 to 1996. The reason for the advancement is the existing building on Plymouth Street would require major modifications and improvements to continue to be functional until 1999. It was decided not spend these funds and, instead, advance construction of the new service center 3 years. The estimated cost of the new facility is \$5.7 million.

TABLE 10-2
Major Projects - Division Operations
 \$ Millions (Escalated)

	<u>1994</u>	<u>1995</u>	<u>Project Total</u>	<u>Expected Completion Date</u>
Hazleton Service Center	2.5	2.3	5.4	1996
Hamlin Service Center	2.8	0.2	3.1	1995
Schuylkill Area S.C.	2.5		2.5	1994
Bethlehem Service Center		0.1	5.7	1996

b. Other Projects

In addition to the major projects outlined above, modifications, additions, replacements, and improvements to existing facilities, are budgeted at \$2.4 million in 1994.

2. System Facilities Service Center

The first phase of the System Facilities Service Center in the Humboldt Industrial Park located near Hazleton, which is occupied by the Chem Lab and Test Department, was completed in 1992 at a cost of \$14.0 million.

The second phase of the project began in 1992 and was occupied in the third quarter of 1993 by the Meter and Stores Departments. Total cost of this phase is \$8.0 million.

The third and final phase of the System Facilities Service Center will include the system transformer repair operations and Construction Department. It began in 1993 and is scheduled to be completed in the 4th quarter of 1994 at a cost of \$17.0 million.

3. General Office Complex

Continuing renovations and improvements have been included in the budget for the General Office Complex. A number of projects have been identified in the Tower Building and North Building. A total

of \$5.0 million is budgeted in 1994 and \$1.2 million in 1995.

4. Land Management Facilities

This budget category includes capital additions, improvements, and replacements at the Company's recreational facilities such as Holtwood, Lake Wallenpaupack, and Montour Preserve. One large project is identified and included in the budget. It is a meeting room addition planned at the Holtwood Land Management facility scheduled for completion in 1995 at \$230,000.

An additional amount of \$124,000 is budgeted in 1994 to address minor replacements and additions.

C. OTHER CAPITAL

This category consists of numerous projects that are not directly a part of Electrical or Production facilities. The projects fall under the general headings of Telecommunications, SCADA, Furniture, Tools, Computer Software, and Retirements.

1. Sites and Rights-of-Way

The expenditures for sites and rights-of-way are estimated at \$0.7 million in 1994 and \$0.7 million in 1995 with a total of \$3.8 million for the 1994-1998 period. The estimated amount for this budget category has been reduced as compared to previous estimates because the siting and R/W costs for Bulk Power projects, Regional Supply and site acquisitions for new Area Supply substation projects have been included in each project estimate rather than summarized under this item.

The funds budgeted are for additional land requirements at existing generating plants, service center locations, and minor line rights-of-way.

2. Capitalization of Computer Software

This category includes computer software costs that have been designated as capital projects. Two large programs are included in the budget for 1994. They are:

a. Nuclear Information Management System

The proposed system would be a department-wide integrated information system providing easier and more efficient data access, and support most department's work processes. NIMS is a key element of the Nuclear Department's Information Management Strategic Plan (IMSP). Total estimated cost of the system is \$11.0 million with a completion date of 1996. \$4.0 million is budgeted in 1994.

b. Division Operations Information Strategic Plan

The proposed system includes replacement of the Customer Information System, developing Support Information Systems (Automated Mapping/Facilities Management/Geographical Information), and an integrated Work Management System. Estimated capital cost of this project is \$46.4 million with a completion date of 1997. In 1994, \$5.3 million is budgeted and \$20.1 million is budgeted for 1995.

3. Power Management System

The Power Management System (PMS) supports the reliable and economic operation of PP&L's generating plants, bulk power transmission system, regional and distribution supply function. This system was placed in service in 1989.

Budget Item 86008 was established for PMS modifications and improvements, and is based on a proposed PMS life cycle management program of expansion, product replacements and upgrades, and functional enhancements.

The overall goal of this item is based on a five-year plan to maintain the Power Management System at its present level as an Energy Management System (EMS).

This five-year plan was developed based on:

- a. Projections of electrical system facility changes.
- b. In-house analysis of future needs and trends.
- c. System obsolescence.
- d. Projections of the direction of computer technology.
- e. Projections of EMS technology identified within the industry.

A total of \$1.9 million is budgeted in 1994 and \$0.3 million is budgeted for 1995. The budgeted amount is significantly less when compared to the amounts budgeted last year for this category. The reason for the decrease is the change in accounting for computer equipment in this category from capital to lease.

4. Miscellaneous/Other

The remaining areas in the "other" category include purchase of office furniture and equipment, purchase of small tools and equipment, enhancements and small additions to the existing radio and telephone systems, the replacement of underground storage tanks, projects requiring small amounts to complete, research projects requiring capital expenditures, and other small items.

Estimated expenditures for these remaining portions of the "Other" category are \$8.3 million for 1994 and \$9.2 million for 1995.

CHAPTER 11

EXPOSURE TO ADDITIONAL CAPITAL FINANCING

CHAPTER 11
EXPOSURE TO ADDITIONAL CAPITAL FINANCING

A. EXPOSURE SUMMARY

In addition to the capital construction budget of about \$2135.4 million for the 1994-1998 period, there is an exposure to additional capital financing in the five-year period. Included are estimated expenditures for potential projects which may be required by the Company but not included in the capital construction budget. Table 11-1 shows the exposure by category and both by year and a total for the second five-year period (1999-2003).

B. CHANGES FROM LAST YEAR

1. FLUE GAS DESULFURIZATION - MARTINS CREEK 1 AND 2

Ambient air modeling studies are in progress to allow PP&L to demonstrate that SO₂ emissions from Martins Creek SES are not causing ground level ambient SO₂ violations near the plant. EPA's conservative ambient air models predict violations and PP&L is attempting to validate a less conservative and more appropriate air model. PP&L is gathering on-site meteorological data and has installed seven air monitoring stations at locations likely to be impacted. The agencies have approved a protocol for the modeling study and a one-year comparison of models began in the spring of 1992. The winning model will be used to set Martin Creek's emission limit.

It is anticipated that Martins Creek fuel sulfur reductions planned for Clean Air Act compliance will be adequate to meet the new emission limit. However, if deeper reductions are required additional fuel sulfur reductions are feasible and flue gas desulfurization will not be required. Therefore, Martins Creek FGD has been removed from the exposure tabulation.

**TABLE 11-1
EXPOSURE TO ADDITIONAL CAPITAL FINANCING
\$ MILLIONS - ESCALATED**

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>Total 1994-1998</u>	<u>Total 1999-2003</u>
<u>Potential Projects</u>							
o Ash Disposal - DER Proposed Solid Waste Regulations, Ground Water Protection Policy, Toxics Reduction	7.4	19.4	45.2	40.5	1.5	114.0	
o Clean Air Legislation - Exposures - Air Toxics							400.0
- NOx - Ozone							660.0
o Brunner Island/Martins Creek/Sunbury Cooling Towers							52.0
o Montour 2 - Replace LP Turbine Rotors	6.0	4.0				10.0	
o Martins Creek 3&4 - Replace Superheaters	1.5	19.5	19.0			40.0	
o Northern PP&L Bulk Power Reinforcement	0.2	2.8	13.0	4.0		20.0	
o Revenue - Supply to New EAF's -- Bethlehem Steel	1.0	2.0	1.0			4.0	
TOTAL	16.1	47.7	78.2	44.5	1.5	188.0	1,112.0

2. MONTOUR 2 - REPLACE LP TURBINE ROTORS

Dovetail cracking had been discovered on the low pressure turbine rotors on Brunner Island Unit 3 and Montour Unit 1. This cracking is not repairable and the low pressure rotors are being replaced on these units to avoid rotor failure and consequential long unit outage. Since Montour Unit 2 is similar in design and age to the other two units, it was thought that the same cracking might be found when the rotors were inspected in November 1992. If cracking was found, the rotors were expected to be replaced during the spring 1994 outage. Because this uncertainty would not be resolved until after the 1993-94 Budget was approved, this item was included as an exposure. Indeed, cracking was observed and replacement of the rotors is included in this year's budget.

3. MARTINS CREEK 3 AND 4 - REPLACE SUPERHEATERS

The fuel handling and burner work to make Martins Creek 3 and 4 capable of firing anything from 100 percent natural gas to 100 percent oil was included as specific budget items in the 1993-1994 Construction Budget at a cost of \$20 million. However, to burn more than 50 percent gas, the existing superheaters must be replaced with material able to withstand higher temperatures. The cost to replace the superheaters is about \$20 million per unit.

As the 1993-1994 budget was being prepared, the decision to proceed with gas co-firing was still pending. The decision to add the superheater replacements required additional analysis of projected fuel costs and generation benefits. Accordingly, superheater replacement was included as an exposure. Decision-making was completed in May, 1993 and superheater replacement will not be pursued at this time.

4. SUSQUEHANNA UNIT 2 - PURCHASE TWO SINGLE PHASE STEP-UP TRANSFORMERS

The "C" phase 500-24 kV generator step-up transformer (GSU) was replaced with an on-site spare single phase GSU in August 1991 because the in-service unit was producing a dangerously high level of combustible gases. The removed unit was determined to be damaged and will be scrapped. The three single phase GSU's then in service and the damaged unit which will be scrapped were McGraw-Edison (M-E) units. (There are also two single phase spare GSU's on-site which are Westinghouse units.)

Based on preliminary analysis of the "C" phase unit, there was a significant likelihood that the remaining three M-E GSUs might be inadequate to accommodate the existing and uprated output of Susquehanna Unit 2 for the long term. Therefore, one of the three M-E GSUs was replaced with one of the Westinghouse units during the fall 1992 Unit 2 refueling outage. Two new GSUs were included in last year's Bulk Power budget to replace the remaining two M-E GSUs during the spring 1994 Unit 2 refueling outage. Two additional new GSUs were identified in the 1993 Exposure List for purchase in 1994 if the M-E units were ultimately judged to be unacceptable for use even as spares and if it was determined that three single phase GSUs are required as on-site spares. These determinations have been made and, accordingly, two additional GSU's are included in this year's bulk power budget.

5. SUSQUEHANNA UNIT 1 - PURCHASE ONE GENERATOR STEP-UP TRANSFORMER

As part of the Susquehanna Unit 1 Uprate Project, there was a potential need to upgrade or replace the two 607 MVA three-phase GSUs for Susquehanna Unit 1. Based on preliminary analysis, the GSU upgrade, if required, would be accomplished by replacing one of the 607 MVA GSUs with a new GSU. The new GSU would be purchased and installed during the spring 1995 Unit 1 refueling outage and, accordingly, was included in last year's Exposure List. Completion of the analysis indicates that the existing GSU's are acceptable for uprated service; therefore, this project is deleted from the Exposure List.

C. POTENTIAL PROJECTS

1. PENNSYLVANIA DER RESIDUAL SOLID WASTE REGULATIONS, GROUND WATER PROTECTION, AND TOXICS REDUCTION

July 4, 1992, Pennsylvania DER promulgated new residual solid waste regulations that impact existing and future ash disposal facilities at PP&L's coal-fired plants. Future disposal areas must be sited and designed according to strict specification and existing facilities must be repermited by demonstrating compliance with environmental impact performance requirements. Nonconforming facilities must be taken out of service before July 4, 1997, and closed shortly thereafter with impervious caps and other abatement measures.

Martin's Creek Basin No. 4 and the Montour dry ash disposal facilities are expected to satisfy the regulations. However, the fly ash facilities at the other plants, the bottom ash basins at all the plants, and the pyrites basins at Montour and Brunner Island will be retired and replaced.

In a related activity, ground water degradation has occurred at Brunner Island and to a lesser degree at the other fossil plants due to seepage from the ash and pyrites disposal areas and the coal piles. Remedial actions are under way at Brunner Island and may be required at the other plants. Many of the actions required by the residual solid waste regulation will also address these ground water issues.

Another related activity is studies required by Pennsylvania DER to control trace metal emissions in the power plant wastewater streams. Toxics Reduction Evaluation (TRE) studies are in progress for Montour and Sunbury and are expected to begin at the other plants in the next few years. These studies are expected to result in plant modifications to recycle and reduce wastewater streams and installation of chemical treatment facilities to treat the water discharges. These actions are being integrated with the residual

solid waste disposal modifications and the ground water protection activities.

Waste disposal and water quality projects shown in the capital budget total \$97 million for the 1994-1998 period. A significant portion of these projects address the issues discussed above. Additional capital expenditures that may occur to address these issues total \$ 114 million for the 1994-1998 period.

2. CLEAN AIR ACT - EXPOSURES

a. AIR TOXICS - TITLE III

In addition to acid rain provisions, the 1990 Federal Clean Air Act Amendments require EPA to conduct a three-year study of hazardous air emissions from power plants. Adverse findings from this study could cause EPA to mandate additional ultra high efficiency particulate removal baghouses (with char injection for mercury removal) and/or flue gas scrubbing to remove vaporous trace metals and certain gaseous emission (HCL) at most plants.

Potential capital expenditures are \$400 million in the 1999-2003 time frame.

b. ADDITIONAL NO_x REDUCTIONS FOR AMBIENT OZONE ATTAINMENT - TITLE I

Title I of the Clean Air Act addresses areas that currently do not meet federal ambient air quality standards. Much of the east coast from Virginia to New England exceeds the ozone standard. Ozone is formed through a series of photochemical reactions that occur when volatile organic compounds (VOCs) and NO_x mix together in the presence of sunlight. VOCs are emitted by motor vehicles, paints, solvents and industry. NO_x is emitted from motor vehicles, industry and utilities.

Title IV, the acid rain title of the Clean Air Act already requires low-NO_x burners on seven Phase I units by 1995 and seven Phase II units by 2000. Title I requires that Reasonably Available Control Technology (RACT) for NO_x and VOCs be installed on all stationary sources within the Northeast Ozone Transport Region by May 1995. The transport region includes all of Pennsylvania in addition to all states in the Northeast from DC to Maine (excluding VT).

Pennsylvania DER, subject EPA approval, proposes to allow individual utility units in Pennsylvania to propose RACT for NO_x. PP&L expects DER to approve as RACT low-NO_x burners similar to the acid rain requirements. Therefore, in addition to \$69 million for NO_x burners on the seven Phase I units, the budget now shows \$52 million for NO_x burners on five of the seven Phase II units to be placed in service prior to 1995. Burner modifications are not planned for Martins Creek 3 & 4 to meet RACT.

Title I also requires photochemical transport modeling studies of NO_x and VOC emissions in the transport region to determine what reductions are needed to achieve ambient ozone attainment. If the results indicate further reductions are needed in power plant NO_x emissions, PP&L may be required to install additional NO_x reduction equipment such as Selective Catalytic Reduction (SCR) on some or all of the fossil units. The planned NO_x burners are expected to be economically and technically compatible with future installation of SCR, should it be required.

Potential additional capital expenditures for installing SCR on all fossil steam units is \$660 million in the 1999-2003 time frame.

3. BRUNNER ISLAND/MARTINS CREEK/SUNBURY COOLING TOWERS

Congress has been considering a reauthorization of the Clean Water Act which includes a possible deletion of the 316(a) variance that allows PP&L to discharge warm circulating river water into the Susquehanna and Delaware Rivers. Should this variance be deleted, the most severe solution would be the installation of cooling towers. The towers would be placed in service in the 1999-2003 time frame at a cost of \$52 million.

4. NORTHERN PP&L REINFORCEMENT

A second 500/230 kV transformer may be placed in service in 1997 at Susquehanna. This major reinforcement of the northern PP&L bulk power system would accommodate the connection of approximately 400 MW of new base load generation in northern PP&L. The new generation to be accommodated would be a combination of generation from PP&L and a group of NUG developers (designated as the Group 3 projects) who desire to connect generation in northern PP&L. Negotiations between PP&L and the Group 3 NUG developers are concluded, and mutual agreement on the allocation of the increased transmission capability provided by the reinforcement and other matters have been reached. The contribution of the Group 3 NUG projects toward the cost of the reinforcement, if installed, will be capped at \$75 per kW of NUG capacity.

5. REVENUE - SUPPLY TO POTENTIAL STEEL MILLS

Bethlehem Steel is proposing installation of new electric arc furnaces (EAFs) which will require new 230 kV supply facilities. Expenditures of approximately \$4 million may be required in 1994-96.

APPENDIX A

1994 LIST OF PROJECTS

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
311	SUSQUEHANNA SES-UNITS 1,2&CMN PIMS EQUIPMENT		180	981	1161
344	SUSQUEHANNA SES - UNIT 1 VALVE UPGRADE PROJECT-PHASE III	3644	135	466	4245
361	SUSQUEHANNA SES - UNIT 2 VALVE UPGRADE PROJECT-PHASE VI	3644	720	559	4923
362	SUSQUEHANNA SES - UNIT 1 CHILLED WATER SYSTEM ENHANCEMENTS		18	1767	1785
363	SUSQUEHANNA SES - UNIT 2 CHILLED WATER SYSTEM ENHANCEMENTS		18	1767	1785
364	SUSQUEHANNA SES - COMMON CHILLED WATER SYSTEM ENHANCEMENTS		9	392	401
369	SUSQUEHANNA SES - UNIT 1 CONTAINMENT RADIATION MONITORS	3226	1501		4727
370	SUSQUEHANNA SES - UNIT 2 CONTAINMENT RADIATION MONITORS	2598	1500		4098
371	SUSQUEHANNA SES- PRODUCTION FACILITIES ADDITION	707	1800	9479	11986
373	SUSQUEHANNA SES - UNIT 2 SNUBBER ELIMINATION	6894	888		7782

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
379	SUSQUEHANNA SES - UNIT 1 POWER UPRATE PROJECT	10339	2700	1677	14716
393	SUSQUEHANNA SES - UNIT 2 VALVE COMPLIANCE PROGRAM	3105	1877		4982
397	SUSQUEHANNA SES - UNIT 2 POWER UPRATE PROJECT	11238	2700	1677	15615
402	SUSQUEHANNA SES - UNIT 1 MECHANICAL STRESS IMPROVEMENT PROJECT PROCESS	743	20	873	1636
403	SUSQUEHANNA SES - UNIT 2 MECHANICAL STRESS IMPROVEMENT PROJECT PROCESS	368	630	871	1869
406	SUSQUEHANNA SES - UNITS 1&2 CONDENSER DEMIN VESSEL RESIN TRANSFER	501	143	783	1427
408	SUSQUEHANNA SES - COMMON SECURITY SYSTEM UPGRADE-PHASE 2		371	6191	6562
417	SUSQUEHANNA SES - UNIT 1 EXTRACTION STEAM PIPING REPLACEMENT	3604	450	8064	12118
418	SUSQUEHANNA SES - UNIT 2 EXTRACTION STEAM PIPING REPLACEMENT	500	2700	9197	12397
425	SUSQUEHANNA SES - UNIT 1 CONDENSER LEAK DETECTION	362	310		672

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
426	SUSQUEHANNA SES - UNIT 1 ION CHROMATOGRAPH	125	256		381
427	SUSQUEHANNA SES - UNIT 1 CHEMISTRY SAMPLE COMPONENTS REMOVAL	116	315		431
428	SUSQUEHANNA SES - UNIT 2 CONDENSER LEAK DETECTION	362	309		671
429	SUSQUEHANNA SES - UNIT 2 ION CHROMATOGRAPH	90	255		345
430	SUSQUEHANNA SES - UNIT 2 CHEMISTRY SAMPLE COMPONENTS REMOVAL	105	306		411
432	SUSQUEHANNA SES - UNIT 2 DEGRADED GRID MODIFICATIONS	1067	225		1292
435	SUSQUEHANNA SES - UNIT 1 DEGRADED GRID MODIFICATIONS	1260	225		1485
438	SUSQUEHANNA SES - UNIT 2 POWER UPRATE MODIFICATIONS- JET PUMP SENSING LINE CLAMP	2423	2025	512	4960
439	SUSQUEHANNA SES- SPENT FUEL STORAGE ADDITIONS	453	2250	5903	8606
440	SUSQUEHANNA SES - UNIT 1 REPLACE PLANT COMPUTER SYSTEM	423	2250	7683	10356
441	SUSQUEHANNA SES - UNIT 2 REPLACE PLANT COMPUTER SYSTEM	423	2250	7683	10356

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
442	SUSQUEHANNA SES - UNIT 1 REACTOR CORE STABILITY	450	132	2638	3220
443	SUSQUEHANNA SES - UNIT 2 REACTOR CORE STABILITY	302	131	2396	2829
445	SUSQUEHANNA SES - UNIT 2 REACTOR PROTECTION SYSTEM (RPS) UPGRADE	244	350		594
447	SUSQUEHANNA SES - UNIT 2 MSIV JET IMPINGEMENT	292	130		422
450	SUSQUEHANNA SES - UNIT 1 CONTROL ROD REPLACEMENT-1994		447		447
456	SUSQUEHANNA SES - COMMON CIRC. WATER EXPANSION JOINT REPLACEMENT	90	68	938	1096
463	SUSQUEHANNA SES - UNIT 1 CONDENSER TUBE CLEANING PROJECT	12	131	1115	1258
464	SUSQUEHANNA SES - UNIT 2 CONDENSER TUBE CLEANING PROJECT	10	131	1115	1256
465	SUSQUEHANNA SES - UNIT 1 DIGITAL FEEDWATER CONTROL		203	466	669
466	SUSQUEHANNA SES - UNIT 2 DIGITAL FEEDWATER CONTROL		203	466	669

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
467	SUSQUEHANNA SES - UNIT 1 DOSE ACCESS CONTROL SYSTEM	630	663		1293
469	SUSQUEHANNA SES - UNIT 1 ECCS KEEP-FILL UPGRADE	10	138	233	381
470	SUSQUEHANNA SES - UNIT 2 ECCS KEEP-FILL UPGRADE		135	233	368
471	SUSQUEHANNA SES - UNIT 1 FUEL POOL COOLING MODS	360	185		545
472	SUSQUEHANNA SES - UNIT 2 FUEL POOL COOLING MODS	180	212		392
477	SUSQUEHANNA SES - UNIT 1 HEAT EXCHANGERS (LONG TERM)	12	336		348
478	SUSQUEHANNA SES - UNIT 2 HEAT EXCHANGERS (LONG TERM)	11	335		346
479	SUSQUEHANNA SES - UNIT 1 IPE UPGRADES	54	194	466	714
480	SUSQUEHANNA SES - UNIT 2 IPE UPGRADES	54	193	466	713
482	SUSQUEHANNA SES - UNIT 1 POWER UPRATE MODIFICATIONS	2422	2025	512	4959
483	SUSQUEHANNA SES - UNIT 1 REACTOR RECIRC PUMP SHAFT REPLACEMENT	23	439	2329	2791

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
484	SUSQUEHANNA SES - UNIT 2 REACTOR RECIRC PUMP SHAFT REPLACEMENT	23	438	2329	2790
485	SUSQUEHANNA SES - UNIT 1 REACTOR WATER LEVEL INDICATION	1080	46		1126
486	SUSQUEHANNA SES - UNIT 2 REACTOR WATER LEVEL INDICATION	360	360		720
487	SUSQUEHANNA SES - UNIT 1 REFUELING BRIDGE UPGRADE		23	216	239
488	SUSQUEHANNA SES - UNIT 2 REFUELING BRIDGE UPGRADE		23	216	239
491	SUSQUEHANNA SES - UNIT 1 STEAM TUNNEL COOLING TURBINE BUILDING	11	169	233	413
492	SUSQUEHANNA SES - UNIT 2 STEAM TUNNEL COOLING TURBINE BUILDING	12	168	233	413
499	SUSQUEHANNA SES - UNIT 1 VIBRATION MONITORING MAJOR ROTATING EQUIPMENT	248	23	446	717
500	SUSQUEHANNA SES - UNIT 2 VIBRATION MONITORING MAJOR ROTATING EQUIPMENT		360	73	433
501	SUSQUEHANNA SES - COMMON PURCHASE A DRYER/ SEPARATOR SYSTEM	828	136		964

1994 CAPITAL CONSTRUCTION BUDGET
 EXISTING GENERATION - NUCLEAR
 LIST OF PROJECTS

10/14/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
504	SUSQUEHANNA SES - UNIT 2 REPLACE ECCS SUCTION STRAINERS		450		450
507	SUSQUEHANNA SES - COMMON CIRCULATING WATER PUMPHOUSE CRANE REPLACEMENT	90	242		332
508	SUSQUEHANNA SES - UNIT 2 CIRCULATING WATER EXPANSION JOINT REPLACEMENT	225	43	379	647
509	SUSQUEHANNA SES - COMMON VENT STACK MONITORING (PHASE 2)	11	472	341	824
511	SUSQUEHANNA SES - UNIT 2 INSTALL KEYLOCK SWITCHES	282	126		408
880	SUSQUEHANNA SES - COMMON CAPITAL SPARE PARTS - 1994		1530		1530
885	SUSQUEHANNA SES - COMMON CAPITAL OFFICE FURNITURE AND EQUIPMENT-TOOLS AND EQUIPMENT		1890		1890
890	SUSQUEHANNA SES SMALL PROJECTS		225		225
900	SUSQUEHANNA SES - MINOR WORK PROJECTS - CAPITAL		900		900
910	SUSQUEHANNA SES SITE SERVICES - CAPITAL		1080		1080
920	SUSQUEHANNA SES MAINTENANCE - CAPITAL REPLACEMENTS		833		833

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

10/14/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
980	SUSQUEHANNA SES UNAPPROVED OR POTENTIAL PROJECTS		185		185
	SUSQUEHANNA SES UNIDENTIFIED PROJECTS		7939		7939
TOTAL EXISTING GENERATION-NUCLEAR *		66646	53778	84364	204788

* Excludes \$202,000 in 1994 for project closeouts which have been budgeted in:
BI 89002 - PROJECTS REQUIRING SMALL AMOUNTS TO COMPLETE

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
1028	MARTINS CREEK SES - UNIT 1 REPLACE GENERATOR EXCITATION SYSTEM	160	744		904
1054	MARTINS CREEK SES - UNIT 4 REPLACE BOILER FEED PUMP TURBINE GOVERNORS	80	75		155
1081	MARTINS CREEK SES - UNIT 4 REPLACE COMPUTER AND BOILER CONTROLS	3044	1043		4087
1094	MARTINS CREEK SES - UNIT 4 AUXILIARY STEAM DESUPERHEATER	562	266		828
1096	MARTINS CREEK SES - UNIT 4 REPLACE CORNER TUBES	181	486		667
1102	MARTINS CREEK SES - UNIT 1 MODIFY PRECIPITATORS	216	1784		2000
1103	MARTINS CREEK SES - UNIT 1 INSTALL LOW NOX BURNERS	433	5369		5802
1104	MARTINS CREEK SES - UNIT 2 MODIFY PRECIPITATORS	216	1784		2000
1105	MARTINS CREEK SES - UNIT 2 INSTALL LOW NOX BURNERS	383	4562		4945
1111	MARTINS CREEK SES - UNIT 2 REPLACE REAR SLOPE REFRACTORY	17	278		295
1121	MARTINS CREEK SES - UNITS 1&2 ASH BASIN #1 CLOSURE	150	129	1471	1750

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
1122	MARTINS CREEK SES - UNIT 1 REPLACE T1A LOAD CENTER	248	651		899
1132	MARTINS CREEK SES - UNITS 3&4 CONTINUOUS EMISSION MONITORS	2038	1817		3855
1136	MARTINS CREEK SES - UNIT 4 REPLACE AIR HEATER BASKETS	400	125		525
1137	MARTINS CREEK SES - UNIT 3 REPLACE TURBINECONTROL SYSTEMS AND GOVERNING CONTROL SYSTEMS	190	2820		3010
1138	MARTINS CREEK SES - UNIT 4 REPLACE TURBINECONTROL SYSTEMS AND GOVERNING CONTROL SYSTEMS	156	132	2821	3109
1140	MARTINS CREEK SES - UNITS 1&2 INSTALL BOTTOM ASH HANDLING SYSTEM	333	114	1977	2424
1143	MARTINS CREEK SES - UNIT 3 CONVERT TO GAS-OIL CO-FIRING		446	14427	14873
1144	MARTINS CREEK SES - UNIT 4 CONVERT TO GAS-OIL CO-FIRING		240	11703	11943
1145	MARTINS CREEK SES - UNITS 3&4 REPLACE ASH LINES	50	1025		1075
1146	MARTINS CREEK SES - UNIT 3 REPLACE GENERATOR ROTOR	581	5413		5994
1147	MARTINS CREEK SES - UNIT 4 REPLACE GENERATOR ROTOR	581	4330	1121	6032

1994 CAPITAL CONSTRUCTION BUDGET
 EXISTING GENERATION - FOSSIL/HYDRO
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
1148	MARTINS CREEK SES - UNITS 1&2 INSTALL GROUNDING SYSTEM	158	366		524
1149	MARTINS CREEK SES - UNIT 1 SO3 GAS CONDITIONING	150	3050		3200
1150	MARTINS CREEK SES - UNIT 2 SO3 GAS CONDITIONING	188	3012		3200
1151	MARTINS CREEK SES - UNIT 3 REPLACE VOLTAGE REGULATORS	22	367		389
1152	MARTINS CREEK SES - UNIT 4 REPLACE VOLTAGE REGULATORS	20	107	271	398
1157	MARTINS CREEK SES - UNIT 1 REPLACE RADIANT SUPERHEATER TUBING	32	1159		1191
1159	MARTINS CREEK SES - UNIT 2 REPLACE CONDENSER TUBING	30	575		605
1160	MARTINS CREEK SES - UNIT 2 REPLACE FEEDWATER HEATER #1	13	207		220
2025	SUNBURY SES - UNIT 1 TURBINE REHABILITATION	8500	400	3705	12605
2062	SUNBURY SES - UNIT 1 REPLACE ECONOMIZER 1A & 1B	157	99	2116	2372
2066	SUNBURY SES - UNIT 1 REPLACE 1A EXTENDED SURFACE BRICK	60	45	471	576

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2067	SUNBURY SES - UNIT 1 REPLACE 1B EXTENDED SURFACE BRICK	385	45	471	901
2089	SUNBURY SES - UNIT 3 INSTALL LOW NOX BURNERS	3715	1291		5006
2090	SUNBURY SES - UNIT 4 INSTALL LOW NOX BURNERS	238	2641	2428	5307
2096	SUNBURY SES - COAL YARD HYDRAULIC ACTUATORS	50	200		250
2105	SUNBURY SES - UNITS 1&2 REPLACE BOILER ROOM ROOF	32	416		448
2106	SUNBURY SES - REPLACE TURBINE AUXILIARY BAY ROOF	11	8	200	219
2109	SUNBURY SES - UNIT 1 REPLACE LOWER WATERWALL SLOPE	129	58	1990	2177
2111	SUNBURY SES - UNIT 1 REPLACE BOILER 1A & 1B ASH BOTTOMS	800	145	3472	4417
2113	SUNBURY SES - UNIT 1 REPLACE STACK BREECHING EXPANSION JOINTS	24	13	127	164
2126	SUNBURY SES - UNIT 3 PRECIPITATOR MODIFICATIONS	100	1400		1500
2127	SUNBURY SES - UNIT 4 PRECIPITATOR MODIFICATIONS	75	492	1160	1727

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2128	SUNBURY SES - UNIT 1 REPLACE GENERATOR ROTOR	50	2891	200	3141
2134	SUNBURY SES - UNIT 4 REPLACE LP TURBINE INNER CYLINDER AND ROTOR		80	6104	6184
2140	SUNBURY SES - ADD RIVER INTAKE DEBRIS COLLECTION SYSTEM	11	143		154
2141	SUNBURY SES - CLOSE ASH BASIN NO. 1	562	105	5154	5821
2142	SUNBURY SES - CLOSE ASH BASIN NO. 2	701	100	6719	7520
2143	SUNBURY SES - UNIT 3 INSTALL PERMANENT AMMONIA CONDITIONING	100	866		966
2144	SUNBURY SES - UNIT 4 INSTALL PERMANENT AMMONIA CONDITIONING	100	497	672	1269
2145	SUNBURY SES - UNITS 1&2 INSTALL TURBINE OIL MIST ELIMINATOR	10	36		46
2148	SUNBURY SES - UNIT 1 REPLACE 1A AND 1B AIR PORT WALL INSULATION		89	1978	2067
2149	SUNBURY SES - UNIT 1 REPLACE 1A AND 1B BASKETED HEATING ELEMENTS		26	463	489

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2153	SUNBURY SES-UNIT 3-CONTROL HOUSE REPLACE RELAYS, GENERATOR PANELS AND CONTROL CABLES		61	1112	1173
2155	SUNBURY SES - UNIT 3 REPLACE 3A AND 3BMILL END CASTINGS	378	309		687
2156	SUNBURY SES - UNIT 4 REPLACE 3A AND 3BMILL END CASTINGS		378	319	697
2157	SUNBURY SES - CONSTRUCTION LOCKER AND LAUNDRY FACILITIES		92	858	950
2158	SUNBURY SES - UNIT 3 REPLACE TURBINE GOVERNOR CONTROL SYSTEM	17	251	402	670
2164	SUNBURY SES - UNIT 4 REPLACE GENERATOR ROTOR		73	3251	3324
2165	SUNBURY SES - UNIT 1 REMOVE EVAPORATOR		145		145
2166	SUNBURY SES - UNIT 2 REMOVE EVAPORATOR		158		158
2167	SUNBURY SES - UNIT 3 REMOVE EVAPORATOR		158		158
2169	SUNBURY SES - REPLACE FILTERED WATER PIPING	29	86	1088	1203
2411	SUNBURY SES - UNIT 2 REPLACE ID FAN MAGNETIC COUPLINGS	56	31	685	772

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2414	SUNBURY SES - UNIT 1A REPLACE ID FAN MAGNETIC COUPLINGS	30	259	98	387
2673	SUNBURY SES - UNIT 1 REPLACE 4KV & 480V SWITCHGEAR	1930	250	497	2677
3004	HOLTWOOD SES - UNIT 17 REPLACE 480VAC & 230VDC SWITCHGEAR	154	296	1240	1690
3036	HOLTWOOD SES - CLOSE ASH BASIN NO. 2- PHASE 1	70	64	5901	6035
4023	BRUNNER ISLAND SES - UNIT 3 REPLACE HP TURBINE BUCKETS		100		100
4024	BRUNNER ISLAND SES - UNIT 2 REPLACE GENERATOR EXCITATION SYSTEM	1150	475		1625
4033	BRUNNER ISLAND SES MECHANICAL TEST FACILITIES	3	108		111
4034	BRUNNER ISLAND SES ELECTRICAL MAINTENANCE & O&S BUILDING EXPANSION	860	300		1160
4061	BRUNNER ISLAND SES NEW PLANT WAREHOUSE	1100	200		1300
4064	BRUNNER ISLAND SES CONSTRUCTION DEPARTMENT EXPAND AND UPGRADE FACILITIES	700	900		1600

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
4095	BRUNNER ISLAND SES - UNIT 3 REPLACE DC BATTERY CHARGER AND UPS TRANSFER SWITCH	61	349		410
4116	BRUNNER ISLAND SES - COAL PILE LINER	2040	1094	2304	5438
4135	BRUNNER ISLAND SES - UNIT 2 REPLACE BOILER CONTROL SYSTEM	3193	6208		9401
4136	BRUNNER ISLAND SES - UNIT 3 REPLACE BOILER CONTROL SYSTEM	3781	6619		10400
4139	BRUNNER ISLAND SES - UNIT 2 INSTALL LOW NOX BURNERS	1018	13917		14935
4140	BRUNNER ISLAND SES - UNIT 3 INSTALL LOW NOX BURNERS	881	16017		16898
4142	BRUNNER ISLAND SES - UNIT 2 GAS CONDITIONING	100	3200		3300
4143	BRUNNER ISLAND SES - UNIT 2 REPLACE HORIZONTAL REHEATER AND SUPERHEATER	30	360	5806	6196
4155	BRUNNER ISLAND SES - UNIT 3 REPLACE IP TURBINE INNER SHELL		2595		2595
4156	BRUNNER ISLAND SES - UNIT 3 REPLACE IP TURBINE 11TH STAGE DIAPHRAGMS		923		923
4158	BRUNNER ISLAND SES - UNIT 3 PURCHASE SPARE IP ROTOR	837	2573		3410

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
4164	BRUNNER ISLAND SES - ADD DRY FLY ASH HANDLING SYSTEM	7204	8924	9237	25365
4172	BRUNNER ISLAND SES - UNIT 2 REPLACE GROUNDED COLLECTION SYSTEM	500	2000		2500
4187	BRUNNER ISLAND SES - UNIT 1 REPLACE IP/LP ROTOR	2200	1627	150	3977
4188	BRUNNER ISLAND SES - DRY FLY ASH CREW AND SERVICE BUILDING	37	339		376
4190	BRUNNER ISLAND SES - UNIT 3 REPLACE DEMINERALIZER CONTROL SYSTEM	79	432		511
4192	BRUNNER ISLAND SES - INSTALL SLURRY WALL AND CAP ON BASIN #3	830	5768		6598
4196	BRUNNER ISLAND SES - UNIT 3 REPLACE AIR PREHEAT COILS	65	975		1040
4201	BRUNNER ISLAND SES - UNIT 3 REPLACE SUPERHEATER DESUPERHEATER STATIONS	76	1141		1217
4203	BRUNNER ISLAND SES - REPLACE TRIPPER FLOOR LIGHTING SYSTEM	180	81		261
4204	BRUNNER ISLAND SES - UNIT 2 REPLACE "A" AIR HEATER HOT AIR OUTLET EXPANSION JOINT	16	194		210

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
4205	BRUNNER ISLAND SES - CLOSE ASH BASIN #6	170	186	5604	5960
4206	BRUNNER ISLAND SES - CLOSE ASH BASIN #7	220	240	7114	7574
4212	BRUNNER ISLAND SES - UNIT 3 REPLACE 3B BOILER FEED PUMP TURBINE ROTOR AND STATIONARY BLADING	50	1210		1260
4213	BRUNNER ISLAND SES - UNIT 2 REPLACE ECONOMIZER	49	293	4960	5302
4215	BRUNNER ISLAND SES - UNIT 2 REPLACE AIR HEATER BASKETS	24	417		441
4216	BRUNNER ISLAND SES - UNITS 1&2 INSTALL MAIN STATION SUMP OIL/WATER SEPARATOR	6	83	138	227
4218	BRUNNER ISLAND SES - INSTALL FUEL OIL TANK FALSE BOTTOMS AND DIKE LINERS	223	362		585
4219	BRUNNER ISLAND SES - UNIT 2 REPLACE HOT REHEAT PIPE - PHASE 1	85	859		944
4220	BRUNNER ISLAND SES - UNIT 2 REPLACE HOT REHEAT PIPE - PHASE 2		28	741	769
4221	BRUNNER ISLAND SES - UNIT 3 REPLACE ID BOOSTER FAN DAMPER	42	1347		1389

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
4550	BRUNNER ISLAND SES - UNIT 2 REBLADE HP TURBINE ROTOR	14	166	1695	1875
5019	MONTOUR SES - UNIT 1 REPLACE COMPUTER	300	266	1110	1676
5021	MONTOUR SES - UNIT 2 REPLACE COMPUTER	800	1986		2786
5044	MONTOUR SES-OFFICE & SERVICES BUILDING EXPANSION	30	306		336
5057	MONTOUR SES & BRUNNER ISLAND SES UNIT 3- PURCHASE SPARE SULZER VALVE BODIES	175	133		308
5084	MONTOUR SES - UNIT 1 REPLACE CONTROL SYSTEM	107	1036	3992	5135
5085	MONTOUR SES - UNIT 2 REPLACE CONTROL SYSTEM	120	297	4166	4583
5103	MONTOUR SES - UNIT 1 INSTALL LOW NOX BURNERS	535	6000	10560	17095
5104	MONTOUR SES - UNIT 1 INSTALL FLUE GAS DESULFURIZATION		1000	329707	330707
5106	MONTOUR SES - UNIT 2 INSTALL LOW NOX BURNERS	830	17307		18137
5119	MONTOUR SES - UNIT 1 REPLACE GENERATOR RETAINING RINGS		47	434	481

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
5123	MONTOUR SES - UNIT 1 PURCHASE SPARE GENERATOR STATOR BARS		341		341
5136	MONTOUR SES - CONTINUOUS EMISSION MONITORS	2032	1778		3810
5139	MONTOUR SES - UNIT 2 REPLACE EHC SYSTEM ANALOG CONTROLS	195	611		806
5149	MONTOUR SES - UNIT 1 REWIND GENERATOR ROTOR		96	1467	1563
5150	MONTOUR SES - UNIT 2 REPLACE IP TURBINE INNER CYLINDER		1106	1360	2466
5152	MONTOUR SES - UNIT 2 REPLACE PRECIPITATOR TR CONTROLS	320	62		382
5153	MONTOUR SES - CLOSE ASH AREA #2	80	345		425
5154	MONTOUR SES - CLOSE ASH BASIN #1 SECTION A	261	270	6969	7500
5156	MONTOUR SES-NEW BOTTOM ASH FACILITIES	28	121	1793	1942
5157	MONTOUR SES - NEW PYRITES FACILITIES	18	56	827	901
5163	MONTOUR SES - UNIT 1 REPLACE TURBINE SUPERVISORY	10	15	208	233

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
5164	CONTROLS AND VIBRATION MONITORING SYSTEM MONTOUR SES - UNIT 2 REPLACE TURBINE SUPERVISORY CONTROLS AND VIBRATION MONITORING SYSTEM	28	341		369
5166	MONTOUR SES - INSTALL COAL CRUSHER BYPASS GRID	11	191		202
5167	MONTOUR SES - UNIT 1 REPLACE FEEDWATER HEATER 2A/B AND 3A/B	93	186	3075	3354
5168	MONTOUR SES - UNIT 2 REPLACE FEEDWATER HEATER 2A/B AND 3A/B	217	3047		3264
5169	MONTOUR SES-CONSTRUCT COAL YARD EQUIPMENT WASH PAD		171		171
5171	MONTOUR SES - UNIT 1 REPLACE SULFUR BURNING GAS CONDITIONING SYSTEM CONTROLS		32	336	368
5172	MONTOUR SES - UNIT 2 REPLACE SULFUR BURNING GAS CONDITIONING SYSTEM CONTROLS		5	122	127
5173	MONTOUR SES - UNIT 2 REWIND GENERATOR ROTOR	62	871		933
5174	MONTOUR SES - UNIT 2 REPLACE COOLING TOWER DISTRIBUTION PIPING AND HOT WATER BASIN	113	1587		1700

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
5175	MONTOUR SES - INSTALL FLY ASH SCREENING FACILITY		650		650
5221	MONTOUR SES - ASH DISPOSAL AREA 3 - C&D CELLS		150	7150	7300
6005	HOLTWOOD HES - REPLACE 13.2KV OCBS IN HYDRO BUS ROOM	12170	3355	579	16104
6016	HOLTWOOD HES - UPGRADE LOW VOLTAGE AC STATION SERVICE	1562	350		1912
6022	HOLTWOOD HES - REPLACE GENERATOR EXCITATION SYSTEM	1900	1113		3013
6030	HOLTWOOD HES - REPLACE GSU TRANSFORMERS - PHASE II	921	1050		1971
6031	HOLTWOOD HES - REPLACE SERVICE WATER PIPING	257	110		367
6033	HOLTWOOD HES - REPLACE #1 GOVERNOR PUMP	66	247		313
6034	HOLTWOOD HES - INSTALL FISH PASSAGE FACILITIES	650	1500	8850	11000
6036	HOLTWOOD HES - REPLACE HYDRO GOVERNOR CONTROL SYSTEM	150	196		346
6037	HOLTWOOD HES - INSTALL PARTIAL DISCHARGE ANALYSIS COUPLERS	37	37		74

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
6120	HOLTWOOD HES - UPGRADE 230V DC STATION SERVICE SYSTEM	1300	766		2066
7012	HARRISBURG CTG - REPLACE EXHAUST STACKS-PHASE 1	2	375		377
7022	LOCK HAVEN CTG-REPLACE GENERATOR ROTOR AND STATOR WINDINGS		655		655
7510	KEYSTONE SES - PP&L SHARE VARIOUS ADDNS & REPLACEMENTS		3960		3960
7511	KEYSTONE SES - UNITS 1 & 2 INSTALL LOW NOX BURNERS	447	3347	3241	7035
7750	CONEMAUGH SES - PP&L SHARE VARIOUS ADDNS & REPLACEMENTS		1866		1866
7751	CONEMAUGH SES - UNITS 1 & 2 INSTALL LOW NOX BURNERS	2000	2317		4317
7752	CONEMAUGH SES - UNIT 1 INSTALL FLUE GAS DESULFURIZATION WITH SPARE	23470	13280		36750
7753	CONEMAUGH SES - UNIT 2 INSTALL FLUE GAS DESULFURIZATION	3850	2973	2564	9387
7910	ASBESTOS PROGRAM - VARIOUS LOCATIONS		2415		2415
7960	GENERATING STATIONS UNANTICIPATED REPLACEMENTS		3000		3000

**1994 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
7980	GENERATING STATIONS MINOR REPLACEMENTS		2000		2000
7990	GENERATING STATIONS MINOR ADDITIONS		700		700
8000	GENERATION PROJECTS UNCOMMITTED		2000		2000
*	EXISTING GEN - FOSSIL/HYDRO ADJUSTMENT		-45161		-45161
TOTAL	EXISTING GEN-FOSSIL AND HYDRO	112077	182644	512931	807652

Adjustment for unanticipated future carryovers and/or project deferrals

**1994 CAPITAL CONSTRUCTION BUDGET
BULK POWER TRANSMISSION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8008	LACKAWANNA 230-69KV SUB-INSTALL CONTINUOUS MONITORING RECORDER AND UPGRADE RELAYING	58	158	679	895
8009	MARTINS CREEK SES UPGRADE PROTECTIVE RELAYING ON UNITS 1&2 AND IN THE OLD 230KV SWCHYRD & 69KV SWCHYRD	1508	1140		2648
8011	SIEGFRIED 230-69KV SUBSTATION- INSTALL FAULT RECORDER AND ALARM MANAGEMENT SYSTEM AND REPLACE SUPERVISORY REMOTE	584	100		684
8025	SUSQUEHANNA 230KV SWITCHYARD- RETERMINATE JENKINS 230 KV LINE	2	78	737	817
8034	SUSQUEHANNA 230KV SWITCHYARD- REPLACE CONTROL CUBICLE	1557	2022	1123	4702
8036	SUSQUEHANNA T-10 TAP 230KV SWITCHYARD	1371	2058	4471	7900
8037	ALBURTIS 500KV SUBSTATION- MODIFY CARRIER EQUIPMENT AND INSTALL ALARM MANAGEMENT SYSTEM	200	128		328
8038	HOSENSACK 500KV SUBSTATION- MODIFY CARRIER EQUIPMENT AND INSTALL ALARM MANAGEMENT SYSTEM	150	110		260
8039	SUSQUEHANNA SES - UNIT 2 PURCHASE OF GSU'S	200	8800		9000

1994 CAPITAL CONSTRUCTION BUDGET
 BULK POWER TRANSMISSION
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8042	NORTHERN PL 500KV TRANSMISSION- REPLACE PRIMARY #1 PILOT RELAY SCHEME (PHASE I AND II)	21	1026	3188	4235
8043	BRUNNER ISLAND SES-REPLACE 230KV SWITCHYARD DISCONNECTS	82	285	474	841
8046	JUNIATA 230KV SUBSTATION-MODIFY CAPACITOR BANK 1 RELAYS		50		50
8047	ALBURTIS 500KV SUBSTATION-MODIFY CAPACITOR BANKS 2 AND 3 RELAYS		50		50
8048	SIEGFRIED 230/69KV SUBSTATION- INSTALL DOUBLE BREAKER BAY ARRANGEMENT		25	230	255
8080	MARTINS CREEK 230KV SWITCHYARD- INSTALL BAY 0 AND REARRANGE LINE AND GENERATOR LEAD TERMINALS	1676	2186		3862
8680	BUSHKILL SWITCHING STATION- REPLACE TONE RELAYS, INSTALL PT'S AND UPGRADE MISC. STATION EQUIPMENT	5	29	274	308
8690	BRUNNER ISLAND & WEST HEMPFIELD-REPLACE TONE RELAY SCHEMES	5	32	633	670
8700	MARTINS CREEK, NORTHWOOD & QUARRY SUBS-UPGRADE TONE RELAY SCHEMES	5	15	980	1000

1994 CAPITAL CONSTRUCTION BUDGET
 BULK POWER TRANSMISSION
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8840	QUARRY-UPGRADE MARTINS CREEK #2 LINE PROTECTION	14	69	648	731
9005	HOSENSACK/BUXMONT 230KV LINE- RECONDUCTOR FOR HIGHER CAPACITY	120	65	1555	1740
9960	REPLACE OR MODIFY THE DC STATION BATTERY AT VARIOUS BULK POWER STATIONS		104		104
9970	BULK POWER IMPROVEMENTS		300		300
	TOTAL BULK POWER TRANSMISSION	7558	18830	14992	41380

1994 CAPITAL CONSTRUCTION BUDGET
 SUSQUEHANNA REGION
 LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
10001	FRACKVILLE-EXCHANGE/EXCHANGE- CENTRALIA 69KV LINE REMOVAL/ UPGRADE TO KENRO << OLD BI # 40073 >>	78	43	652	773
10002	EXCHANGE 69KV SWITCHING STATION REMOVAL AND INSTALL NEW CONTROL CUBICLE AND SCADA << OLD BI # 40074 >>	34	322	214	570
10003	FRACKVILLE-FISHBACH #3 69KV LINE RECONSTRUCT 2.5 MILES TO 138KV D/C FROM OAK HILL SUBSTATION TO FISHBACH << OLD BI # 40075 >>	250	61	1815	2126
10004	FRACKVILLE-FISHBACH #2 69KV LINE RECONSTRUCT 1.5 MILES TO 138KV D/C FROM WADESVILLE SUBSTATION TAP TO FISHBACH SUBSTATION << OLD BI # 40076 >>	350	8	1134	1492
10005	FISHBACH SUBSTATION- MODERNIZE 69KV DIFFERENTIAL RELAY SCHEME AND SCADA << OLD BI # 40077 >>	100	19	584	703
10006	GIRARDVILLE 138KV TAP LINE - 1.0 MILE << OLD BI # 40080 >>	48	47	1027	1122
10010	NORTH SHAMOKIN 138/69KV TAP (0.2 MILE) << OLD BI # 40089 >>	166	83	206	455

1994 CAPITAL CONSTRUCTION BUDGET
 SUSQUEHANNA REGION
 LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
10011	SUNBURY-FRACKVILLE 69KV #1 LINE- REBUILD ELDRED TO MOWRY (2.2 MI) << OLD BI # 40092 >>	216	304	1185	1705
10014	SUNBURY-EXCHANGE #2 69KV LINE- REPLACE OHGWS 24 MILES << OLD BI # 40095 >>	113	1105		1218
10086	BERWICK SUBSTATION- UPGRADE 69KV RELAYING AND OTHER FACILITIES	71	843		914
10088	CLINTON-MUNCY 69KV LINE- REBUILD SECTION FOR 138KV DOUBLE CIRCUIT	117	241	1137	1495
10090	LYCOMING-LOCK HAVEN 1&2 69KV LN- RECONSTRUCT PART 1	1077	1077	5380	7534
10091	LYCOMING-LOCK HAVEN 1&2 69KV LN- RECONSTRUCT PART 2	88	50	7507	7645
10094	LYCOMING 230-69KV SUBSTATION- REARRANGE 69KV YARD	35	396		431
TOTAL REGIONAL SUPPLY		2743	4599	20841	28183
AREA SUPPLY					
10308	FLEMINGTON 64-01 12KV LINE- RECONDUCTOR/RELOCATE THE SUGAR RUN TAP (PHASE 1) << OLD BI # 10508 >>		10	143	153
10309	FLEMINGTON 64-01 12KV LINE- RECONDUCTOR/RELOCATE THE SUGAR RUN TAP (PHASE 2)		13	149	162

1994 CAPITAL CONSTRUCTION BUDGET
SUSQUEHANNA REGION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
	<< OLD BI # 10509 >>				
10407	LOCK HAVEN 65-6 12KV LINE- RECONDUCTOR 2.0 MILES OF THE LOCK HAVEN #6 SECTION	14	167		181
	<< OLD BI # 10707 >>				
10502	WOOLRICH 56-1 12 KV LINE- RECONDUCTOR/RELOCATE A PORTION OF THE NO. 1 SECTION	15	162		177
	<< OLD BI # 10902 >>				
10907	HEPBURN 68-02 12KV LINE- RECONDUCTOR AND ADD A PHASE TO JACK BOWEN TAP	15	142		157
	<< OLD BI # 11707 >>				
11421	WILLIAMSPORT 69-12KV SUBSTATION- INSTALL BREAKER FAILURE PROTECTION ON 12KV CIRCUIT BREAKERS AND REPLACE SCADA	3	29	327	359
	<< OLD BI # 12721 >>				
12009	MUNCY 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND CONVERSION TO 'TWIN A'	175	248		423
	<< OLD BI # 13609 >>				
12010	MUNCY 47-03 12KV LINE- RECONDUCTOR/RELOCATE SECTIONS OF GLADE RUN TAP	4	14	165	183
	<< OLD BI # 15808 >>				
13708	NORTHUMBERLAND 69-12KV SUB AND SCADA AND 69KV AND 12KV LINE CONNECTIONS		216	2021	2237

1994 CAPITAL CONSTRUCTION BUDGET
 SUSQUEHANNA REGION
 LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
15814	BERWICK 69-12KV SUBSTATION - EXTEND 60-01 12KV LINE		39	290	329
16914	SHAMOKIN 4KV-CONVERT TO 12KV (PART I)		19	200	219
	<< OLD BI # 43314 >>				
17003	NORTH SHAMOKIN 69-12KV SUB AND 12KV CONNECTING LINES		18	1093	1111
	<< OLD BI # 43503 >>				
17801	GIRARDVILLE 69-12KV SUB AND 12KV LINE CONNECTIONS	5	47	846	898
	<< OLD BI # 44701 >>				
19204	CRESSONA 69-12KV SUB-ADD'L TRANS CAPACITY	26	362		388
	<< OLD BI # 48404 >>				
TOTAL AREA SUPPLY		257	1486	5234	6977
TOTAL SUSQUEHANNA REGION		3000	6085	26075	35160

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - SCRANTON AREA
LIST OF PROJECTS**

9/24/93

CONSTRUCTION COSTS
\$ THOUSANDS - ESCALATED

BI NO	PROJECT TITLE	PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	PROJECT TOTAL
REGIONAL SUPPLY					
20030	PECKVILLE-SCRANTON & LACKAWANNA-SCRANTON 138KV LNS	800	796		1596
20034	MONTDALE 138KV TP-3.0 MI.	47	51	1317	1415
20042	HOFFMAN-MINOOKA 69KV LINE- RECONSTRUCT FOR DOUBLE CIRCUIT 138KV	1810	3599		5409
20043	LACKAWANNA-PECKVILLE #2 AND LACKAWANNA-SUBURBAN DOUBLE CIRCUIT 69KV LINE-RECONSTRUCT FOR DOUBLE CIRCUIT 138KV	100	20	614	734
20044	LACKAWANNA-PECKVILLE #1 69KV LINE-RECONSTRUCT FOR DOUBLE CIRCUIT 138KV		47	1998	2045
20046	JENKINS-MINOOKA #1&2-RECONSTRUCT FOR 138KV	47	83	1643	1773
20047	MONTAGE 138KV TAP-1.5 MI.	71	204	788	1063
20049	LACKAWANNA-CONSTRUCT 230-138KV SUBSTATION		327	8783	9110
20054	HILL 138KV TAP		10	806	816
	TOTAL REGIONAL SUPPLY	2875	5137	15949	23961

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - SCRANTON AREA
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
AREA SUPPLY					
20715	EAST CARBONDALE 12-1 LINE- RECONDUCTOR WAYMART TAP		14	139	153
20717	EAST CARBONDALE 12-3-CREAMTOWN 4KV CONVERT TO 12KV (PART 1)		160		160
20718	EAST CARBONDALE 12-3-CREAMTOWN 4KV-CONVERT TO 12KV (PART 2)		19	179	198
21504	EDELLA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND ADD SCADA AND REBUILD GRIFFIN POND ROAD TAP	56	609		665
21714	MORGAN 69-12KV SUBSTATION- RECONDUCTOR 24-3 LINE (1.0 MI.)		9	101	110
22004	PECKVILLE 23-4KV SUBSTATION- 4KV TO 12KV CONVERSION (PART 1)	343	319		662
22006	PECKVILLE 23-4KV SUBSTATION- 4KV TO 12KV CONVERSION (PART 3)	47	492		539
22007	MT. JESSUP 23-4KV SUBSTATION- 4KV TO 12KV CONVERSION (PART 1)	35	275		310
22008	MT. JESSUP 23-4KV SUBSTATION- 4KV TO 12KV CONVERSION (PART 2)	31	181	365	577
22114	EYNON 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	12	125		137

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - SCRANTON AREA
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
24120	SUBURBAN 23-4KV SUB-CONVERT JAUNTY & REMAINDER OF ECONOMY FEEDER TO 12KV	40	433		473
24301	HILL 69-12KV SUBSTATION AND_12KV LINE CONNECTIONS, INSTALL SCADA		16	914	930
24415	SCRANTON LTN-REPLACE BOGART PLACE DUCT RUN	293	120		413
24422	SCRANTON 4KV LTN - 12KV CONVERSION (PART 3)	800	1235		2035
24425	SCRANTON LTN-GLOBE STORE VAULT	100	182		282
24434	SCRANTON LTN-RECONSTRUCT MANHOLES 157 & 162	19	201		220
24435	SCRANTON LTN-RECONSTRUCT MANHOLES 192 & 267		22	206	228
24439	SCRANTON LTN - INSTALL NEW TRANSFORMER VAULT AND RECONSTRUCT MH33		22	204	226
24440	SCRANTON LTN-5TH CABLE BACKUP	57	796	1793	2646
24510	SCRANTON 69-12KV SUB TRANSFER E. MTN. TAP TO 69-4 LINE	4	43		47
24910	MINOOKA 69-12KV SUBSTATION- CONVERT MINOOKA-MURRAY 23KV TO 12KV	50	130		180

1994 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - SCRANTON AREA
 LIST OF PROJECTS

9/24/93

CONSTRUCTION COSTS
 \$ THOUSANDS - ESCALATED

BI NO	PROJECT TITLE	PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	PROJECT TOTAL
25101	MONTAGE 138-12KV SUBSTATION 12KV CONNECTING LINES AND SCADA	18	185	861	1064
	TOTAL AREA SUPPLY	1905	5588	4762	12255
	TOTAL SCRANTON REGION	4780	10725	20711	36216

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HONESDALE AREA
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
30046	ELK MOUNTAIN 138KV TAP	549	381		930
30054	KIMBLES 138KV TAP (0.5 MILE)	117	55	260	432
30055	BLOOMING GROVE - HONESDALE RECONDUCTOR	8	8	73	89
30056	PECKVILLE-GOULDSDORO 69KV LINE- RELOCATION	5	24	254	283
	TOTAL REGIONAL SUPPLY	679	468	587	1734
AREA SUPPLY					
30202	TINKER 69-12KV SUBSTATION- 44-1 LINE-RECONDUCTOR AND RELOCATE		18	196	214
31103	WEST DAMASCUS 69-12KV SUBSTATION ADDITIONAL TRANSFORMER CAPACITY	21	193		214
31218	HONESDALE 34-4 12KV LINE- CONSTRUCT SINGLE PHASE TIE TO FALLSDALE TAP	7	71		78
31503	INDIAN ORCHARD 69-12KV SUB- 69KV AND 12KV CONNECTING LINES	1181	108		1289
32507	MADISONVILLE 69-12KV SUBSTATION 55-1 LINE-ADDITIONAL PHASE		8	102	110

1994 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - HONESDALE AREA
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
32807	HAMLIN 69-12KV SUBSTATION-87-2 LINE RIDGEVIEW DR. TAP- ADDITIONAL PHASE		3	52	55
33204	TAFTON 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND EXTEND TANGLEWOOD NORTH TAP AND INSTALL SCADA	53	307		360
33701	KIMBLES 69-12KV SUBSTATION AND 12KV CONNECTING LINES AND INSTALL SCADA	71	437	749	1257
33915	WALLENPAUPACK 69-12KV SUBSTATION REMOVE SUBSTATION AND CONNECTING LINES		60	296	356
34810	HEMLOCK 69-12KV SUBSTATION- 67-1 LINE-ADDITIONAL PHASES		9	132	141
	TOTAL AREA SUPPLY	1333	1214	1527	4074
	TOTAL NORTHEAST DIVISION - HONESDALE	2012	1682	2114	5808

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HAZ/W B AREA
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
40043	HARWOOD-E. HAZLETON #2 69KV LINE RECONSTRUCT E. HAZLETON- BERYLLIUM SECTION (3.2 MILES) FOR 138KV	5	13	2337	2355
40079	EAST MOUNTAIN 138KV TAP LINE-(0.8 MILE)	75	1087		1162
40086	EAST PALMERTON-WAGNERS 69KV LINE RECONSTRUCT FOR DOUBLE CIRCUIT OPERATION FROM EAST PALMERTON TO CHRISTMANS-10.2 MILES (PART 1)	191	1222	948	2361
40087	EAST PALMERTON-WAGNERS 69KV LINE RECONSTRUCT FOR DOUBLE CIRCUIT OPERATION FROM CHRISTMANS TO LAKE HARMONY-9.1 MILES (PART 2) & CONV LAKE HARMONY TO "TWIN A"	336	450	4491	5277
40096	BUTLER 138KV TAP-(.6 MILES)	47	383		430
	TOTAL REGIONAL SUPPLY	654	3155	7776	11585

AREA SUPPLY

40312	GEORGETOWN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	239	100		339
40515	WILKES BARRE LTN-RETOP 3 MAN HOLES AND 6 VAULTS NO. 3	200	326		526
40516	WILKES BARRE LTN-RETOP 3 MAN HOLES AND 4 VAULTS NO. 4	100	270		370

1994 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - HAZW B AREA
 LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
40517	WILKES BARRE LTN-RETOP NINE MANHOLES #5	11	125		136
40518	WILKES BARRE LTN-RETOP 10 MANHOLES #6	14	180		194
40520	WILKES BARRE LTN-RETOP 10 MANHOLES #7		24	225	249
40521	WILKES BARRE LTN-RETOP 10 MANHOLES #8		23	287	310
40601	EAST MOUNTAIN 69-12KV SUBSTATION AND 12KV CONNECTING LINES	278	1150		1428
40706	WILKES BARRE SUB-PENN HAZLE TAPS CABLE REPLACE		6	114	120
41105	ARROWHEAD 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL << OLD BI # 46505 >>		11	107	118
41301	JACK FROST 69-12KV SUB & LINE CONNECTIONS << OLD BI # 46401 >>		91	910	1001
41506	HICKORY RUN 69-12KV SUBSTATION- ADDITIONAL TRANSFORMER CAPACITY << OLD BI # 46806 >>		11	107	118

**1994 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HAZ/W B AREA
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
42001	BUTLER 69-12KV SUBSTATION AND 12KV LINE CONNECTIONS	95	1559		1654
42205	HARTLAND 69-12KV SUBSTATION- 84-3 LINE-RECONDUCTOR		12	110	122
43311	ASHFIELD SUBSTATION-INCREASE TRANSFORMER CAPACITY AND RECONDUCTOR 04-2 LINE		57	560	617
43412	WEISSPORT 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	521	340		861
	<< OLD BI # 49812 >>				
	TOTAL AREA SUPPLY	1458	4285	2420	8163
	TOTAL NORTHEAST DIVISION - HAZ / WB	2112	7440	10196	19748

1994 CAPITAL CONSTRUCTION BUDGET

9/24/93

LEHIGH DIVISION
LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
50017	WESCOSVILLE-TREXLERTOWN NOS 3&4 138/69KV LINES	1998	1316		3314
50034	REBUILD SEIDERSVILLE-QUAKERTOWN 69KV	160	363	16055	16578
50035	BUXMONT-QUAKERTOWN 69KV LINE- REBUILD FOR 138KV DOUBLE CIRCUIT	2666	1868		4534
50038	FOGELSVILLE 138/69KV TAP- ADD THE SECOND CIRCUIT	52	471		523
50044	HOSENSACK-UPPER HANOVER 69KV LINE-REBUILD SECTION FOR 138KV DOUBLE CIRCUIT BETWEEN HOSENSACK AND UPPER HANOVER	439	1229		1668
50045	WESCOSVILLE-SIEGFRIED #1&2 69KV LINES-CONVERT TO 138KV	1500	1845	7550	10895
50047	DORNEYVILLE 138-69KV TAP-ADD SECOND CIRCUIT	21	317		338
50050	RIDGE ROAD 138/69KV TAP LINE	838	1326	639	2803
50052	SIEGFRIED-HAUTO #1 69KV LINE- RECONDUCTOR SIEGFRIED-TREICHLERS SECTION (1.93 MILES)	39	124	348	511
50054	SPRINGFIELD 230-138-69KV SUBSTATION AND 69KV CONNECTING LINES	379	402	16007	16788

1994 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
50057	NORTH COOLBAUGH 138KV TAP LINE- 1.8 MI. << OLD BI # 30050 >>	272	919		1191
50058	HENRYVILLE 138KV TAP (3.7 MILES) << OLD BI # 30053 >>	335	532	2296	3163
TOTAL REGIONAL SUPPLY		8699	10712	42895	62306
AREA SUPPLY					
50201	NORTH COOLBAUGH SUBSTATION AND 12KV LINE CONNECTIONS << OLD BI # 33101 >>	200	489		689
50607	MECKESVILLE 69-1-ROBIN HOOD LAKES RECONDUCTORING AND ADDITIONAL PHASE		8	79	87
51001	HENRYVILLE 69-12KV SUBSTATION AND 12KV LINE CONNECTIONS AND INSTALL SCADA << OLD BI # 36301 >>	40	154	861	1055
51213	TANNERSVILLE 69-12KV SUBSTATION 57-3 LINE-MAJESTIC MINK TAP- RECONDUCTOR AND INSTALL ADDITIONAL PHASES << OLD BI # 36613 >>	16	161		177
51305	BARTONSVILLE 79-1 LINE- INSTALL ADDITIONAL PHASE AND RECONDUCTOR ARANDT TAP << OLD BI # 36805 >>	12	110		122

1994 CAPITAL CONSTRUCTION BUDGET

9/24/93

LEHIGH DIVISION
LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
51718	GILBERT 78-1 LINE-INSTALL ADDITIONAL PHASE AND RECONDUCTOR MCILHANEY (2 PH) TAP << OLD BI # 38818 >>	9	89		98
51724	GILBERT 69-12KV SUBSTATION- CONVERT TO MODIFIED 'TWIN A'		24	227	251
52408	SOUTH SLATINGTON 69-12KV SUB- RECONDUCTOR A SECTION OF THE 44-3 LINE << OLD BI # 50408 >>		13	165	178
52507	SCHNECKSVILLE 69-12KV SUB- CONVERT TO 138KV OPERATION << OLD BI # 50707 >>	34	30	744	808
52612	EGYPT 69-12KV SUBSTATION- CONVERT TO 138-12KV AND INSTALL SCADA << OLD BI # 50912 >>	30	70	911	1011
52707	FOGELSVILLE 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		22	243	265
52708	FOGELSVILLE 69-12KV SUBSTATION- FOGELSVILLE 22-2-RECONSTRUCT LYON VALLEY TAP FOR THREE PHASE OPERATION		29	320	349
52810	CRACKERSPORT 69-12KV SUBSTATION- CONVERT TO 138KV OPERATION << OLD BI # 51810 >>	80	437	337	854

1994 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
53009	TREXLERTOWN 69-12KV SUBSTATION- RECONDUCTOR THE #2 CU SECTION OF 47-3 LINE ALONG ROUTE 100 << OLD BI # 52309 >>	18	168		186
53310	EAST TEXAS 69-12KV SUBSTATION- EAST TEXAS 19-1 12KV LINE- RELOCATE/RECONSTRUCT LOMA 3 PHASE TAP << OLD BI # 52910 >>		8	78	86
53507	DORNEYVILLE SUBSTATION- CONVERT TO TWIN A & INSTALL SCADA << OLD BI # 53207 >>	80	170		250
53911	ALLENTOWN LTN-REPLACE VAULT ROOF AND SIDEWALK SLABS ON V194 (NORTH OFFICE BLDG.)	11	126		137
54703	LANARK 69-12KV SUBSTATION- ADD'L 12KV LINE AND TERMINAL, CONVERT TO TYPE B OPERATION AND ADD SCADA << OLD BI # 56403 >>	1	54	534	589
55309	NORTHAMPTON 138-12KV SUBSTATION- REMOVE 31-1 12KV TOWER SECTION AND CONSTRUCT NEW 12KV LINE	27	245		272
56207	ELLIOTT HEIGHTS AREA-CONSTRUCT A NEW HUGHESTOWN TYPE 138/12KV SUB (ENERGIZED AT 69KV) & INSTALL SCADA & REMOVE EXISTING 69-12KV SUBSTATION << OLD BI # 55207 >>		73	1483	1556

1994 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
56309	MINSI TRAIL 69-12KV SUBSTATION- RELOCATE THE 25-3 12KV LINE OFF THE TOWPATH << OLD BI # 55309 >>		27	360	387
56509	SEIDERSVILLE 69-12KV SUBSTATION- RECONDUCTOR SECTION OF THE 39-2 12KV LINE		9	85	94
56510	SEIDERSVILLE 69-12KV SUBSTATION- 39-5 12KV LINE-ADD 3RD PHASE TO BLACK RIVER ROAD TAP	3	51		54
56608	COOPERSBURG 69-12KV SUBSTATION- COOPERSBURG 09-3 12KV LINE- RELOCATE 3 PHASE LINE ONTO OLD BETHLEHEM PIKE		25	278	303
56609	COOPERSBURG 69-12KV SUBSTATION- 09-3 12KV LINE-ADD A THIRD PHASE TO THE LOCUST VALLEY TAP		7	76	83
57818	SELLERSVILLE 69-12KV SUBSTATION- RECONDUCTOR THE 40-3 12KV LINE		44		44
57819	SELLERSVILLE 69-12KV SUBSTATION- 40-8 12KV LINE-RECONDUCTOR AND ADD PHASE TO RIDGE VALLEY ROAD TAP	3	139		142
57901	RIDGE ROAD 69-12KV SUBSTATION AND 12KV CONNECTING LINES AND SCADA << OLD BI # 58701 >>	152	540	436	1128

1994 CAPITAL CONSTRUCTION BUDGET
 LEHIGH DIVISION
 LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
58314	HATFIELD 69-12KV SUBSTATION- RECONDUCTOR THE 20-2 12KV LINE		2	34	36
	TOTAL AREA SUPPLY	716	3324	7251	11291
	TOTAL LEHIGH REGION	9415	14036	50146	73597

1994 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
60069	WEST SHORE-CARLISLE #1 & #2- RECONSTRUCT MECHANICSBURG TO CARLISLE SECTION	1830	584	3732	6146
60070	CARLISLE SUB - MODERNIZE 69KV RELAY AND CONTROL FACILITIES, REPLACE CABLES, REPLACE SCADA RTU AND UPGRADE CAPACITOR CONTROL	177	315	385	877
60074	WEST SHORE-HARRISBURG 1&2 LINES- RECONSTRUCT SECTION	874	156	2694	3724
60076	JUNIATA-RICHFIELD 69KV LINE- RECONDUCTOR/RECONSTRUCT	380	1252		1632
60078	JUNIATA-CUMBERLAND #2 69KV LINE- RECONSTRUCT	15	452		467
60081	WEST CARLISLE AND MT. ROCK 69KV TAP LINES-REHABILITATION		206	1407	1613
60084	BENVENUE 69KV TAP-REBUILD	817	1529		2346
	TOTAL REGIONAL SUPPLY	4093	4494	8218	16805
AREA SUPPLY					
60502	MIFFLINTOWN 69-12KV SUBSTATION 69KV AND 12KV LINE CONNECTIONS AND SCADA	5	80	801	886

**1994 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
61506	DALMATIA 69-12KV SUBSTATION- RELOCATE 36-2 12KV LINE		19	202	221
62008	HALIFAX 69-12KV SUB-ADD'L 12KV LN & TERM AND ADD SCADA		22	263	285
62009	HALIFAX 69-12KV SUBSTATION- RELOCATE 39-2 12KV LINE	5	275	124	404
62318	BENVENUE 69-12KV SUBSTATION- ADD THIRD PHASE TO LOSH RUN TAP		10	151	161
63219	CARLISLE 69-12KV SUBSTATION- REBUILD/REARRANGE/REMOVE PORTIONS OF THE CARLISLE 11-7 12KV LINE ALONG THE RAILROAD	26	307		333
65810	ROSEMONT 69-12KV SUBSTATION- ADDITIONAL TRANSFORMER CAPACITY		6	55	61
66508	WINDSOR 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		24	310	334
66712	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION STRUCTURAL WORK, PART 1	7	106		113
66713	WALNUT 12 KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION STRUCTURAL WORK, PART 2	4	109		113
66714	WALNUT 69-12KV SUBSTATION- STRUCTURAL WORK FOR 08-4 AND 08-6 FEEDERS	6	64		70

1994 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
66715	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 1		487		487
66716	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 2		224	272	496
66717	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 3		49	453	502
66718	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 4		12	492	504
66719	WALNUT 69-12KV SUBSTATION- ELECTRICAL WORK, PART 2		9	168	177
66721	WALNUT 69-12KV SUBSTATION- INSTALL 69KV CAPACITOR BANKS		7	382	389
66810	CENTER CITY 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM NORTH SECTION ELECTRICAL WORK, PART 4	55	432		487
66811	CENTER CITY 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM NORTH SECTION ELECTRICAL WORK, PART 5	39	448		487
68703	RUTHERFORD 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND SCADA		42	388	430

1994 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
68808	LAWNTON 69-12KV SUBSTATION- RECONDUCTOR A PORTION OF THE 75-3 12KV LINE	8	73		81
69705	SWATARA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		18	214	232
69811	SAND HILL 58-2 LINE-CONVERT 4KV TO 13KV	13	309		322
69818	HOCKERSVILLE 4KV-CONVERT TO 13KV-SINGLE FAMILY AND GARDEN APARTMENTS		58	554	612
69819	HOCKERSVILLE 4KV SYSTEM- CONVERT TO 13KV-BRIARCREST TOWNHOUSES	37	345		382
	TOTAL AREA SUPPLY	205	3535	4829	8569
	TOTAL HARRISBURG REGION	4298	8029	13047	25374

1994 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
70009	MORGANTOWN 2-KINZER 13 TIE RECONDUCTOR (7.8 MILES)		105	983	1088
70013	FACE ROCK 69KV SUB-REPLACE OBSOLETE RELAY & CONTROL FACS & PROVIDE FOR CONNECTION OF THE NEW HOLTWOOD 13.2KV SWITCHGEAR TO THE FACE ROCK 69KV BUS	2000	527		2527
70015	WEST HEMPFIELD 230-138KV SUBSTATION	435	408	9778	10621
70016	SOUTH AKRON 230-138KV SUBSTATION	966	1865	9517	12348
70017	WEST HEMPFIELD-SOUTH MANHEIM #1& 2 69KV LINE-CONVERT TO 138KV OPERATION FROM WEST HEMPFIELD TO PRINCE (9.5 MI.)	350	50	913	1313
70018	SECOND EAST LANCASTER-PRINCE 138KV TIE	288	2163		2451
70025	WEST HEMPFIELD-SOUTH MANHEIM 69KV TIE LINE (PENN CASTINGS TAP TO KELLOGG TAP) 1.6 MILES	14	17	1353	1384
70027	SOUTH AKRON-MORGANTOWN #2 69KV LINE-RECONDUCTOR KINZER 13 TIE TO MORGANTOWN SUBSTATION (10.0 MILES)		147	1367	1514
70029	NEW MORGAN 69KV TAP LINE	30	26	1418	1474

**1994 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
70033	LETORT 69KV TAP LINE	30	215		245
70034	821/822 LINE-REBUILD BERKS SUB TO STATE HILL TP (1.5 MI.); STATE HILL TAP-ADD SECOND CIRCUIT (3.2 MI.)	249	1348		1597
70038	WEST HEMPFIELD-HUMMELSTOWN 69KV LINE-REBUILD NORTH COLUMBIA TAP TO DONEGAL SUBSTATION (3.2 MILES)	57	410	1847	2314
70039	NORTH BRIDGEPORT 69KV TAP- ADD SECOND CIRCUIT (0.2 MILES)		19	360	379
70040	PURCHASE 821/822 69KV LINE FROM M.E. CO.		114		114
70041	FACE ROCK-FIVE FORKS 115KV LINE- REPLACE OVERHEAD GROUND WIRES		690		690
	TOTAL REGIONAL SUPPLY	4419	8104	27536	40059
AREA SUPPLY					
70409	LAVINO 69-12KV SUBSTATION- ESTABLISH 45-2/45-3 12KV TIE	21	190		211
71206	STATE HILL 69-12KV SUBSTATION - CONVERT TO TWIN A AND SCADA		17	195	212
72102	RHEEMS 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	20	96		116

1994 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
72603	NORTH MANHEIM 69-12KV SUBSTATION ADDITIONAL 12KV LINE AND TERMINAL		10	122	132
73308	LINCOLN 69-12KV SUBSTATION- RECONDUCTOR 43-1 12KV LINE	8	6	82	96
73310	LINCOLN 69-12KV SUBSTATION- LINCOLN 43-2 12KV LINE EXTENSION	15	21	302	338
73511	COCALICO 69-12KV SUBSTATION- RECONDUCTOR 01-2 12KV LINE		16	148	164
73602	REAMSTOWN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		50	561	611
73709	EAST PETERSBURG 69-12KV SUB- ADDITIONAL 12KV LINE AND TERMINAL	4	39	397	440
73907	NEFFSVILLE SUBSTATION- RECONDUCTOR 50-1 LINE	20	191		211
73908	NEFFSVILLE SUBSTATION-INCREASE TRANSFORMER CAPACITY		22	204	226
74707	MORGANTOWN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE & TERMINAL AND UPGRADE 69KV CAPACITOR PROTECTION		13	178	191
74801	NEW MORGAN SUBSTATION AND 12KV LINE CONNECTIONS		13	1058	1071
75005	LEOLA 69-12KV SUBSTATION- CONVERT TO 138KV-PART 1 & 2		38	658	696

**1994 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
75413	EARL 69-12KV SUBSTATION- RECONDUCTOR 13-3 12KV LINE	18	184		202
75802	MARIETTA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		10	177	187
76202	LETORT AREA 69-12KV SUB & 12KV LINE CONNECTIONS AND INSTALL SCADA	148	1010		1158
76309	DONERVILLE 69-12KV SUBSTATION- CONVERT TO TWIN A, 138KV OPERATION AND ADD 138KV SWITCHES PART 1 & 2		46	769	815
76606	ROHRERSTOWN 69-12KV SUBSTATION- CONVERT TO TWIN A, 138KV OPERATION AND ADD SCADA PART 1 & 2		41	710	751
76801	MCGOVERNVILLE 69-12KV SUBSTATION AND 12KV CONNECTING LINES	20	402	1247	1669
77113	PRINCE 69-12KV SUBSTATION- CONVERT TO 138KV	300	870	6626	7796
77212	LANCASTER LTN- REBUILD PRINCE-KING VAULT #147		18	170	188
77217	LANCASTER LTN-CHRISTIAN-MIFFLIN VAULT #150	80	300		380
77218	LANCASTER LTN- REBUILD PRINCE-KING VAULT #193		15	144	159

1994 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
77409	EAST LANCASTER 69-12KV SUB- CONVERT TO 138KV-PART 1 & 2		38	659	697
77704	NORTH BRIDGEPORT 69-12KV SUB- CONVERT TO TWIN A, 138KV OPERATION AND ADD SCADA PART 1 & 2		41	710	751
78206	WEST WILLOW 69-12KV SUBSTATION- RECONDUCTOR 75-3 12KV LINE-PART 2		19	176	195
78207	WEST WILLOW 69-12KV SUBSTATION- RECONDUCTOR 75-3 12KV LINE-PART 3		12	218	230
79310	QUARRYVILLE 69-12KV SUBSTATION- 56-3 12KV LINE REBUILD	13	170		183
79610	WAKEFIELD 69-12KV SUBSTATION- REBUILD 74-2 12KV LINE	203	77		280
79611	WAKEFIELD 69-12KV SUBSTATION- REBUILD 74-2 12KV LINE-(TAYLORIA NORTH TAP)		14	126	140
	TOTAL AREA SUPPLY	870	3989	15637	20496
	TOTAL LANCASTER REGION	5289	12093	43173	60555

**1994 CAPITAL CONSTRUCTION BUDGET
REGIONAL POOL ITEMS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
81101	REGIONAL SUPPLY-UPGRADE SUBSTATION CAPACITOR BANK PROTECTION SCHEMES		679		679
81102	REGIONAL SUPPLY IMPROVEMENTS		500		500
81103	RELOCATION DUE TO R/W REQUIREMENTS-TRANSMISSION		900		900
81104	POLE REPLACEMENTS-69KV AND ABOVE		828		828
81106	NUG CONNECTED TO THE REGIONAL SUPPLY SYSTEM-ENGINEERING FOLLOWUP AND TECHNICAL REVIEW		50		50
81107	REGIONAL SUPPLY SUBSTATION- MODIFICATIONS TO ACCOMMODATE A 230-69KV MOBILE TRANSFORMER		377		377
81108	PURCHASE REGIONAL SUPPLY SYSTEM SPARE TRANSFORMERS		2920		2920
81109	REGIONAL 69KV AND 138KV LINES- IMPROVE GROUND CLEARANCE TO MAINTAIN LINE RATINGS		450		450
81111	REGIONAL SUPPLY SUBSTATIONS- DC STATION SERVICE IMPROVEMENTS		100		100
81113	SYSTEM - VARIOUS LOCATIONS MODIFY AND REPLACE AB SWITCHES TO OBTAIN PARALLEL BREAK CAPABILITIES		185		185

1994 CAPITAL CONSTRUCTION BUDGET
REGIONAL POOL ITEMS

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
81115	PURCHASE POWER CIRCUIT BREAKERS- REGIONAL AND BULK POWER		1026		1026
81119	REPLACE DETERIORATED UPSWEPT ARMS-69KV AND ABOVE		450		450
81120	LOWER STRUCTURE GROUND RESISTANCE		500		500
	TOTAL REGIONAL POOL ITEMS		8965		8965

**1994 CAPITAL CONSTRUCTION BUDGET
AREA POOL ITEMS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
80001	RELOCATION DUE TO R/W REQUIREMENTS-DISTR		4300		4300
80002	ELIMINATE VULNERABLE FACILITIES LOCATED ALONG HIGHWAYS (INCLUDING MOD POLES)		160		160
80004	AREA SUPPLY IMPROVEMENTS		800		800
80006	PURCHASE OF 69-12KV TRANS		1300		1300
80008	PURCHASE OF 69-12KV MOBILE TRANSFORMERS AND RELATED MODIFICATIONS AT AREA SUPPLY SUBS		20		20
80009	CAPITAL REPAIRS TO FAILED 69-12KV POWER TRANSFORMERS		325		325
80013	PURCHASE POWER CIRCUIT BREAKERS- AREA SUPPLY		424		424
80015	CONNECTION OF NON-UTILITY GENERATION-AREA SUPPLY		25		25
80016	AREA SUPPLY SUBSTATIONS - DC STATION SERVICE IMPROVEMENTS		100		100
80017	REPLACEMENT OF DETERIORATED UNDERGROUND DISTRIBUTION CABLE		3800		3800
80018	LOW TENSION NETWORK PRIMARY CABLE REPLACEMENT		50		50
80019	REPLACEMENT OF DETERIORATED COPPERWELD CONDUCTOR		500		500
TOTAL AREA POOL ITEMS			11804		11804

**1994 CAPITAL CONSTRUCTION BUDGET
AREA SUPPLY BLANKET ITEMS**

9/24/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
81001	POLE REPLACEMENTS-23KV & UNDER		3500		3500
81002	CAPACITORS-23KV & UNDER		805		805
81003	OIL CIRCUIT RECLOSERS		1600		1600
81004	DISTRIBUTION DEPARTMENT MINOR-LINES		4855		4855
81005	DISTRIBUTION DEPARTMENT MINOR-SUBSTATION		285		285
81006	DISTRIBUTION DEPARTMENT- STORMS AND EMERGENCIES		2600		2600
81008	DISTRIBUTION DEPARTMENT - INSTALL MOV'S AND ELBOW ARRESTORS AT SPECIFIC UG CABLE LOCATIONS		910		910
81009	DISTRIBUTION DEPARTMENT-REPLACE FAILED AND/OR DETERIORATED, NON-REPAIRABLE EQUIPMENT (INCL. LTN)		1020		1020
81011	DISTRIBUTION DEPARTMENT-FOREIGN UTILITY WORK		970		970
	TOTAL AREA BLANKET ITEMS		16545		16545

**1994 CAPITAL CONSTRUCTION BUDGET
REGIONAL AND AREA SUPPLY SUMMARY**

9/27/93

	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			
	PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	PROJECT TOTAL
REGIONAL SUPPLY				
SPECIFIC ITEMS	24162	36669	123802	184633
POOL ITEMS		8965		8965
TOTAL REGIONAL SUPPLY	24162	45634	123802	193598
AREA SUPPLY				
SPECIFIC ITEMS	6744	23421	41660	71825
POOL ITEMS		11804		11804
BLANKET ITEMS		16545		16545
* ADJUSTMENT		-4000		-4000
TOTAL AREA SUPPLY	6744	47770	41660	96174
TOTAL REGIONAL & AREA SUPPLY	30906	93404	165462	289772

* Adjustment for unanticipated future carryovers and/or project deferrals

**1994 CAPITAL CONSTRUCTION BUDGET
REVENUE WORK**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
82001	138KV AND 69KV REVENUE EXTENSIONS		1500		1500
82002	12KV REVENUE EXTENSIONS ON SPECIFIC ERS		11100		11100
82003	REVENUE EXTENSIONS ON WORK ORDERS		46000		46000
83001	STREET LIGHTING-EXTENSION OR MODERNIZATION OF EXISTING SYSTEMS		2500		2500
83002	STREET LIGHTING CONVERSIONS- MERCURY VAPOR TO HPS		500		500
83003	DISTR TRANSFORMERS		14000		14000
83004	METERS		4400		4400
83005	POWER CONDITIONING PROGRAM		1800		1800
	TOTAL REVENUE WORK		81800		81800

**1994 CAPITAL CONSTRUCTION BUDGET
SITES AND LINE RIGHT-OF-WAY**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS - \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
84001	GENERATION		100		100
84002	BULK POWER TRANSMISSION		300		300
84003	REGIONAL SUPPLY		200		200
84005	GENERAL PROPERTY		100		100
TOTAL SITES & LINE RIGHT-OF-WAY			700		700

1994 CAPITAL CONSTRUCTION BUDGET

9/27/93

GENERAL BUILDINGS

LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
85013	GENERAL OFFICE-NB1 UPGRADES	380	959		1339
85014	SCHUYLKILL OFFICE EXPANSION	50	2450		2500
85015	GENERAL OFFICE-NORTH BUILDING MODIFICATIONS/RECONFIGURATION	200	1700		1900
85090	HAZLETON OPERATING AREA SERVICE CENTER		2450	2950	5400
85093	HONESDALE OPERATING AREA-HAMLIN SERVICE CENTER	50	2845	200	3095
85099	SYSTEM FACILITIES CENTER	23195	13945	772	37912
85801	LAND MANAGEMENT PROJECTS		354		354
87001	OFFICE AND SERVICE BUILDINGS ADDITIONS AND REPLACEMENTS		4789		4789
*	BUILDING PROJECTS - ADJUSTMENT		-8700		-8700
	TOTAL GENERAL BUILDINGS	23875	20792	3922	48589

* Adjustment for unanticipated future carryovers and/or project deferrals

**1994 CAPITAL CONSTRUCTION BUDGET
OTHER CATEGORY**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
86001	COMMUNICATION SYSTEM		140		140
86003	POWER MANAGEMENT SYSTEM		575		575
86005	CAPITALIZATION OF COMPUTER SOFTWARE		9320		9320
86006	LEASEHOLD IMPROVEMENTS		500		500
86007	REPLACEMENT OF SUPERVISORY REMOTES-SYSTEMWIDE		963		963
86008	POWER MANAGEMENT SYSTEM- MODIFICATIONS/IMPROVEMENTS		1900		1900
86010	PJM-ENERGY MANAGEMENT COMPUTER SYSTEM-PL SHARE		294		294
87002	OFFICE FURNITURE & EQUIPMENT		1433		1433
87003	TOOLS AND EQUIPMENT		790		790
87004	FIRE EXTINGUISHERS		30		30
87007	UNDERGROUND STORAGE TANKS- REPLACEMENT PROGRAM		1300		1300
89001	RETIREMENTS UNDISTRIBUTED COSTS AND ADJUSTMENTS		200		200
89002	PROJECTS REQUIRING SMALL AMOUNTS TO COMPLETE		2000		2000
89003	RESEARCH AND DEVELOPMENT		100		100
	TOTAL OTHER		19545		19545

1994 CAPITAL CONSTRUCTION BUDGET
NUCLEAR FUEL PURCHASES

10/6/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
220	NUCLEAR FUEL PURCHASES		42800	247800	290600
	GRAND TOTAL	241062	514293	1029471	1784826

APPENDIX B

1995 LIST OF PROJECTS

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
311	SUSQUEHANNA SES - UNITS 1,2&CMN PIMS EQUIPMENT	180	233	748	1161
344	SUSQUEHANNA SES - UNIT 1 VALVE UPGRADE PROJECT-PHASE III	3779	466		4245
361	SUSQUEHANNA SES - UNIT 2 VALVE UPGRADE PROJECT-PHASE VI	4364	559		4923
362	SUSQUEHANNA SES - UNIT 1 CHILLED WATER SYSTEM ENHANCEMENTS	18	419	1348	1785
363	SUSQUEHANNA SES - UNIT 2 CHILLED WATER SYSTEM ENHANCEMENTS	18	419	1348	1785
364	SUSQUEHANNA SES - COMMON CHILLED WATER SYSTEM ENHANCEMENTS	9	93	299	401
371	SUSQUEHANNA SES- PRODUCTION FACILITIES ADDITION	2507	4658	4821	11986
379	SUSQUEHANNA SES - UNIT 1 POWER UPRATE PROJECT	13039	1677		14716
397	SUSQUEHANNA SES - UNIT 2 POWER UPRATE PROJECT	13938	1677		15615
402	SUSQUEHANNA SES - UNIT 1 MECHANICAL STRESS IMPROVEMENT PROCESS PROJECT	763	873		1636

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
403	SUSQUEHANNA SES - UNIT 2 MECHANICAL STRESS IMPROVEMENT PROCESS PROJECT	998	871		1869
406	SUSQUEHANNA SES - UNITS 1&2 CONDENSER DEMIN VESSEL RESIN TRANSFER	644	783		1427
408	SUSQUEHANNA SES - COMMON SECURITY SYSTEM UPGRADE-PHASE 2	371	1919	4272	6562
417	SUSQUEHANNA SES - UNIT 1 EXTRACTION STEAM PIPING REPLACEMENT	4054	3726	4338	12118
418	SUSQUEHANNA SES - UNIT 2 EXTRACTION STEAM PIPING REPLACEMENT	3200	3726	5471	12397
438	SUSQUEHANNA SES - UNIT 2 POWER UPRATE MODIFICATIONS- JET PUMP SENSING LINE CLAMP	4448	512		4960
439	SUSQUEHANNA SES- SPENT FUEL STORAGE ADDITIONS	2703	2329	3574	8606
440	SUSQUEHANNA SES - UNIT 1 REPLACE PLANT COMPUTER SYSTEM	2673	2795	4888	10356
441	SUSQUEHANNA SES - UNIT 2 REPLACE PLANT COMPUTER SYSTEM	2673	2795	4888	10356
442	SUSQUEHANNA SES - UNIT 1 REACTOR CORE STABILITY	582	1153	1485	3220

1995 CAPITAL CONSTRUCTION BUDGET
 EXISTING GENERATION - NUCLEAR
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
443	SUSQUEHANNA SES - UNIT 2 REACTOR CORE STABILITY	433	1152	1244	2829
451	SUSQUEHANNA SES - UNIT 1 CONTROL ROD REPLACEMENT-1995		385		385
452	SUSQUEHANNA SES - UNITS 1&2 CONTROL ROD REPLACEMENT-1996		385	1109	1494
463	SUSQUEHANNA SES - UNIT 1 CONDENSER TUBE CLEANING PROJECT	143	512	603	1258
464	SUSQUEHANNA SES - UNIT 2 CONDENSER TUBE CLEANING PROJECT	141	512	603	1256
465	SUSQUEHANNA SES - UNIT 1 DIGITAL FEEDWATER CONTROL	203	466		669
466	SUSQUEHANNA SES - UNIT 2 DIGITAL FEEDWATER CONTROL	203	466		669
469	SUSQUEHANNA SES - UNIT 1 ECCS KEEPFIll UPGRADE	148	233		381
470	SUSQUEHANNA SES - UNIT 2 ECCS KEEPFIll UPGRADE	135	233		368
473	SUSQUEHANNA SES - UNIT 1 GENERATOR CORE MONITOR		47	692	739
475	SUSQUEHANNA SES - UNIT 1 GENERATOR / STATOR COOLING MODS		93	400	493

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
479	SUSQUEHANNA SES - UNIT 1 IPE UPGRADES	248	466		714
480	SUSQUEHANNA SES - UNIT 2 IPE UPGRADES	247	466		713
482	SUSQUEHANNA SES - UNIT 1 POWER UPRATE MODIFICATIONS	4447	512		4959
483	SUSQUEHANNA SES - UNIT 1 REACTOR RECIRC PUMP SHAFT REPLACEMENT	462	2329		2791
484	SUSQUEHANNA SES - UNIT 2 REACTOR RECIRC PUMP SHAFT REPLACEMENT	461	2329		2790
487	SUSQUEHANNA SES - UNIT 1 REFUELING BRIDGE UPGRADE	23	47	169	239
488	SUSQUEHANNA SES - UNIT 2 REFUELING BRIDGE UPGRADE	23	47	169	239
491	SUSQUEHANNA SES - UNIT 1 STEAM TUNNEL COOLING TURBINE BUILDING	180	233		413
492	SUSQUEHANNA SES - UNIT 2 STEAM TUNNEL COOLING TURBINE BUILDING	180	233		413
499	SUSQUEHANNA SES - UNIT 1 VIBRATION MONITORING MAJOR ROTATING EQUIPMENT	271	373	73	717

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - NUCLEAR
LIST OF PROJECTS**

10/14/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
508	SUSQUEHANNA SES - UNIT 2 CIRCULATING WATER EXPANSION JOINT REPLACEMENT	268	279	100	647
509	SUSQUEHANNA SES - COMMON VENT STACK MONITORING (PHASE 2)	483	341		824
880	SUSQUEHANNA SES - COMMON CAPITAL SPARE PARTS - 1995		1584		1584
885	SUSQUEHANNA SES - COMMON CAPITAL OFFICE FURNITURE AND EQUIPMENT-TOOLS AND EQUIPMENT		1956		1956
900	SUSQUEHANNA SES-MINOR WORK PROJECTS-CAPITAL		932		932
910	SUSQUEHANNA SES SITE SERVICES - CAPITAL		1112		1584
920	SUSQUEHANNA SES MAINTENANCE-CAPITAL REPLACEMENTS		472		472
	SUSQUEHANNA SES UNIDENTIFIED PROJECTS		122		122
TOTAL EXISTING GENERATION-NUCLEAR		69660	50000	42642	162302

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
1121	MARTINS CREEK SES - UNITS 1&2 ASH BASIN #1 CLOSURE	279	49	1422	1750
1138	MARTINS CREEK SES - UNIT 4 REPLACE TURBINECONTROL SYSTEMS AND GOVERNING CONTROL SYSTEMS	288	2821		3109
1140	MARTINS CREEK SES - UNITS 1&2 INSTALL BOTTOM ASH HANDLING SYSTEM	447	1266	711	2424
1143	MARTINS CREEK SES - UNIT 3 CONVERT TO GAS-OIL CO-FIRING	446	6183	8244	14873
1144	MARTINS CREEK SES - UNIT 4 CONVERT TO GAS-OIL CO-FIRING	240	496	11207	11943
1147	MARTINS CREEK SES - UNIT 4 REPLACE GENERATOR ROTOR	4911	1121		6032
1152	MARTINS CREEK SES - UNIT 4 REPLACE VOLTAGE REGULATOR	127	271		398
2025	SUNBURY SES - UNIT 1 TURBINE REHABILITATION	8900	3705		12605
2034	SUNBURY SES - UNIT 4 REPLACE ECONOMIZER		66	1900	1966
2062	SUNBURY SES - UNIT 1 REPLACE ECONOMIZER 1A & 1B	256	2116		2372
2066	SUNBURY SES - UNIT 1 REPLACE 1A EXTENDED SURFACE BRICK	105	471		576

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2067	SUNBURY SES - UNIT 1 REPLACE 1B EXTENDED SURFACE BRICK	430	471		901
2090	SUNBURY SES - UNIT 4 INSTALL LOW NOX BURNERS	2879	2428		5307
2097	SUNBURY SES - UNIT 4 REPLACE OUTLET CONVECTION SUPERHEAT TUBES		14	434	448
2106	SUNBURY SES - REPLACE TURBINE AUXILIARY BAY ROOF	19	200		219
2109	SUNBURY SES - UNIT 1 REPLACE LOWER WATERWALL SLOPE	187	1990		2177
2111	SUNBURY SES - UNIT 1 REPLACE BOILER 1A & 1B ASH BOTTOMS	945	3472		4417
2113	SUNBURY SES - UNIT 1 REPLACE STACK BREECHING EXPANSION JOINTS	37	127		164
2127	SUNBURY SES - UNIT 4 PRECIPITATOR MODIFICATIONS	567	1160		1727
2128	SUNBURY SES - UNIT 1 REPLACE GENERATOR ROTOR	2941	200		3141
2134	SUNBURY SES - UNIT 4 REPLACE LP TURBINE INNER CYLINDER AND ROTOR	80	249	5855	6184

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2141	SUNBURY SES -CLOSE ASH BASIN NO. 1	667	78	5076	5821
2142	SUNBURY SES-CLOSE ASH BASIN NO.2	801	83	6636	7520
2144	SUNBURY SES - UNIT 4 INSTALL PERMANENT AMMONIA CONDITIONING	597	672		1269
2147	SUNBURY SES - UNIT 4 REPLACE 31ST STAGE FEEDWATER HEATER SHELL		5	175	180
2148	SUNBURY SES - UNIT 1 REPLACE 1A AND 1B AIR PORT WALL INSULATION	89	1978		2067
2149	SUNBURY SES - UNIT 1 REPLACE 1A AND 1B BASKETED HEATING ELEMENTS	26	463		489
2150	SUNBURY SES - UNIT 4 REPLACE ASH BOTTOM INSULATION AND BOILER SEAL SYSTEM		21	633	654
2153	SUNBURY SES-UNIT 3-CONTROL HOUSE REPLACE RELAYS, GENERATOR PANELS AND CONTROL CABLES	61	632	480	1173
2154	SUNBURY SES-UNIT 4-CONTROL HOUSE REPLACE RELAYS, GENERATOR PANELS AND CONTROL CABLES		40	798	838
2156	SUNBURY SES - UNIT 4 REPLACE 3A AND 3BMILL END CASTINGS	378	319		697

1995 CAPITAL CONSTRUCTION BUDGET
 EXISTING GENERATION - FOSSIL/HYDRO
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2157	SUNBURY SES - CONSTRUCTION LOCKER AND LAUNDRY FACILITIES	92	858		950
2158	SUNBURY SES - UNIT 3 REPLACE TURBINE GOVERNOR CONTROL SYSTEM	268	402		670
2159	SUNBURY SES - UNIT 4 REPLACE EXTENDED SURFACE BOILER		73	2111	2184
2160	SUNBURY SES - UNIT 4 REPLACE HORIZONTAL SUPERHEATER		34	1203	1237
2161	SUNBURY SES - UNIT 4 REPLACE REHEAT SERIES AND BYPASS DAMPERS		11	319	330
2164	SUNBURY SES - UNIT 4 REPLACE GENERATOR ROTOR	73	227	3024	3324
2168	SUNBURY SES - UNIT 1 REPLACE ASH PIT LINER		106		106
2169	SUNBURY SES - REPLACE FILTERED WATER PIPING	115	535	553	1203
2170	SUNBURY SES - UNIT 1- REPLACE GENERATOR STATOR WINDINGS		828		828
2411	SUNBURY SES - UNIT 2 REPLACE ID FAN MAGNETIC COUPLINGS	87	685		772

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
2414	SUNBURY SES - UNIT 1A REPLACE ID FAN MAGNETIC COUPLINGS	289	98		387
2673	SUNBURY SES - UNIT 1 REPLACE 4KV & 480V SWITCHGEAR	2180	497		2677
3004	HOLTWOOD SES - UNIT 17 REPLACE 480VAC & 230VDC SWITCHGEAR	450	1141	99	1690
3036	HOLTWOOD SES - CLOSE ASH BASIN NO. 2-PHASE 1	134	52	5849	6035
4115	BRUNNER ISLAND SES CONSTRUCT NEW PYRITES FACILITY	13	85	2900	2998
4116	BRUNNER ISLAND SES - COAL PILE LINER	3134	1132	1172	5438
4143	BRUNNER ISLAND SES - UNIT 2 REPLACE HORIZONTAL REHEATER AND SUPERHEATER	390	5806		6196
4163	BRUNNER ISLAND SES ASH DISPOSAL AREA 8	530	2100	6100	8730
4164	BRUNNER ISLAND SES - ADD DRY FLY ASH HANDLING SYSTEM	16128	9237		25365
4187	BRUNNER ISLAND SES - UNIT 1 REPLACE IP/LP ROTOR	3827	150		3977
4205	BRUNNER ISLAND SES - CLOSE ASH BASIN #6	356	193	5411	5960

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
4206	BRUNNER ISLAND SES - CLOSE ASH BASIN #7	460	248	6866	7574
4213	BRUNNER ISLAND SES - UNIT 2 REPLACE ECONOMIZER	342	4960		5302
4216	BRUNNER ISLAND SES - UNITS 1&2 INSTALL MAIN STATION SUMP OIL/WATER SEPARATOR	89	138		227
4220	BRUNNER ISLAND SES - UNIT 2 REPLACE HOT REHEAT PIPE - PHASE 2	28	741		769
4550	BRUNNER ISLAND SES - UNIT 2 REBLADE HP TURBINE ROTOR	180	1695		1875
5019	MONTOUR SES - UNIT 1 REPLACE COMPUTER	566	1110		1676
5084	MONTOUR SES - UNIT 1 REPLACE CONTROL SYSTEM	1143	3992		5135
5085	MONTOUR SES - UNIT 2 REPLACE CONTROL SYSTEM	417	622	3544	4583
5103	MONTOUR SES - UNIT 1 INSTALL LOW NOX BURNERS	6535	10560		17095
5104	MONTOUR SES - UNIT 1 INSTALL FLUE GAS DESULFURIZATION	1000	11613	318094	330707
5107	MONTOUR SES - UNIT 2 INSTALL FLUE GAS DESULFURIZATION		538	83746	84284

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
5119	MONTOUR SES - UNIT 1 REPLACE GENERATOR RETAINING RINGS	47	434		481
5149	MONTOUR SES - UNIT 1 REWIND GENERATOR ROTOR	96	1467		1563
5150	MONTOUR SES - UNIT 2 REPLACE IP TURBINE INNER CYLINDER	1106	896	464	2466
5154	MONTOUR SES - CLOSE ASH BASIN #1 SECTION A	531	2969	4000	7500
5155	MONTOUR SES - CLOSE ASH BASIN #1 SECTIONS B&C		135	4857	4992
5156	MONTOUR SES-NEW BOTTOM ASH FACILITIES	149	772	1021	1942
5157	MONTOUR SES - NEW PYRITES FACILITIES	74	356	471	901
5163	MONTOUR SES - UNIT 1 REPLACE TURBINE SUPERVISORY CONTROLS AND VIBRATION MONITORING SYSTEM	25	208		233
5167	MONTOUR SES - UNIT 1 REPLACE FEEDWATER HEATER 2A/B AND 3A/B	279	3075		3354
5170	MONTOUR SES - UNIT 2 - PURCHASE 11TH STAGE IP TURBINE DIAPHRAGM		42	574	616

1995 CAPITAL CONSTRUCTION BUDGET
 EXISTING GENERATION - FOSSIL/HYDRO
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
5171	MONTOUR SES - UNIT 1 REPLACE SULFUR BURNING GAS CONDITIONING SYSTEM CONTROLS	32	336		368
5172	MONTOUR SES - UNIT 2 REPLACE SULFUR BURNING GAS CONDITIONING SYSTEM CONTROLS	5	6	116	127
5221	MONTOUR SES - ASH DISPOSAL AREA 3 - C&D CELLS	150	50	7100	7300
6005	HOLTWOOD HES - REPLACE 13.2KV OCBS IN HYDRO BUS ROOM	15525	579		16104
6034	HOLTWOOD HES - INSTALL FISH PASSAGE FACILITIES	2150	6600	2250	11000
7013	HARWOOD CTG - REPLACE EXHAUST STACKS		42	400	442
7016	HARRISBURG CTG - REPLACE EXHAUST STACKS - PHASE 2		368		368
7510	KEYSTONE SES - PP&L SHARE VARIOUS ADDNS & REPLACEMENTS		4099		4099
7511	KEYSTONE SES - UNITS 1 & 2 INSTALL LOW NOX BURNERS	3794	3241		7035
7750	CONEMAUGH SES - PP&L SHARE VARIOUS ADDNS & REPLACEMENTS		1931		1931
7753	CONEMAUGH SES - UNIT 2 INSTALL FLUE GAS DESULFURIZATION	6823	2564		9387

**1995 CAPITAL CONSTRUCTION BUDGET
EXISTING GENERATION - FOSSIL/HYDRO
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
7910	ASBESTOS PROGRAM --VARIOUS LOCATIONS		3940		3940
7960	GENERATING STATIONS UNANTICIPATED REPLACEMENTS		3105		3105
7980	GENERATING STATIONS MINOR REPLACEMENTS		2070		2070
7990	GENERATING STATIONS MINOR ADDITIONS		725		725
8000	GENERATION PROJECTS UNCOMMITTED		10000		10000
*	EXISTING GEN - FOSSIL/HYDRO ADJUSTMENT		-26729		-26729
TOTAL	EXISTING GEN-FOSSIL AND HYDRO	96315	116915	505815	719045

Adjustment for unanticipated future carryovers and/or project deferrals

1995 CAPITAL CONSTRUCTION BUDGET
 BULK POWER TRANSMISSION
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8008	LACKAWANNA 230-69KV SUB-INSTALL CONTINUOUS MONITORING RECORDER AND UPGRADE RELAYING	216	679		895
8020	HOSENSACK 230KV SUB-RELAY & CONTROL CHANGES	10	21	210	241
8023	SUSQUEHANNA 230KV SWITCHYARD- REPLACE 2-230KV CBS IN BAY 3 AND 2-230KV CBS IN BAY 2		42	560	602
8025	SUSQUEHANNA 230KV SWITCHYARD- RETERMINATE JENKINS 230 KV LINE	80	737		817
8027	MONTOUR 230KV SWITCHYARD-INSTALL ALARM MANAGEMENT SYSTEM		37	417	454
8028	SUNBURY SES 230/138/69KV SWITCHYARDS-INSTALL ALARM MANAGEMENT SYSTEM		8	485	493
8029	MARTINS CREEK 69KV-INSTALL ALARM MANAGEMENT SYSTEM		3	394	397
8030	MARTINS CREEK 230KV-INSTALL ALARM MANAGEMENT SYSTEM		3	534	537
8031	SUNBURY 500-230KV SUBSTATION- INSTALL ALARM MANAGEMENT SYSTEM		19	177	196
8034	SUSQUEHANNA 230KV SWITCHYARD- REPLACE CONTROL CUBICLE	3579	1123		4702

**1995 CAPITAL CONSTRUCTION BUDGET
BULK POWER TRANSMISSION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8036	SUSQUEHANNA T-10 TAP 230KV SWITCHYARD	3429	4471		7900
8042	NORTHERN PL 500KV TRANSMISSION- REPLACE PRIMARY #1 PILOT RELAY SCHEME (PHASE I AND II)	1047	1360	1828	4235
8043	BRUNNER ISLAND SES-REPLACE 230KV SWITCHYARD DISCONNECTS	367	296	178	841
8044	JUNIATA 500KV SUBSTATION-UPGRADE BREAKER FAILURE PROTECTION		17	197	214
8045	SUSQUEHANNA-PURCHASE SPARE 500-230KV TRANSFORMER FOR T-21		92	2366	2458
8048	SIEGFRIED 230/69KV SUBSTATION- INSTALL DOUBLE BREAKER BAY ARRANGEMENT	25	230		255
8081	MARTINS CREEK 230KV SWITCHYARD- REPLACE CBS IN BAY 1		49	451	500
8680	BUSHKILL SWITCHING STATION- REPLACE TONE RELAYS, INSTALL PT'S AND UPGRADE MISC. STATION EQUIPMENT	34	274		308
8690	BRUNNER ISLAND & WEST HEMPFIELD-REPLACE TONE RELAY SCHEMES	37	327	306	670
8700	MARTINS CREEK, NORTHWOOD & QUARRY SUBS-UPGRADE TONE RELAY SCHEMES	20	72	908	1000

1995 CAPITAL CONSTRUCTION BUDGET
 BULK POWER TRANSMISSION
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
8840	QUARRY-UPGRADE MARTINS CREEK #2 LINE PROTECTION	83	648	-	731
9005	HOSENSACK/BUXMONT 230KV LINE- RECONDUCTOR FOR HIGHER CAPACITY	185	1555	-	1740
9960	REPLACE OR MODIFY THE DC STATION BATTERY AT VARIOUS BULK POWER STATIONS	-	99	-	99
9970	BULK POWER IMPROVEMENTS	-	415	-	415
	BULK POWER PROJECTS-UNIDENTIFIED	-	1036	-	1036
	TOTAL BULK POWER TRANSMISSION	9112	13613	9011	31736

1995 CAPITAL CONSTRUCTION BUDGET
SUSQUEHANNA DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
10001	FRACKVILLE-EXCHANGE/EXCHANGE- CENTRALIA 69KV LINE REMOVAL/ UPGRADE TO KENRO << OLD BI # 40073 >>	121	289	363	773
10002	EXCHANGE 69KV SWITCHING STATION REMOVAL AND INSTALL NEW CONTROL CUBICLE AND SCADA << OLD BI # 40074 >>	356	214		570
10003	FRACKVILLE-FISHBACH #3 69KV LINE RECONSTRUCT 2.5 MILES TO 138KV D/C FROM OAK HILL SUBSTATION TO FISHBACH << OLD BI # 40075 >>	311	62	1753	2126
10004	FRACKVILLE-FISHBACH #2 69KV LINE RECONSTRUCT 1.5 MILES TO 138KV D/C FROM WADESVILLE SUBSTATION TAP TO FISHBACH SUBSTATION << OLD BI # 40076 >>	358	8	1126	1492
10005	FISHBACH SUBSTATION- MODERNIZE 69KV DIFFERENTIAL RELAY SCHEME AND SCADA << OLD BI # 40077 >>	119	584		703
10006	GIRARDVILLE 138KV TAP LINE-(1.0 MILES) << OLD BI # 40080 >>	95	317	710	1122
10008	FRACKVILLE-PINE GROVE 69KV LINE- PHASE 1-RECONSTRUCT SECTION FROM ELDRED TO HEGINS TO 138KV (5.7 MILES) << OLD BI # 40082 >>	50	43	3725	3818

1995 CAPITAL CONSTRUCTION BUDGET
SUSQUEHANNA DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
10011	SUNBURY-FRACKVILLE 69KV #1 LINE- REBUILD ELDRED TO MOWRY (2.2 MILES) << OLD BI # 40092 >>	520	1185		1705
10088	CLINTON-MUNCY 69KV LINE- REBUILD SECTION FOR 138KV DOUBLE CIRCUIT	358	1137		1495
10090	LYCOMING-LOCK HAVEN 1&2 69KV LN- RECONSTRUCT PART 1	2154	1000	4380	7534
10091	LYCOMING-LOCK HAVEN 1&2 69KV LN- RECONSTRUCT PART 2	138	701	6806	7645
TOTAL REGIONAL SUPPLY		4580	5540	18863	28983
AREA SUPPLY					
10308	FLEMINGTON 64-01 12KV LINE- RECONDUCTOR/RELOCATE THE SUGAR RUN TAP (PHASE 1) << OLD BI # 10508 >>	10	143		153
10309	FLEMINGTON 64-01 12KV LINE- RECONDUCTOR/RELOCATE THE SUGAR RUN TAP (PHASE 2) << OLD BI # 10509 >>	13	149		162
11421	WILLIAMSPORT 69-12KV SUBSTATION- INSTALL BREAKER FAILURE PROTECTION ON 12KV CIRCUIT BREAKERS AND REPLACE SCADA << OLD BI # 12721 >>	32	327		359
12010	MUNCY 47-03 12KV LINE- RECONDUCTOR/RELOCATE SECTIONS OF GLADE RUN TAP	18	165		183

**1995 CAPITAL CONSTRUCTION BUDGET
SUSQUEHANNA DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
12114	HUGHESVILLE 70-02 12KV LINE- RECONDUCTOR, RELOCATE AND ADD PHASE TO BEAVER LAKE TAP		33	337	370
13605	POINT 42-02 12KV LINE- RECONDUCTOR APPROX. 3 MILES OF THE WINFIELD TAP		27	254	281
	<< OLD BI # 15605 >>				
13708	NORTHUMBERLAND 69-12KV SUB AND SCADA AND 69KV AND 12KV LINE CONNECTIONS	216	2021		2237
	<< OLD BI # 15808 >>				
15708	WEST BERWICK 69-12KV SUB-RECOND A PORTION OF THE MIFFLINVILLE 12KV TP		3	26	29
	<< OLD BI # 19108 >>				
15709	WEST BERWICK 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		19	216	235
	<< OLD BI # 19109 >>				
15814	BERWICK 69-12KV SUBSTATION - EXTEND 60-01 12KV LINE	39	290		329
16914	SHAMOKIN 4KV-CONVERT TO 12KV (PART I)	19	200		219
	<< OLD BI # 43314 >>				
16915	SHAMOKIN 4KV-CONVERT TO 12KV (PART II)		24	227	251
	<< OLD BI # 43315 >>				

1995 CAPITAL CONSTRUCTION BUDGET
 SUSQUEHANNA DIVISION
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
17003	NORTH SHAMOKIN 69-12KV SUB & 12KV CONNECTING LINES << OLD BI # 43503 >>	18	152	941	1111
17801	GIRARDVILLE 69-12KV SUB AND 12KV LINE CONNECTIONS << OLD BI # 44701 >>	52	125	721	898
19016	WADESVILLE 4KV SYSTEM-CONV TO 12KV << OLD BI # 47916 >>		10	99	109
	TOTAL AREA SUPPLY	417	3688	2821	6926
	TOTAL SUSQUEHANNA REGION	4997	9228	21684	35909

1995 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - SCRANTON AREA
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
20034	MONTDALE 138KV TP-3.0 MI.	98	36	1281	1415
20043	LACKAWANNA-PECKVILLE #2 AND LACKAWANNA-SUBURBAN DOUBLE CIRCUIT 69KV LINE-RECONSTRUCT FOR DOUBLE CIRCUIT 138KV	120	614		734
20044	LACKAWANNA-PECKVILLE #1 69KV LINE-RECONSTRUCT FOR DOUBLE CIRCUIT 138KV	47	84	1914	2045
20046	JENKINS-MINOOKA #1&2-RECONSTRUCT FOR 138KV	130	217	1426	1773
20047	MONTAGE 138KV TAP - (1.5 MILES)	275	139	649	1063
20049	LACKAWANNA-CONSTRUCT 230-138KV SUBSTATION	327	1287	7496	9110
20052	LACKAWANNA-SCRANTON #1 AND #2 69KV LINES-UPGRADE AT SCRANTON SUBSTATION		12	115	127
20053	LACKAWANNA-EAST CARBONDALE LINE- RECONSTRUCT FOR DOUBLE CIRCUIT 138KV		145	3667	3812
20054	HILL 138KV TAP	10	11	795	816
	TOTAL REGIONAL SUPPLY	1007	2545	17343	20895

1995 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - SCRANTON AREA
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
AREA SUPPLY					
20715	EAST CARBONDALE 12-1 LINE- RECONDUCTOR WAYMART TAP	14	139		153
20718	EAST CARBONDALE 12-3-CREAMTOWN 4KV-CONVERT TO 12KV (PART 2)	19	179		198
20719	EAST CARBONDALE 12-3-CREAMTOWN 4KV-CONVERT TO 12KV (PART 3)		17	154	171
21601	MONTDALE 69-12KV SUB & 12KV LINE CONNECTIONS		64	633	697
21714	MORGAN 69-12KV SUBSTATION- RECONDUCTOR 24-3 LINE (1.0 MI.)	9	101		110
22008	MT. JESSUP 23-4KV SUBSTATION- 4KV TO 12KV CONVERSION (PART 2)	212	365		577
23322	PROVIDENCE 69-12KV SUBSTATION- ADDITIONAL TRANSFORMER CAPACITY AND 12KV LINE RESECTIONALIZING		23	204	227
24301	HILL 69-12KV SUBSTATION AND_12KV LINE CONNECTIONS, INSTALL SCADA	16	153	761	930
24435	SCRANTON LTN-RECONSTRUCT MANHOLES 192 & 267	22	206		228
24436	SCRANTON LTN-REBUILD MANHOLE #191		11	106	117

**1995 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - SCRANTON AREA
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
24439	SCRANTON LTN-INSTALL NEW TRANSFORMER VAULT AND RECONSTRUCT MH33	22	204		226
24440	SCRANTON LTN-5TH CABLE BACKUP	853	837	956	2646
24702	CEDAR AVENUE 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND LTN BACKUP		25	269	294
25101	MONTAGE 138-12KV SUBSTATION 12KV CONNECTING LINES AND SCADA	203	83	778	1064
25302	MOSCOW 69-12KV SUB-ADD'L 12KV LINE & TERMINAL & INCREASE TRANSFORMER CAPACITY AND ADD SCADA		35	401	436
	TOTAL AREA SUPPLY	1370	2442	4262	8074
	TOTAL SCRANTON REGION	2377	4987	21605	28969

**1995 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HONESDALE AREA
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
30052	BLOOMING GROVE-DTT, WALLENPAUPACK DTT AND RELAY UPGRADE		29	386	415
30054	KIMBLES 138KV TAP (0.5 MILE)	172	260		432
30055	BLOOMING GROVE-HONESDALE RECONDUCTOR	16	73		89
30056	PECKVILLE-GOULD SBORO 69KV LINE- RELOCATION	29	254		283
	TOTAL REGIONAL SUPPLY	217	616	386	1219
AREA SUPPLY					
30202	TINKER 69-12KV SUBSTATION- 44-1 LINE-RECONDUCTOR AND RELOCATE	18	196		214
31104	WEST DAMASCUS 69-12KV SUBSTATION 60-1 12KV LINE-RECONDUCTOR AND REBUILD A PORTION OF THE ABRAHAMSVILLE TAP		10	93	103
31219	KIMBLES 69-12KV SUBSTATION- (WALLENPAUPACK 39-4 LINE)- SANDY SHORE TAP ADDITIONAL PHASE		2	39	41
32507	MADISONVILLE 69-12KV SUBSTATION 55-1 LINE-ADDITIONAL PHASE	8	102		110

**1995 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HONESDALE AREA
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
32807	HAMLIN 69-12KV SUBSTATION-87-2 LINE RIDGEVIEW DR. TAP- ADDITIONAL PHASE	3	52		55
33205	TAFTON 69-12KV SUBSTATION 80-1 LINE-CLOUD CREST TAP-INSTALL ADDITIONAL PHASE		4	52	56
33701	KIMBLES 69-12KV SUBSTATION AND 12KV CONNECTING LINES AND INSTALL SCADA	508	749		1257
33915	WALLENPAUPACK 69-12KV SUBSTATION REMOVE SUBSTATION AND CONNECTING LINES	60	35	261	356
34810	HEMLOCK 69-12KV SUBSTATION- 67-1 LINE-ADDITIONAL PHASES	9	132		141
	TOTAL AREA SUPPLY	606	1282	445	2333
	TOTAL HONESDALE AREA	823	1898	831	3552

**1995 CAPITAL CONSTRUCTION BUDGET
NORTHEAST DIVISION - HAZ-WB AREA
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
40043	HARWOOD-E. HAZLETON #2 69KV LINE RECONSTRUCT E. HAZLETON- BERYLLIUM SECTION (3.2 MILES) FOR 138KV	18	31	2306	2355
40084	JENKINS-HARWOOD #1 69KV LINE- RECONSTRUCT JENKINS-WILKES-BARRE SECTION (11.2 MILES) FOR 138KV		69	4748	4817
40086	EAST PALMERTON-WAGNERS 69KV LINE RECONSTRUCT FOR DOUBLE CIRCUIT OPERATION FROM EAST PALMERTON TO CHRISTMANS-10.2 MILES (PART 1)	1413	948		2361
40087	EAST PALMERTON-WAGNERS 69KV LINE RECONSTRUCT FOR DOUBLE CIRCUIT OPERATION FROM CHRISTMANS TO LAKE HARMONY-9.1 MILES (PART 2) & CONV LAKE HARMONY TO "TWIN A"	786	2533	1958	5277
40090	JENKINS 230/138 KV SUBSTATION CONSTRUCTION		66	5422	5488
	TOTAL REGIONAL SUPPLY	2217	3647	14434	20298
AREA SUPPLY					
40520	WILKES BARRE LTN-RETOP 10 MANHOLES #7	24	225		249
40521	WILKES BARRE LTN-RETOP 10 MANHOLES #8	23	287		310

1995 CAPITAL CONSTRUCTION BUDGET
 NORTHEAST DIVISION - HAZ-WB AREA
 LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
40522	WILKES BARRE LTN-RETOP 10 MANHOLES #9		16	147	163
40706	WILKES BARRE SUB-PENN HAZLE TAPS CABLE REPLACE	6	114		120
41105	ARROWHEAD 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL << OLD BI # 46505 >>	11	107		118
41301	JACK FROST 69-12KV SUB & LINE CONNECTIONS << OLD BI # 46401 >>	91	910		1001
41506	HICKORY RUN 69-12KV SUBSTATION- ADDITIONAL TRANSFORMER CAPACITY << OLD BI # 46806 >>	11	107		118
42205	HARTLAND 69-12KV SUBSTATION- 84-3 LINE-RECONDUCTOR	12	110		122
43311	ASHFIELD SUBSTATION-INCREASE TRANSFORMER CAPACITY AND RECONDUCTOR 04-2 LINE	57	560		617
	TOTAL AREA SUPPLY	235	2436	147	2818
	TOTAL NORTHEAST DIVISION - HAZ / WB	2452	6083	14581	23116

1995 CAPITAL CONSTRUCTION BUDGET

9/27/93

LEHIGH DIVISION
LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
50034	REBUILD SEIDERSVILLE-QUAKERTOWN 69KV	523	777	15278	16578
50045	WESCOSVILLE-SIEGFRIED #1&2 69KV LINES-CONVERT TO 138KV	3345	2277	5273	10895
50050	RIDGE ROAD 138/69KV TAP LINE	2164	639		2803
50052	SIEGFRIED-HAUTO #1 69KV LINE- RECONDUCTOR SIEGFRIED-TREICHLERS SECTION (1.93 MILES)	163	348		511
50054	SPRINGFIELD 230-138-69KV-SUBSTATION AND 69KV CONNECTING LINES	781	416	15591	16788
50058	HENRYVILLE 138KV TAP (3.7 MILES)	867	2296		3163
	<< OLD BI # 30053 >>				
50061	QUARRY-ELLIOTT HEIGHTS #1 AND #2 69KV LINES-INSTALL AIRBREAK SWITCHES		9	82	91
	TOTAL REGIONAL SUPPLY	7843	6762	36224	50829
AREA SUPPLY					
50607	MECKESVILLE 69-1-ROBIN HOOD LAKES RECONDUCTORING AND ADDITIONAL PHASE	8	79		87

1995 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
50717	WAGNERS 69-12KV SUBSTATION-NEW 12KV LINE AND TERMINAL AND CONVERT TO TWIN A << OLD BI # 35717 >>		31	469	500
50812	LAKE NAOMI 69-12KV SUBSTATION- NEW 12KV LINE AND TERMINAL, INSTALL SCADA, CONVERT TO TWIN A PLUS ADDITIONAL TRANSFORMER CAPACITY << OLD BI # 36012 >>		5	679	684
50814	LAKE NAOMI 86-1 LINE-HEMLOCK DRIVE TAP-ADDITIONAL PHASES << OLD BI # 36014 >>		5	100	105
50815	LAKE NAOMI 86-3 LINE-HEMLOCK/ HILLCREST TAPS-ADDITIONAL PHASES << OLD BI # 36015 >>		3	46	49
50917	MT. POCONO 64-1 LINE-INSTALL THREE PHASE ON ACE CORNERS TAP << OLD BI # 36117 >>		8	134	142
51001	HENRYVILLE 69-12KV SUBSTATION AND 12KV LINE CONNECTIONS AND INSTALL SCADA << OLD BI # 36301 >>	194	861		1055
51214	TANNERSVILLE 57-1 12KV LINE- INSTALL ADDITIONAL PHASE ON NEOLA TAP << OLD BI # 36614 >>		12	121	133

1995 CAPITAL CONSTRUCTION BUDGET

9/27/93

LEHIGH DIVISION
LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
51304	BARTONSVILLE 79-1 12KV LINE- RECONDUCTOR_AND ADDITIONAL 12KV LINE AND TERMINAL << OLD BI # 36804 >>		14	162	176
51721	GILBERT 69-12KV SUBSTATION 78-1 LINE-SILVER VALLEY TAP- RECONDUCTOR AND INSTALL ADDITIONAL PHASES << OLD BI # 38821 >>		13	123	136
51722	GILBERT 69-12KV SUBSTATION 78-1 LINE-CHESTNUT HILLS TAP- RECONDUCTOR AND INSTALL ADDITIONAL PHASE << OLD BI # 38822 >>		1	26	27
51723	GILBERT 69-12KV SUBSTATION 78-1 LINE-RECONDUCTOR 12KV LINE << OLD BI # 38823 >>		12	115	127
51724	GILBERT 69-12KV SUBSTATION- CONVERT TO MODIFIED 'TWIN A'	24	227		251
52408	SOUTH SLATINGTON 69-12KV SUB- RECONDUCTOR A SECTION OF THE 44-3 LINE << OLD BI # 50408 >>	13	165		178
52507	SCHNECKSVILLE 69-12KV SUB- CONVERT TO 138KV OPERATION << OLD BI # 50707 >>	64	419	325	808
52508	SCHNECKSVILLE 138-12KV SUB- RECONDUCTOR 37-1 12KV LINE		3	44	47

**1995 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
52509	SCHNECKSVILLE 138-12KV SUB RECONDUCTOR 37-2 12KV LINE		3	66	69
52612	EGYPT 69-12KV SUBSTATION- CONVERT TO 138-12KV AND INSTALL SCADA << OLD BI # 50912 >>	100	447	464	1011
52707	FOGELSVILLE 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	22	243		265
52708	FOGELSVILLE 69-12KV SUBSTATION- FOGELSVILLE 22-2-RECONSTRUCT LYON VALLEY TAP FOR THREE PHASE OPERATION	29	320		349
52810	CRACKERSPORT 69-12KV SUBSTATION- CONVERT TO 138KV OPERATION << OLD BI # 51810 >>	517	337		854
53310	EAST TEXAS 69-12KV SUBSTATION- EAST TEXAS 19-1 12KV LINE- RELOCATE/RECONSTRUCT LOMA 3 PHASE TAP << OLD BI # 52910 >>	8	78		86
53412	WEST ALLENTOWN 69-12KV SUB- REPLACE 54-5 12KV OCB AND ASSOCIATED DISCONNECT SWITCHES << OLD BI # 53012 >>		8	76	84
54602	ALTON PARK 69-12KV SUBSTATION- ALTON PARK 63-1 AND 2 UG TIE		7	64	71

1995 CAPITAL CONSTRUCTION BUDGET
LEHIGH DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
54703	LANARK 69-12KV SUBSTATION- ADD'L 12KV LINE AND TERMINAL, CONVERT TO TYPE B OPERATION AND ADD SCADA << OLD BI # 56403 >>	55	534		589
55205	TREICHLERS 69-12KV SUBSTATION- BUILD TIE BETWEEN 48-1 & 48-2 LINE		16	204	220
56207	ELLIOTT HEIGHTS AREA-CONSTRUCT A NEW HUGHESTOWN TYPE 138/12KV SUB (ENERGIZED AT 69KV) & INSTALL SCADA & REMOVE EXISTING 69-12KV SUBSTATION << OLD BI # 55207 >>	73	869	614	1556
56209	ELLIOTT HEIGHTS 69-12KV SUB- RECONDUCTOR/REBUILD THE 12-2 AND 12-5 12KV LINES		18	178	196
56308	MINSI TRAIL 69-12KV SUBSTATION- RELOCATE THE 25-4 12KV LINE AND REMOVE 25-3/4/5 12KV LINE OFF THE TOWPATH << OLD BI # 55308 >>		16	200	216
56309	MINSI TRAIL 69-12KV SUBSTATION- RELOCATE THE 25-3 12KV LINE OFF THE TOWPATH << OLD BI # 55309 >>	27	360		387
56509	SEIDERSVILLE 69-12KV SUBSTATION- RECONDUCTOR SECTION OF THE 39-2 12KV LINE	9	85		94

1995 CAPITAL CONSTRUCTION BUDGET

9/27/93

LEHIGH DIVISION
LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
56608	COOPERSBURG 69-12KV SUBSTATION- COOPERSBURG 09-3 12KV LINE- RELOCATE 3 PHASE LINE ONTO OLD BETHLEHEM PIKE	25	278		303
56609	COOPERSBURG 69-12KV SUBSTATION- 09-3 12KV LINE-ADD A THIRD PHASE TO THE LOCUST VALLEY TAP	7	76		83
57204	EAST GREENVILLE 10-1 3PH RECONSTRUCTION		13	138	151
57305	UPPER HANOVER 69-12KV SUB- REPLACE 51-2 12KV OCB AND ASSOCIATED DISCONNECT SWITCHES << OLD BI # 57105 >>		2	44	46
57901	RIDGE ROAD 69-12KV SUBSTATION AND 12KV CONNECTING LINES AND SCADA << OLD BI # 58701 >>	692	436		1128
58101	TELFORD 69-12KV SUBSTATION AND CONNECTING LINES << OLD BI # 59201 >>		79	1730	1809
58314	HATFIELD 69-12KV SUBSTATION- RECONDUCTOR THE 20-2 12KV LINE	2	34		36
58403	ORVILLA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND SCADA << OLD BI # 59603 >>		26	285	311
	TOTAL AREA SUPPLY	1869	6143	6407	14419
	TOTAL LEHIGH REGION	9712	12905	42631	65248

1995 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
60069	WEST SHORE-CARLISLE #1 & #2- RECONSTRUCT MECHANICSBURG TO CARLISLE SECTION	2414	3732		6146
60070	CARLISLE SUB - MODERNIZE 69KV RELAY AND CONTROL FACILITIES, REPLACE CABLES, REPLACE SCADA RTU AND UPGRADE CAPACITOR CONTROL	492	385		877
60074	WEST SHORE-HARRISBURG 1&2 LINES- RECONSTRUCT SECTION	1030	401	2293	3724
60081	WEST CARLISLE AND MT. ROCK 69KV TAP LINES-REHABILITATION	206	342	1065	1613
60086	JUNIATA-RICHFIELD 69KV-REBUILD NEWPORT TO THOMPSONTOWN SECTION		73	3471	3544
60090	HUMMELSTOWN 230-69KV SUBSTATION- RECONNECT TRANSFORMER #1		41	386	427
	TOTAL REGIONAL SUPPLY	4142	4974	7215	16331
AREA SUPPLY					
60502	MIFFLINTOWN 69-12KV SUBSTATION 69KV AND 12KV LINE CONNECTIONS AND SCADA	85	801		886
61506	DALMATIA 69-12KV SUBSTATION- RELOCATE 36-2 12KV LINE	19	202		221

1995 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
62008	HALIFAX 69-12KV SUB-ADD'L 12KV LN & TERM AND ADD SCADA	22	263		285
62009	HALIFAX 69-12KV SUBSTATION- RELOCATE 39-2 12KV LINE	280	124		404
62318	BENVENUE 69-12KV SUBSTATION- ADD THIRD PHASE TO LOSH RUN TAP	10	151		161
64308	MT. ALLEN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		21	847	868
65810	ROSEMONT 69-12KV SUBSTATION- ADDITIONAL TRANSFORMER CAPACITY	6	55		61
66111	ROCKVILLE SUB-RELAY AND BREAKER UPGRADE AND ADD SCADA		40	373	413
66405	NORTH HARRISBURG 69-12KV SUB- ADDITIONAL 12KV LINE AND TERMINAL		19	190	209
66508	WINDSOR 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	24	310		334
66716	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 2	224	272		496
66717	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 3	49	453		502
66718	WALNUT 12KV SYSTEM, SPLIT HARRISBURG LTN SYSTEM SOUTH SECTION ELECTRICAL WORK, PART 4	12	492		504

**1995 CAPITAL CONSTRUCTION BUDGET
HARRISBURG DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
66719	WALNUT 69-12KV SUBSTATION- ELECTRICAL WORK, PART 2	9	168		177
66720	WALNUT 69-12KV SUBSTATION- ELECTRICAL WORK, PART 3		83		83
66721	WALNUT 69-12KV SUBSTATION- INSTALL 69KV CAPACITOR BANKS	7	30	352	389
67114	HARRISBURG 69-12KV SUBSTATION- REPLACE OVERDUTIED BREAKERS AND REPLACE SCADA REMOTE		24	224	248
68505	DUKE 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		17	370	387
68703	RUTHERFORD 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND SCADA	42	388		430
69705	SWATARA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	18	214		232
69815	VIAN 59-1 LINE-CONVERT FROM 4KV TO 13KV		26	247	273
69818	HOCKERSVILLE 4KV-CONVERT TO 13KV-SINGLE FAMILY AND GARDEN APARTMENTS	58	554		612
	TOTAL AREA SUPPLY	865	4707	2603	8175
	TOTAL HARRISBURG REGION	5007	9681	9818	24506

**1995 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
REGIONAL SUPPLY					
70009	MORGANTOWN 2-KINZER 13 TIE RECONDUCTOR (7.8 MILES)	105	815	168	1088
70015	WEST HEMPFIELD 230-138KV SUBSTATION	843	2044	7734	10621
70016	SOUTH AKRON 230-138KV SUBSTATION	2831	2890	6627	12348
70017	WEST HEMPFIELD-SOUTH MANHEIM #1& 2 69KV LINE-CONVERT TO 138KV OPERATION FROM WEST HEMPFIELD TO PRINCE (9.5 MILES)	400	52	861	1313
70022	SOUTH AKRON 230-69KV SUBSTATION- UPGRADE MISCELLANEOUS RELAY AND CONTROL EQUIPMENT		9	210	219
70025	WEST HEMPFIELD-SOUTH MANHEIM 69KV TIE LINE (PENN CASTINGS TAP TO KELLOGG TAP) 1.6 MILES	31	200	1153	1384
70026	SOUTH AKRON-EARL 138/69KV LINE		231	11016	11247
70027	SOUTH AKRON-MORGANTOWN #2 69KV LINE-RECONDUCTOR KINZER 13 TIE TO MORGANTOWN SUBSTATION (10.0 MILES)	147	1367		1514
70028	SOUTH AKRON-MORGANTOWN #1 69KV LINE-RECONDUCTOR EARL #1 TAP TO MORGANTOWN SUBSTATION (11.2 MILES)		162	2291	2453

1995 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
70029	NEW MORGAN 69KV TAP LINE	56	347	1071	1474
70038	WEST HEMPFIELD-HUMMELSTOWN 69KV LINE-REBUILD NORTH COLUMBIA TAP TO DONEGAL SUBSTATION (3.2 MILES)	467	546	1301	2314
70039	NORTH BRIDGEPORT 69KV TAP- ADD SECOND CIRCUIT (0.2 MILES)	19	360		379
70042	CONESTOGA 25 HZ SUB-UPGRADE AND MODERNIZE		300	7816	8116
70045	ENGLESIDE-SOUTH AKRON 69KV LINE- CONVERT SECTION TO 138KV		104	2345	2449
	TOTAL REGIONAL SUPPLY	4899	9427	42593	56919
AREA SUPPLY					
70808	WERNERSVILLE 69-12KV SUBSTATION- REBUILD THE 77-1 12KV LINE		13	125	138
71112	SPRING 69-12KV SUBSTATION - REPLACE CONTROL CABLES AND UPGRADE RELAYING AND REPLACE SCADA		18	651	669
71206	STATE HILL 69-12KV SUBSTATION - CONVERT TO TWIN A AND SCADA	17	195		212

**1995 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
71812	ELIZABETHTOWN 69-12KV SUBSTATION INCREASE TRANSFORMER CAPACITY AND CONVERT TO TWIN A OPERATION AND INSTALL SCADA		28	258	286
72205	MT. JOY 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND SCADA		22	196	218
72603	NORTH MANHEIM 69-12KV SUBSTATION ADDITIONAL 12KV LINE AND TERMINAL	10	122		132
73308	LINCOLN 69-12KV SUBSTATION- RECONDUCTOR 43-1 12KV LINE	14	82		96
73309	LINCOLN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL AND SCADA		10	785	795
73310	LINCOLN 69-12KV SUBSTATION- LINCOLN 43-2 12KV LINE EXTENSION	36	302		338
73511	COCALICO 69-12KV SUBSTATION- RECONDUCTOR 01-2 12KV LINE	16	148		164
73602	REAMSTOWN 69-12KV SUBSTATION- NEW 12KV LINE AND TERMINAL	50	561		611
73709	EAST PETERSBURG 69-12KV SUB - ADDITIONAL 12KV LINE AND TERMINAL	43	397		440
73908	NEFFSVILLE SUBSTATION-INCREASE TRANSFORMER CAPACITY	22	204		226

1995 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
74707	MORGANTOWN 69-12KV SUBSTATION- ADDITIONAL 12KV LINE & TERMINAL AND UPGRADE 69KV CAPACITOR PROTECTION	13	178		191
74708	MORGANTOWN 69-12KV SUBSTATION- RECONDUCTOR 32-1 12KV LINE		41	383	424
74709	MORGANTOWN 69-12KV SUBSTATION- INCREASE TRANSFORMER CAPACITY		16	147	163
74801	NEW MORGAN SUBSTATION AND 12KV LINE CONNECTIONS	13	122	936	1071
75005	LEOLA 69-12KV SUBSTATION- CONVERT TO 138KV-PART 1 & 2	38	283	375	696
75606	HONEYBROOK 69-12KV SUBSTATION- EXTEND 34-1 12KV LINE		22	208	230
75802	MARIETTA 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL	10	177		187
76112	HEMPFIELD 69-12KV SUBSTATION- REBUILD 38-3 12KV LINE		14	135	149
76309	DONERVILLE 69-12KV SUBSTATION- CONVERT TO TWIN A, 138KV OPERATION AND ADD 138KV SWITCHES PART 1 & 2	46	297	472	815
76606	ROHRERSTOWN 69-12KV SUBSTATION- CONVERT TO TWIN A, 138KV OPERATION AND ADD SCADA PART 1 & 2	41	260	450	751

**1995 CAPITAL CONSTRUCTION BUDGET
LANCASTER DIVISION
LIST OF PROJECTS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
77113	PRINCE 69-12KV SUBSTATION- CONVERT TO 138KV	1170	2695	3931	7796
77212	LANCASTER LTN- REBUILD PRINCE-KING VAULT #147	18	170		188
77218	LANCASTER LTN- REBUILD PRINCE-KING VAULT #193	15	144		159
77409	EAST LANCASTER 69-12KV SUB- CONVERT TO 138KV-PART 1 & 2	38	241	418	697
77704	NORTH BRIDGEPORT 69-12KV SUB- CONVERT TO TWIN A, 138KV OPERATION AND ADD SCADA PART 1 & 2	41	260	450	751
78110	MILLERSVILLE 69-12KV SUBSTATION- ADDITIONAL 12KV LINE AND TERMINAL		22	217	239
78206	WEST WILLOW 69-12KV SUBSTATION- RECONDUCTOR 75-3 12KV LINE- PART 2	19	176		195
78207	WEST WILLOW 69-12KV SUBSTATION- RECONDUCTOR 75-3 12KV LINE- PART 3	12	218		230
78904	MOUNT NEBO 69-12KV SUBSTATION- INCREASE TRANSFORMER CAPACITY, REPLACE 48-2 12KV OCB AND ADD SCADA		24	226	250

1995 CAPITAL CONSTRUCTION BUDGET

9/27/93

LANCASTER DIVISION

LIST OF PROJECTS

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
79611	WAKEFIELD 69-12KV SUBSTATION- REBUILD 74-2 12KV LINE-(TAYLORIA NORTH TAP)	14	126		140
	TOTAL AREA SUPPLY	1696	7588	10363	19647
	TOTAL LANCASTER REGION	6595	17015	52956	76566

**1995 CAPITAL CONSTRUCTION BUDGET
REGIONAL SUPPLY POOL ITEMS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
81101	REGIONAL SUPPLY-UPGRADE SUBSTATION CAPACITOR BANK PROTECTION SCHEMES		560		560
81102	REGIONAL SUPPLY IMPROVEMENTS		518		518
81103	RELOCATION DUE TO RW REQUIREMENTS-TRANSMISSION		414		414
81104	POLE REPLACEMENTS-69KV AND ABOVE		857		857
81106	NUG CONNECTED TO THE REGIONAL SUPPLY SYSTEM-ENGINEERING FOLLOWUP AND TECHNICAL REVIEW		52		52
81109	REGIONAL 69KV AND 138KV LINES- IMPROVE GROUND CLEARANCE TO MAINTAIN LINE RATINGS		466		466
81113	SYSTEM - VARIOUS LOCATIONS MODIFY AND REPLACE AB SWITCHES TO OBTAIN PARALLEL BREAK CAPABILITIES		233		233
81115	PURCHASE POWER CIRCUIT BREAKERS- REGIONAL AND BULK POWER		264		264
81119	REPLACE DETERIORATED UPSWEPT ARMS-69KV AND ABOVE		466		466
81120	LOWER STRUCTURE GROUND RESISTANCE		414		414
	TOTAL REGIONAL POOL ITEMS		4244		4244

**1995 CAPITAL CONSTRUCTION BUDGET
AREA SUPPLY POOL ITEMS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
80001	RELOCATION DUE TO RAW REQUIREMENTS-DISTR		4451		4451
80002	ELIMINATE VULNERABLE FACILITIES LOCATED ALONG HIGHWAYS (INCLUDING MOD POLES)		166		166
80004	AREA SUPPLY IMPROVEMENTS		828		828
80006	PURCHASE OF 69-12KV TRANS		362		362
80007	PURCHASE OF 138-12KV TRANS		333		333
80009	CAPITAL REPAIRS TO FAILED 69-12KV POWER TRANSFORMERS		336		336
80013	PURCHASE POWER CIRCUIT BREAKERS- AREA SUPPLY		376		376
80015	CONNECTION OF NON-UTILITY GENERATION-AREA SUPPLY		25		25
80017	REPLACEMENT OF DETERIORATED UNDERGROUND DISTRIBUTION CABLE		3933		3933
80018	LOW TENSION NETWORK PRIMARY CABLE REPLACEMENT		104		104
80019	REPLACEMENT OF DETERIORATED COPPERWELD CONDUCTOR		518		518
	TOTAL AREA POOL ITEMS		11432		11432

**1995 CAPITAL CONSTRUCTION BUDGET
AREA SUPPLY BLANKET ITEMS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
81001	POLE REPLACEMENTS-23KV & UNDER		3623		3623
81002	CAPACITORS-23KV & UNDER		833		833
81003	OIL CIRCUIT RECLOSERS		1656		1656
81004	DISTRIBUTION DEPARTMENT MINOR - LINES		5025		5025
81005	DISTRIBUTION DEPARTMENT MINOR - SUBSTATION		295		295
81006	DISTRIBUTION DEPARTMENT- STORMS AND EMERGENCIES		2692		2692
81008	DISTRIBUTION DEPARTMENT - INSTALL MOV'S AND ELBOW ARRESTORS AT SPECIFIC UG CABLE LOCATIONS		942		942
81009	DISTRIBUTION DEPARTMENT-REPLACE FAILED AND/OR DETERIORATED, NON-REPAIRABLE EQUIPMENT (INCL. LTN)		1056		1056
81011	DISTRIBUTION DEPARTMENT-FOREIGN UTILITY WORK		1004		1004
	TOTAL AREA BLANKET ITEMS		17126		17126

**1995 CAPITAL CONSTRUCTION BUDGET
REGIONAL AND AREA SUPPLY SUMMARY**

9/27/93

	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			
	PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	PROJECT TOTAL
REGIONAL SUPPLY				
SPECIFIC ITEMS	24905	33511	137058	195474
POOL ITEMS		4244		4244
UNIDENTIFIED		1036		1036
TOTAL REGIONAL SUPPLY	24905	38791	137058	200754
AREA SUPPLY				
SPECIFIC ITEMS	7058	28286	27048	62392
POOL ITEMS		11432		11432
BLANKET ITEMS		17126		17126
UNIDENTIFIED		1036		1036
* ADJUSTMENT		-4000		-4000
TOTAL AREA SUPPLY	7058	53880	27048	87986
TOTAL REGIONAL & AREA SUPPLY	31963	92671	164106	288740

* Adjustment for unanticipated future carryovers and/or project deferrals

**1995 CAPITAL CONSTRUCTION BUDGET
REVENUE WORK**

9/27/93

**CONSTRUCTION COSTS
\$ THOUSANDS - ESCALATED**

BI NO	PROJECT TITLE	PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	PROJECT TOTAL
82001	138KV AND 69KV REVENUE EXTENSIONS		1500		1500
82002	12KV REVENUE EXTENSIONS ON SPECIFIC ERS		11000		11000
82003	REVENUE EXTENSIONS ON WORK ORDERS		46000		46000
83001	STREET LIGHTING-EXTENSION OR MODERNIZATION OF EXISTING SYSTEMS		2500		2500
83002	STREET LIGHTING CONVERSIONS- MERCURY VAPOR TO HPS		500		500
83003	DISTR TRANSFORMERS		14000		14000
83004	METERS		4500		4500
83005	POWER CONDITIONING PROGRAM		6800		6800
	TOTAL REVENUE WORK		86800		86800

**1995 CAPITAL CONSTRUCTION BUDGET
SITES AND LINE RIGHTS-OF-WAY**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
84001	GENERATION		104		104
84002	BULK POWER TRANSMISSION		311		311
84003	REGIONAL SUPPLY		207		207
84005	GENERAL PROPERTY		104		104
TOTAL SITES & LINE RIGHT-OF-WAY			726		726

**1995 CAPITAL CONSTRUCTION BUDGET
GENERAL BUILDINGS**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
85090	HAZLETON OPERATING AREA SERVICE CENTER	2450	2250	700	5400
85093	HONESDALE OPERATING AREA-HAMLIN SERVICE CENTER	2895	200		3095
85094	BETHLEHEM OPERATING AREA SERVICE CENTER		100	5637	5737
85099	SYSTEM FACILITIES CENTER	37140	772		37912
85801	LAND MANAGEMENT PROJECTS		254		254
87001	OFFICE AND SERVICE BUILDINGS ADDITIONS AND REPLACEMENTS		1933		1933
*	BUILDING PROJECTS-ADJUSTMENT		-1633		-1633
	TOTAL GENERAL BUILDINGS	42485	3876	6337	52698

* Adjustment for unanticipated future carryovers and/or project deferrals

**1995 CAPITAL CONSTRUCTION BUDGET
OTHER CATEGORY**

9/27/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS \$ THOUSANDS - ESCALATED			PROJECT TOTAL
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
86001	COMMUNICATION SYSTEM		145		145
86003	POWER MANAGEMENT SYSTEM		693		693
86005	CAPITALIZATION OF COMPUTER SOFTWARE		23700		23700
86006	LEASEHOLD IMPROVEMENTS		518		518
86007	REPLACEMENT OF SUPERVISORY REMOTES-SYSTEMWIDE		997		997
86008	POWER MANAGEMENT SYSTEM- MODIFICATIONS/IMPROVEMENTS		362		362
86009	PJM FACILITIES PROJECTS PP&L SHARE		1297		1297
86010	PJM-ENERGY MANAGEMENT COMPUTER SYSTEM-PL SHARE		1589		1589
87002	OFFICE FURNITURE & EQUIPMENT		500		500
87003	TOOLS AND EQUIPMENT		828		828
87004	FIRE EXTINGUISHERS		31		31
87007	UNDERGROUND STORAGE TANKS- REPLACEMENT PROGRAM		207		207
89001	RETIREMENTS UNDISTRIBUTED COSTS AND ADJUSTMENTS		206		206
89002	PROJECTS REQUIRING SMALL AMOUNTS TO COMPLETE		2072		2072
89003	RESEARCH AND DEVELOPMENT		104		104
	TOTAL OTHER		33249		33249

1995 CAPITAL CONSTRUCTION BUDGET
NUCLEAR FUEL PURCHASES

10/6/93

BI NO	PROJECT TITLE	CONSTRUCTION COSTS			PROJECT TOTAL
		\$ THOUSANDS - ESCALATED			
		PRIOR TO BUDGT YR	DURING BUDGT YR	AFTER BUDGT YR	
220	NUCLEAR FUEL PURCHASES	42800	55400	192400	290600
	GRAND TOTAL	292335	453250	920311	1665896