Report

PRODUCTIVITY THROUGH COMPUTERIZATION



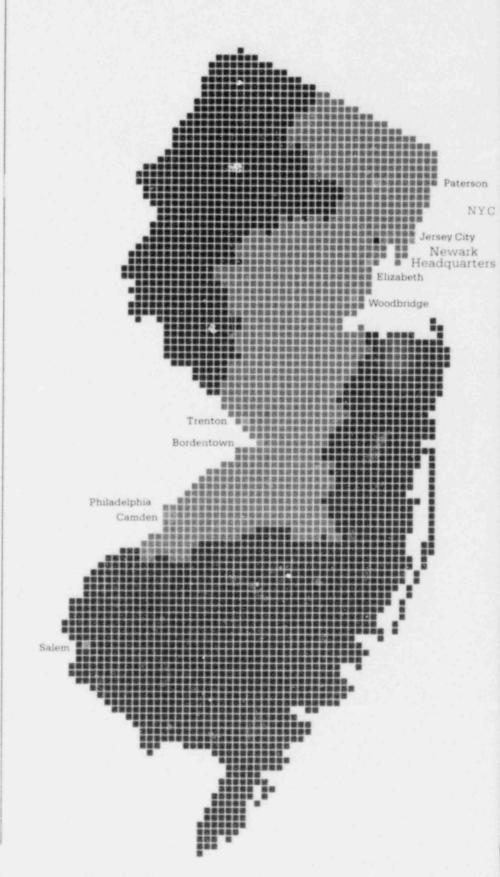
#### 1981 Annual Report

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#### About the Cover

PSE&G's growing utilization of computers to improve efficiency and productivity is symbolized in this computerization of the photograph of an employee's hands at the console of a video terminal. An ever-increasing number of the Company's operations involve use of computer systems.





Public Service Electric and Gas Company 80 Park Plaza, Newark, New Jersey 07:01 (201) 430-7000

Stockholder Information - Toll Free

New Jersey residents (800) 242-0813 Outside New Jersey (800) 526-8050

#### **About the Company**

Public Service Electric and Gas Company, the largest utility in New Jersey, serves some 5.4 million people, about three-quarters of the state's population. The Company's service area (shown in green on map) stretches across the industrial corridor running from the New York state line on the north to below Camden in the south. The territory, a center of transportation, contains a well-balanced mixture of industrial, commercial and residential development. Included in the area are New Jersey's six largest cities and nearly 300 smaller suburban and rural communities.

#### **Annual Meeting**

Please note that the Annual Meeting of Stockholders of the Company will be held at the Governor Morris Inn, Two Whippany Road, Morristown, New Jersey, Tuesday, April 20, 1982, at 2 (3) p.m. A summary of the meeting will be sent to all stockholders of record at a later date.

#### Financial Highlights

	1981	1980 (1	Increase Decrease)
Earnings per average share of Common St	ock \$2.63	\$3.13*	(16)
Shares of Common Stock Average	80,962,000	73,069,000	11
Year-end	86,089,000	76,615,000	12
Dividends paid per share of Common Stock	k \$2.44	\$2.29	7
Book Value per share of Common Stock	\$25.66	\$26.38	(3)
Total Operating Revenues	\$3,471,652,000	\$2,994,054,000	16
Total Operating Expenses	\$3,117,385,000	\$2,616,902,000	19
Earnings Available for Common Stock	\$ 212,599,000	\$ 229,060,000*	(7
Gross Additions to Utility Plant	\$ 683,849,000	\$ 625,530,000	9
Total Utility Plant	\$7,320,764,000	\$6,881,209,000	- 6

<sup>\*</sup>Excludes net extraordinary gain of \$6,316,000 equal to \$ 09 per share. See Notes 3 and 5, page 35.



The move into the new corporate headquarters at 80 Park Plaza, Newark was completed in 1981. During the year the work of razing the former headquarters included demolition by an implosion in June.



The year 1981 was difficult - and, at times, discouraging - as weakness in the economy, accompanied by high inflation and interest rates, continued to exact a toll on the utility industry. Progress was made by your Company, however, in a number of areas that hold promise for the future ## A highlight of the year was the placing in service of the second nuclear unit at Salem Generating Station after two years of delays stemming from additional requirements of the Nuclear Regulatory shareholders at the Company's 1981 annual meeting.



Robert I. Smith, Chairman of the Board, (left) and Harold W. Sonn, President, reply to questions of

Commission following the Three Mile Island accident in Pennsylvania. The unit will be a major asset in our effort to stabilize electric rates by reducing dependence on high-cost foreign oil for the production of electricity. **## Earnings Decline** As a consequence of the bleak economic climate and erosion of the rate relief received in 1980, earnings declined in 1981 to \$2.63 a Common Share from \$3.22 a share in 1980. The 1980 earnings had benefited by a net gain of 9 cents a share as a result of two extraordinary, nonrecurring items, and there were 7.9 million fewer average shares outstanding in 1980. Revenues in 1981 increased to \$3.47 billion from \$2.99 billion, while expenses swelled by inflation - rose from \$2.62 billion to \$3.12 billion. ## The recessionary economy, conservation and cooler, less humid summer weather adversely affected our electric sales. Total electric sales were down 0.8 per cent from 1980. Ample supplies of natural gas at a continuing price advantage over oil helped to increase overall gas sales by 4.4 per cent over the prior year. **B** Dividend Increased The quarterly dividend on Common Stock was increased in the first quarter of 1981 to 61 cents a share from 58 cents paid in the fourth quarter of 1980. The increase was in line with management's

goal of raising the dividend on a regular basis to adequately compensate stockholders and to maintain a competitive return in attracting new capital. This was the sixth consecutive year in which the dividend was raised. ## Rate Relief Received The need for additional rate relief was recognized early in the year and in February 1981 we filed a petition with the New Jersey Board of Public Utilities (BPU) requesting an increase of \$536 million in annual revenues. Of this amount, \$465 million was for electric service and \$71 million for gas. ## Hearings were held on the request during the year and on February 11, 1982, the BPU granted an increase of \$390 million. This included \$338 million in electric revenues, and \$52 million in gas revenues. ## Hope Creek No. 2 Cancelled One of the most significant actions taken by the Company in 1981 was the decision to cancel construction of the second of two nuclear units planned for Hope Creek Generating Station. The cancellation was approved at a meeting of the Board of Directors on December 23. ## We had been evaluating the Hope Creek project, especially the need for the second unit, for more than a year as part of the continuous review of our construction program. The project also had been the subject of hearings by the BPU. ## The main reasons for the cancellation were the lack of need for the unit in the

1990's, due to lower than previously anticipated growth in electric demand, coupled with the substantial financial burden of raising the necessary capital for construction. Further, even though our studies still showed this nuclear unit to be economic in the long-run. uncertainties with regard to future fuel costs, interest rates and inflation made it imprudent, in our judgment, to continue the project. Cancellation of the unit does not indicate any change in our support of nuclear power as being essential to meet the nation's energy needs, but was based on today's economic realities. # The Company will recover through rates all abandonment costs relating to Hope Creek No. 2. The recovery, beginning in July 1982, was authorized by the BPU in a decision on March 4, 1982. # Oil Usage Reduced During the year we were able to reduce our use of heavy oil for the generation of electricity by 28.2 per cent compared with 1980. This was accomplished by increasing our nuclear power generation to a record level, and

View of Hope Creek Generating Station shows in foreground the No. 2 unit which has been cancelled. Construction is continuing on No. 1 unit. At left are the domed containment structures of the Salem Generating Station.



by purchasing lower-cost coal-generated power from neighboring utilities. # Salem No. 2 unit in the second half of the year was a significant factor in boosting nuclear power production to 25 percent of total output for 1981, up from 22 per cent in 1980. A full power operating license for the unit was received in May and, after extensive testing, commercial operation began on October 13. ## Approximately 17 per cent of our electric output was fueled by natural gas as we continue to be encouraged by the federal government to use gas and thereby reduce oil imports. ## Nuclear Department Formed As a result of experience gained in the operation of the Salem station and in response to assessments of the nuclear industry, we announced in September plans to create a separate nuclear department headed by a vice president. ## Headquarters of the department will be in a facility adjacent to the Salem and Hope Creek generating stations. Approximately 200 employees will be transferred initially from the Newark corporate headquarters to the Salem site. \*\* Research Continues A high point of our research and development program during 1981 was the completion and dedication of the Battery Energy Storage Test (BEST) facility in the Company's service area. At this national center large-scale advanced battery systems will be tested as energy storage devices. 
■ As a result of one facet of the Company's research program — a three-year solar demonstration project - it is planned in 1982 to begin offering to customers whose homes meet certain criteria an opportunity to purchase solar water heating systems. The systems will use electricity or gas for backup service. ## Computers Improving Productivity In attempting to cope with the continuing unfavorable economic atmosphere, we have redoubled our efforts to curtail expenses and to improve operating efficiencies. # Improved productivity in practically all areas of the Company's operations is being realized through the greater utilization of computers. Some of the advances made in the computerization of operations during the year are discussed and illustrated in this report. \*\* As we begin the new year, problems - especially high inflation and money costs - continue to plague the utility industry. Any abatement in their intensity will have a beneficial effect on our Company's future. ## We anticipate challenging problems in the future and we are optimistic about the ability of Company employees to meet and overcome them. In all our efforts, we appreciate the continuing support of the Company shareholders.

Hobert I Smith

Robert I. Smith Chairman of the Board and Chief Executive Officer

Harold W Sonn Chief Operating Officer

March 4, 1982

## FINANCIAL RESULIS

#### Dividends and Earnings per Share

2.00

79

78

80

81

DividendsEarnings

#### # Financial Results

Revenues in 1981 passed the \$3 billion mark for the first time as they rose by \$478 million, or 16.0 per cent, over the 1980 figure to \$3.47 billion.

Electric revenues increased 11.4 per cent to \$2.32 billion, accounting for 67 per cent of the total. Gas revenues went up 26.3 per cent to \$1.15 billion and made up the other 33 per cent.

A major part of the increase in revenues — \$414 million — was attributable to increases in electric energy adjustment and gas raw materials adjustment charges from which earnings do not benefit. A rise in base rates in April 1980 and improvement in gas sales were factors to a lesser degree.

The sources of 1981 revenues by customer classification were:

	Electric	Gas	Combined
Residential	31%	53%	38%
Commercial	38%	26%	34%
Industrial	29%	21%	27%
Street Lighting			
and other	2%	-%	1%
Total	100%	100%	100%

#### **Expenses Rise**

Fueled by persistent high inflation, operating expenses in 1981 climbed \$500 million, or 19.1 per cent, from \$2.6 billion in 1980.

Expenses for production increased \$418 million, a 26 9 per cent rise. Of this total, electric costs rose \$227 million, equal to 21.8 per cent, and gas expenses rose \$192 million, or 37.1 per cent.

Power production costs increased but the amount was limited somewhat by a reduction in the use of oil as fuel for generation. The reduction was made possible by higher nuclear production partly as a result of Salem No. 2 output, and power purchases from other utilities at lower costs than would have been available from the Pennsylvania-New Jersey-Maryland Interconnection.

Nuclear units produced electrical energy more economically because of lower fuel costs compared with conventional steam units and combustion turk ness Comparative fuel costs in 1981 per million British Thermal Units were nuclear 47 cents; coal \$1.92 and oil \$5.81. Prices paid pipeline suppliers for natural gas continued to rise because of escalations provided for in the Natural Gas Policy Act of 1978 and were mainly responsible for higher costs of gas production. The costs of raw materials to manufacture gas also were higher.

Maintenance expenses increased by 13.5 per cent for the year. The rise was largely attributable to major whabilitation and overhaul work at a number of generating stations.

Labor costs increased \$15.8 million, mainly because of wage increases provided for in union contracts. Two-year labor agreements negotiated in 1980 provided for a wage increase of 9%, effective May 1, 1981.

New Jersey gross receipts taxes increased by 15.5 per cent, from \$400 million to \$462 million, because of the Company's higher revenues.

#### **## Earnings Decline**

Earnings per share of Common Stock in 1981 declined to \$2.63 from \$3.22 in 1980. The decline was attributable largely to the croding effect inflation had on the rate increase the Company was granted in April 1980. Other factors were lower electric sales resulting from the economic recession, cooler, less humid summer weather and conservation by customers.

The 1980 earnings included a net gain of 9 cents a share as a result of two extraordinary, non-recurring items. There was a gain of 27 cents a share that resulted from the sale of Transport of New Jersey, which was partially offset by a write-off of 18 cents a share representing unrecovered costs associated with abandonment of the Company's offshore generating project.

In 1981 there were 81.0 million average shares outstanding compared with 73.1 million in 1980, an increase of 7.9 million, or 10.8 per cent.

#### **## Dividend Increased**

The quarterly dividend on Common Stock was raised in the first quarter of 1981 by 3 cents a share to 61 cents from the 58 cents paid in the fourth quarter of 1980. The increase resulted in dividends paid in 1981 totaling \$2.44 compared with \$2.29 in 1980, a 6.6 per cent increase.

#### Rate Increase of 11.5 Per Cent Received

On February 11, 1982, the New Jersey Board of Public Utilities (BPU), the state regulatory agency, granted the Company an 11.5 per cent increase in revenues totaling \$390 million, effective February 14. Of the amount, \$338 million, an increase of 14.8 per cent, was for electric service and \$52 million, an increase of 4.7 per cent, was for gas.

Based on the 12-month period ended October 31, 1981 as a test year, the Company was allowed a return on rate base of 10.67 per cent and on common equity of 16 per cent. This was an increase over the rates of return authorized in the previous rate case which were 9.46 per cent on rate base and 13.75 per cent on common equity.

The BPU also granted an increase of \$125 million of Construction Work in Progress that will earn a current return. The amount, one half of the Company's request, is in addition to \$250 million previously authorized.

The rate increase resulted from a petition filed on February 13, 1981, requesting an overall increase of \$536 million in annual revenues, or about 15 per cent. Of the amount, \$465 million was in electric revenues, an increase of 20 per cent, and \$71 million was in gas revenues, or 6 per cent.

The New Jersey Public Advocate, a participant in the rate case, has requested the BPU to reconsider its rate order.

#### ## Adjustment Charges Increased

Effective August 1, the BPU approved an increase in the Company's levelized energy adjustment charge for electricity to provide \$160.5 million in additional annual revenues. The amount is designed to cover projected fuel and purchased energy costs in the 11-month period which began August 1, and to recover under-collections from previous periods.

As part of the decision, the BPU also ruled that \$5.78 million of energy replacement costs associated with a prolonged outage of the Salem No. 1 nuclear unit in the 12-month period ended June 30, 1980, should be shared equally by customers and stockholders. The Company's portion, \$2.89 million, or \$1.6 million, net of taxes, was written off in August 1981.

The BPU also approved an increase in the Company's levelized raw materials adjustment charge for gas customers to provide additional annual revenues of \$136 million. The charge, effective November 16, 1981 through September 30, 1982, is to cover projected increased costs of natural gas and the materials to manufacture gas.

In May the U.S. Supreme Court ruled as unconstitutional a tax by the State of Louisiana on natural gas produced in the Gulf of Mexico and transported through that state. The tax had been collected since April 1, 1979. As a result of this ruling, the Company recovered and distributed to gas customers refunds related to the tax of \$23.8 million.

The Company also refunded to electric customers \$5.5 million which resulted from a settlement between the U.S. Department of Energy and one of the Company's oil suppliers for alleged over charging. These refunds in each case were made through adjustment charges.

#### **\*\*\* Nuclear Unit Cancelled**

The Company on December 23 cancelled the No. 2 unit of the Hope Creek Generating Station which had been scheduled for commercial operation in 1989. The unit was about 18% complete and approximately \$335 million had been expended by the Company on the unit including \$50 million of Allowance

for Funds Used During Construction

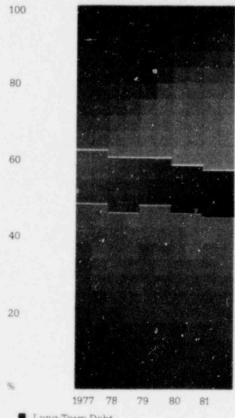
The decision to cancel was based largely on current estimates of projected load growth, which indicated a lack of need for the unit, and the financial burden of construction.

On March 4, 1982, the BPU approved recovery by the Company through rates of all abandonment costs, amounting to \$172 million, after tax considerations, over 15 years, beginning in July 1982.

The Company's latest forecast indicates that electric peak demand will increase at a 1.3 per cent annual rate through 1995, a growth rate below that of earlier projections and far below the rate expected when the Hope Creek units were planned.

Mainly as a result of the cancellation, the Company's construction expenditures are expected to be reduced by \$1 billion over the next nine years. This amount does not reflect \$68 million of estimated cancellation and closeout costs. It was doubtful that the Company could have raised the necessary capital to complete both units. The completion of Hope Creek No. 1 unit alone as scheduled in 1986 will be difficult without substantial additional rate relief.

#### Capitalization Ratios (Year-End)



Long-Term Debt
 Preferred Stock
 Common Equity

Although the Company's studies indicate that the No. 2 unit would have been economic on the basis of fuel savings, they contain uncertainties. These include the future price of oil and coal, the rate of infiation, the cost of capital, load growth in the 1930's and 1990's, and future Federal and state regulations. The uncertainties also were factors in the decision to cancel.

Cancellation of the No. 2 unit does not indicate that the Company has changed its mind about nuclear power as the best way to meet energy needs in New Jersey The Company's nuclear units in operation are saving consumers hundreds of millions of dollars. However, the Company could not afford to spend the funds which would have been required to finish the No 2 unit since the capacity will not be needed to meet customer demands. Because of such lack of demand, the Company has no present plans to construct additional nuclear capacity beyond Hope Creek No. 1.

The Hope Creek station was to have consisted of the two, 1,067-megawatt, nuclear units. The Company owns 95 per cent of the station, and Atlantic City Electric Company the other 5 per cent.

#### **Taxability of Dividends**

As a consequence of the cancellation of the Hope Creek No. 2 unit, the Company estimates, subject to Internal Revenue Service approval, that 88.3 per cent of the dividends paid on Common Stock in 1981 is nontaxable for current Federal income tax purposes. The nontaxable portion constitutes a return of capital which should be applied to reduce the cost of shares owned in computing a gain or loss on a subsequent disposition.

## Expenditures Rise

Construction expenditures in 1981 totaled \$717 million, up \$37 million, or 5.4 percent from \$680 million in 1980. Included in the figures are Allowance for Funds Used During Construction (AFDC), nuclear fuel payments, and advances to subsidiaries.

In 1982 construction outlays are estimated at \$799 million and in the five years through 1986 at \$3.9 billion. These amounts include \$92 million and \$772 million of AFDC, respectively. During the five-year period spending for nuclear generating units and the fuel to operate them will be about \$2.6 billion, 67 per cent of the five-year expenditure estimate.

## Estimated Construction Expenditures (Including AFDC) Year 1982 1983 1984 1985 1986 (Millions) Totals \$799 \$818 \$835 \$774 \$644

The Company anticipates that it will generate internally approximately 50 per cent of its construction expenditures, excluding AFDC, over the next five years. This assumes receipt of sufficient rate relief. Inadequate rate relief would require the deferral of various construction projects in order to reduce expenditures. Mortgage Bonds, Preferred. Stock and Common Stock will be issued to finance the balance.

#### **Securities Sold**

During 1981 the Company raised more than \$320 million through the sale of Mortgage Bonds, Preferred Stock and Common Stock.

In March, 500,000 shares of 13.44% Cumulative Preferred Stock, \$100 par value, were sold. Net proceeds to the Company from the sale of this stock totaled \$49,569,500.

Six million shares of Common Stock were sold in June to a group of underwriters at \$18.60 a share. Proceeds to the Company from this sale totaled \$111.6 million

In August, the Company sold \$100 million principal amount of 15% per cent, 10-year First and Refunding Mortgage Bonds at an annual interest cost to the Company of 15.968 per cent. The Company also raised \$54.8 million through the sale of 3.17 million shares of Common Stock under the Dividend Reinvestment and Stock Purchase Plan, and \$5.3 million through a scance of shares under the Employee Stock Purchase Plan, the Tax Reduction Act Employee Stock Ownership Plan, and the Thrift Plan.

Proceeds from the sale of these securities in 1981 were used to repay short-term dept incurred in connection with the Company's construction program.

Short-term needs were financed through the sale of commercial paper. There was \$207.6 million in short-term commercial paper outstanding at year end.

#### ## Stockholders

At the end of 1981, stockholders of record totaled 273,132. They included 233,224 owners of Common Stock, 12,299 holders of \$1.40 Dividend Preference Common Stock, and 27,609 holders of Preferred Stock.

#### Dividend Reinvestment Plan Qualifies for Tax Benefits

The Company's Dividend Reinvestment and Stock Purchase Plan qualifies for tax deferred treatment beginning in 1982 under the Economic Recovery Tax Act of 1981.

Under the Act, participants in the Plan, other than non-resident aliens, trusts, estates, partnerships and corporations, are eligible for tax deferment on dividends reinvested in shares of Common Stock for the years 1982 through 1985.

Those participating may elect on their 1982 tax returns to exclude from gross income, and therefore defer Federal income taxes on, up to a total of \$750 per year ,\$1,500 on a joint return) of their reinvested dividends received from the Company and other qualified public utilities

Federal income taxes will be deferred until the stock purchased with reinvested dividends is sold. If the stock is held more than one year, any proceeds from the sale will be treated as a long-term capital gain. Proceeds from the disposition of any stock (including stock acquired through dividend reinvestment) within one year after such dividend will be taxed as ordinary income to the extent of the shares acquired through tax-deferred dividend reinvestment during the one year period

A prospectus describing the Dividend Reinvestment and Stock Purchase Plan and its tax deferred feature was distributed in February 1982, in time for interested shareholders to enroll prior to the March 1982 dividend. Holders of record of \$1.40 Dividend Preference Common Stock and Preferred Stock are now eligible to participate in the Plan, as well as holders of record of Common Stock.

At the end of 1981, 53,435, or 23 per cent of the holders of Common Stock were participating in either full or partial dividend reinvestment, up from 47,780 at the close of 1980. Investments through optional cash payments also increased substantially during the year

### III Nuclear Insurance Increased

The Company in 1981 increased insurance coverage for direct physical damage to its nuclear facilities

Effective in August 1981, Nuclear Mutual Limited (NML), an industry-owned mutual insurance firm of which the Company is a member, increased nuclear property coverage to \$460 million, up from \$375 million in 1980

In November, Nuclear Electric Insurance Limited (NEIL), another industry-owned organization of which the Company also is a member, began providing excess nuclear property insurance with initial coverage of \$118 million. As of January 15, 1982, this coverage was increased to \$247 million. This is in addition to the \$450 million provided by NML.

The Company anticipates that in the future NEIL, will increase its excess coverage to \$500 million which would provide for total coverage approaching \$1 billion.

NEIL also provides insurance against the extra expense of obtaining replacement power during prolonged outages of nuclear power plants. This coverage also was increased during the year. After the first 26 weeks of an outage a weekly indemnity of up to \$2.3 million is provided for 52 weeks, and \$1.15 million for an additional 52 weeks.

#### The 1981 Income Dollar

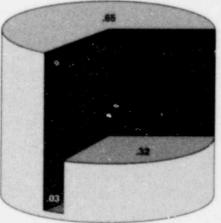
#### Where It Came From

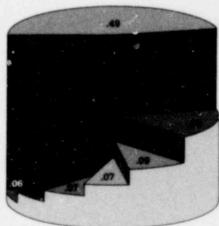
Electric Revenues Gas Revenues	\$ .65
Allowance for Funds Used During Construction	.03
	\$1.00

#### Where It Went

Fuel, Purchased Power & Gas	\$ .49
Salaries & Wages	.07
Materials & Services	.09
Taxes	.16
Interest	.06
Dividends	.07
Reinvested in Business	.06







#### Generating Capacity Forecast

Year	Plannin T Peak Load	Installed Capacity	Per Cent Reserve
	(Mega	(watts)	
1982	7135	8995	26
1983	7285	8995	23
1984	7440	8995	2.1
1985	7605	9115	20
1986	7690	9165	19
1987	7815	10004	28
1988	7930	9994	26
1989	8045	9994	24
1990	8150	9994	23
1991	8245	9988	21

## PRODUCTION AND DISTRIBUTION

The Company's electric output dipped slightly in 1981, the first decline since 1975. The decline was attributable to lower sales caused by the economic recession, cooler weather which reduced demand for air-conditioning and greater conservation by customers.

Total megawatthours produced, purchased and interchanged for the year amounted to 32.2 million, a decrease of 1.5 per cent from 1980

Peak demand of 7,034 megawatts occurred on July 9 which was 1.7 per cent below the all-time mark of 7,159 megawatts reached on July 21, 1980. The maximum output of 136,133 megawatthours for a day was on July 9, which was 3.2 per cent less than the record figure of 140,591 megawatthours on July 21, 1980.

At the time of the system peak load, the Company had an installed generating capacity of 9,023 megawatts, or a capacity reserve of 22 per cent. Installed capacity was 9.101 megawatts at year end.

On the accompanying table are shown the planning peak electric loads, installed generating capacities and per cent reserves anticipated for the next ten years.

## Salem No. 2 Begins Commercial Operation

The full power operating license for Salem No. 2 unit was received on May 20 and after a power ascension testing program, it was placed in commercial operation on October 13.

Prior to the receipt of the full power license, an emergency exercise with the states of New Jersey and Delaware was held on April 8 as required by the Nuclear Regulatory Commission and the Federal Emergency Management Agency. The exercise demonstrated the emergency preparedness capabilities of the Company as well as those of the two states.

Salem No. 1 was taken out of service for refueling and maintenance on January 1, 1982. During the outage the three low pressure turbine rotors will be replaced by others of an advanced design.

High density fuel rack installations in the spent fuel storage pools for both Salem units were completed during the year. As a result, spent fuel capacity at the station was increased from 264 elements to 1.170 at each of the two pools. There now is sufficient spent fuel storage capacity at Salem until the late 1990's.

## Hope Creek No. 1 Work Progresses

Construction work at the Hope Creek Generating Station during the year focused on the No. 1 unit which reached 38 per cent of completion by year end. Efforts are being concentrated on achieving fuel loading in early 1986. Significant steps included installation of the reactor pressure vessel, completion of the turbinegenerator pedestal and enclosure of the turbine building.

Only minimal work was carried out on the No. 2 unit as its need was being evaluated. The unit, which was about 18 per cent completed, was cancelled in December and is discussed on Page 6.

The Company owns 95 per cent of the Hope Creek station and Atlantic City Electric Company holds the other 5 per cent

## Construction Begun on Training Center

In April, construction was started on the Nuclear Training Center in Salem, N.J. Included in the center will be simulators to train control room operating personnel for the Salem and Fierre Creek generating stations. Size of the center is about eight sales from the stations.

An order for the Hope Creek simulator was placed in June for delivery in mid-1984. A simulator for Salem station training was ordered in 1980 and is scheduled to be delivered in 1982.

The center will house classrooms, a shop and laboratories for training, as well as other facilities. Courses will extend from a few days to over a year.

Construction of the center emphasizes the importance the Company places on thoroughly trained and qualified nuclear plant personnel.

#### III Nuclear Department Created

A review of the Company's nuclear operations and support organizations, together with the experience gained in the operation of the Salem station, led to the formation in 1981 of a Nuclear Department. Considered in the review were assessments of the nuclear industry made following the Three Mile Island accident in Pennsylvania. Requirements and recommendations of the Nuclear Regulatory Commission and the Institute of Nuclear Power Operations, an industry organization, also were taken into account.

Greund-breaking ceremony was held in April for the Nuclear Training Center shown under construction at Salem, N.J. At ceremony. Robert I. Smith, Company chairman; Henry J. Midura, general manager — nuclear operations and H. Denis Hanson, manager — nuclear training displayed drawing of center. Included in center will be simulators to train control room operating personnel of Salem and Hope Creek generating stations.





The headquarters of the new department will be established adjacent to the site of the Salem and Hope Creek stations and will involve the transfer of personnel from the Newark headquarters. Creation of the department, headed by a vice president and separate from the existing Production Department, more clearly established the responsibility for the safe and efficient operation of the Company's nuclear facilities.

#### **33** Oil Use Minimized

The Company continued in its efforts to minimize the use of oil as a fuel for electric generation. A total of 631 million therms of natural gas, equivalent to 10.3 million barrels of oil, was used for production at a cost saving of approximately \$116 million.

An additional \$1.54 million was saved through oil purchases made outside of long-term contractual agreements. Further reductions in

the use of oil were achieved by increased nuclear generation, up 9 per cent in 1981, and lower-cost outside electricity purchases, 32 per cent above 1980's level.

During the year, 7.5 million barrels of oil, down 27.7 per cent from 1980, and 2.0 million tons of coal, up 15.4 per cent from 1980, were purchased for the New Jersey electric production facilities. Coal use was up despite the 72-day miners' strike which caused curtailment of deliveries.

The average price of low sulfur heavy fuel oil purchased to generate electricity during 1981 was \$35.55 per barrel, 18.5 per cent higher than during 1980. Coal prices for the New Jersey facilities increased 11.6 per cent above the level of 1980, primarily as a result of labor cost increases resulting from the settlement of the miners' strike.

Uranium mining operation at Key Lake in Saskatchewan, Canada. During 1981 the Company contracted for uranium from this deposit which is of extremely high grade and at shallow depth. About 425,000 pounds of uranium will be received annually.



The Company's electric output by source of energy in 1981 compared with 1980 follows:

Source	1981	1980
Coal	27%	29%
Oil	13	18
Natural Gas	17	17
Nuclear	25	- 22
Purchased and Interchanged	18	14
Total	100%	100%

#### **Uranium Plentiful**

During 1981, the uranium market was characterized by some further reductions in price as demand declined. Major U.S. producers curtailed mining and exploration activities and purchased from stockpiles of users to meet their existing commitments.

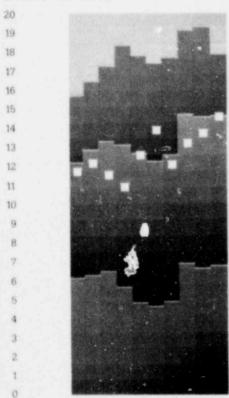
The Company executed contracts with several major uranium producers which will provide approximately 60 per cent of estimated requirements through the early 1990's. One of these was the first major contract for uranium from a deposit of high grade ore at a shallow depth at Key Lake in Saskatchewan, Canada. Domestic supplies also were obtained to provide diversity for assurance of supply.

As a result of these efforts and related ones for nuclear fuel services, the Company's fuel supply has been expanded to match the increased nuclear production capacity

The Company is currently receiving reduced deliveries of

#### Gas Peak Sendout and Daily Capacity at Time of Peak

(Millions of Therms)



Heating 1971 72 73 74 75 76 77 78 79 80 Season 72 73 74 75 76 77 78 79 80 81

High Load Factor Natural Gas
 Winter Storage Natural Gas

■ Manufactured Gas
□ 24-Hour Peak Sendout

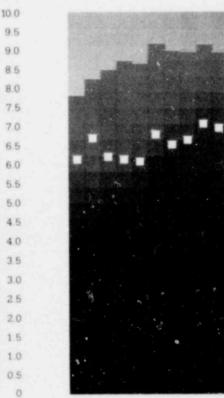
uranium under a long-term contract with Kerr-McGee Nuclear Corporation as a result of an amendment to the contract entered into in 1980 because of the availability of uranium concentrates in the open market at lower prices. Under the contract with Kerr-McGee, \$40.5 million had been advanced as of December 31, 1981 to finance mining and milling facilities for this long-term project. The Company advanced 70 per cent of this amount, and the co-owners of Salem and Hope Creek stations advanced the other 30 per cent.

Of these advances, \$14.3 million, including \$4.7 million of interest, has been recovered through credits against the purchase price of uranium concentrates delivered by Kerr-McGee.

Resumption of uranium production under the Kerr-McGee contract after November 1982 will be at the option of the Company. Under the contract, recovery of advance payments not already recouped will depend upon the sale of uranium by

#### Electric Peak Load and Installed Capacity at Time of Peak

(Millions of Kilowatts)



1972 73 74 75 76 77 78 79 80 81

■ Installed Capacity
☐ Peak Load

Kerr-McGee to the Company or other buyers, or Kerr-McGee's sale of the project properties.

#### **Gas Sendout Higher**

An improvement in gas supply and additional customer connections helped to increase total sendout for the year to 2.15 billion therms, 3.3 per cent higher than the 2.08 billion therms in 1980.

An all-time record peak day sendout of 14,812,000 therms was set on January 12, 1981 when the average temperature was 6°F. This surpassed the previous record of 14,444,000 therms set on December 25, 1980, when the average temperature was 2°F.

On January 17, 1982 a new sendout record of 16,201,000 therms was set when the average temperature was -4°F.

The number of interruptible customers served increased by 22 to 110, and their peak day consumption rose by 10.7 per cent to 1.1 million therms. The number of days of interruption increased to 22 from 11 days in 1980 because of extremely cold weather during January 1981.

## Improvement in Supply Continues

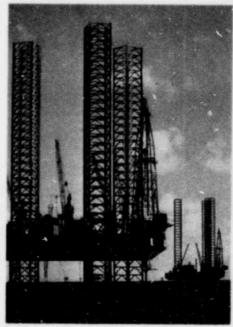
The improved supply situation which followed the passage of the Natural Gas Policy Act of 1978 continued during 1981.

The amount of natural gas purchased for distribution to customers totaled 2.02 billion therms, compared to 1.97 billion therms in 1980.

Deliveries of pipeline gas by interstate suppliers were curtailed 0.7 per cent or 17.2 million therms compared with 1.2 per cent or 29.5 million therms in 1980. The maximum monthly curtailment to the Company was 3.0 per cent, while most of the year full contract amounts were delivered. Curtailments have decreased markedly since 1976 when they peaked at 30.7 per cent.

The cost of natural gas increased by 19 per cent to \$2.95 a million BTU's in 1981. The higher prices were attributable to allowable increases under Federal gas pricing policies as well as increased quantities of higher-cost deregulated gas and Canadian imports.

Offshore drilling operations in the Gulf of Mexico make up a significant part of the exploration program of Energy Development Corporation, the Company's exploration subsidiary.



## Supplemental Gas Supplies

Natural gas supplies were supplemented with gas purchased from Exxon's Bayway Refinery as well as with gas manufactured in Companyowned facilities

Exxon supplied 92.3 million therms of refinery gas at an average cost of \$6.04 a million BTU's during the year compared with 84.3 million therms at an average cost of \$5.13 a million BTU's in 1980.

During the coldest parts of the winter, manufactured gas consisting of synthetic natural gas produced from naphtha, oil gas produced from kerosene and liquefied petroleum gas produced from propane ware supplied to Company customers. The total production of this gas amounted to 29.0 million therms compared with 22.7 million therms in 1980.

#### ## Subsidiary Scores Gains

Energy Development Corporation (EDC), the Company's exploration subsidiary, continued to show substantial gains in natural gas de'iveries and earnings in 1981. Deliveries of gas totaled 186 million therms during 1981, an increase of 82 per cent over 1980.

The substantial increase in deliveries by EDC in 1981 made the subsidiary the third largest source of gas supply to the Company.

EDC revenues and earnings reached record levels in 1981. Revenues from the sale of gas and oil totaled \$75.2 million, compared with \$44.1 million in 1980. Net income was \$11.4 million in 1981, an increase of 99 per cent over 1980. The increases for the year were due to greater gas and oil production, up 65 per cent and 43 per cent, respectively, and higher prices for natural gas.

EDC continued its search for natural gas in the Southwest and the Gulf of Mexico. Exploration activity in 1981 was carried out through five separate programs, four onshore and one offshore.

Onshore operations involved the drilling of 11 successful wells with 14 wells abandoned. At year end five wells were being drilled.

Offshore drilling and leasing activity continued to play the major role in EDC's exploration program. During the year 33 wells were successfully completed, nine were abandoned and four were being drilled at year end.

Two federal lease sales were held for Gulf of Mexico offshore blocks during the year EDC, as part of a group, bid \$33.6 million on 32 blocks and placed high bids on seven blocks totaling \$9.6 million. EDC's interest in these blocks ranges from 15 per cent to 20 per cent. Testing of the new blocks will begin in 1982.

#### **## LNG Applications**

Conferences were held in December at the Federal Energy Regulatory Commission (FERC) on applications concerning placing in use two liquefied natural gas tanks and related facilities on Staten Island, New York

The tanks, owned by Energy Terminal Services Corporation (ETSC), a Company subsidiary, would be used to store domestic natural gas for use by the Company and others during periods of peak demand. Operation of the tanks will require construction of a liquefaction unit and other facilities as well as a pipeline under the Arthur Kill to transport gas to and from New Jersey.



The Iris-Stop, developed in England, was utilized for first time in U.S. to isolate a section of 36-inch gas main during relocation work. Installed under pressure so customer service can be maintained, the mechanically-operated steel shutter expands to block gas flow.

#### III Daily Capacity Increased

The Company's effective daily gas capacity, excluding the effect of curtailments, increased by 571,000 therms during 1981. The increase was made possible by the purchase of a firm transportation service for storage gas from Texas Eastern Transmission Corporation. The daily capacity of 19,010,000 therms on December 31 was composed of

Type of Gas	Therms per Day
Natural Gas	14,463,000
Liquefied Petroleum Gas	1,981,000
Synthesic Natural Gas	1,125,000
Oil Gas	1.186,000
Refinery Gas	255,000
Total	19.010,000

A three-leg 340,000-volt cable is fed into pipe for the longest PSE\*G cable pull at this voltage. Cable runs 4,600 feet from manhole to manhole under Jersey City through Conrail tunnel as part of new interconnection between PSE\*G's Hudson Generating Station and Con Edison's Farragut Substation in Brooklyn.

#### **\*\*\* Capacity Purchased**

During July negotiations were completed with Allegheny Power Systems (APS) for the purchase of a portion of the capacity and energy from the APS Pleasants Power Station in West Virginia. The agreement, effective August 1, will continue until December 31, 1984, and provides for the Company to receive 400 megawatts in 1981, 300 in 1982, and, tentatively, 200 and 100 megawatts in 1983 and 1984, respectively

The tanks were originally constructed as a terminal for imported liquefied natural gas (LNG). However, due to uncertainties and delays relating to the project, including the lack of regulatory approvals which resulted in loss of a supply of LNG, the terminal has not been placed in operation. At December 31, 1981, the Company's investment in ETSC amounted to \$82.6 million.

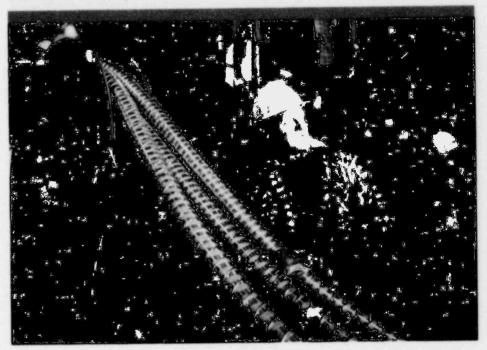
The FERC staff in February 1981 issued a draft supplement to its Environmental Impact Statement which said that it had "... reached the preliminary conclusion that the existing and planned ETSC facilities can be constructed and operated safely"

#### Interconnections Strengthened

After several years of construction, the Company and Consolidated Edison Company in 1981 were nearing completion of a comprehensive project to reinforce interconnections between their electric transmission systems.

The project's major features are a second 345,000-volt interconnection between the Waldwick Switching Station in Bergen County and Con Edison's Ramapo Substation in Rockland County, New York, and a second 345,000-volt interconnection beneath the Hudson River linking the Hudson Generating Station in Jersey City and Con Edison's Farragut Substation in Brooklyn.

These two new interconnections and associated 230,000-volt reinforcements within the Company system will permit increased interchange of power between the two companies and facilitate more reliable and economic operation.



Two other new interconnections were placed in service in 1981. One, a 500,000-volt circuit, connects with Jersey Central Power & Light Company, and the other, a 230,000-volt connection, ties with Atlantic City Electric Company.

The Company now has 24 interconnections with other systems.

#### **\*\*\* New Substations**

The Company's distribution system was expanded during the year with the installation of two new substations and five new 13,000-volt circuits

In May a 138,000-volt service was energized for a new treatment plant of the Passaic Valley Sewage Commission in Newark. The facility, which contains numerous large motors to operate compressors and pumps, will reach a total electrical demand of 47,000 kilowatts.

Since the Pleasants Power Station is coal-fired, the Company estimates it will be able to save about \$120 million over the four-year term of the agreement by displacing higher-cost generation, mainly oilfired.

The Company also has twoparty agreements with other utilities for purchase of power, when it is available, at a lower cost than that available from the Pennsylvania-New Jersey-Maryland Interconnection.

#### **## Gas Lines Expanded**

In order to meet the needs of new gas customers and those converting to gas heat, 310 miles of new gas mains and service lines were installed during 1981. Although this was less than 1980, it was the second highest new piping mileage installed since 1969.

## 

## Greater Productivity through Computerization





As part of an overall program to increase efficiency and productivity, the Company in 1981 significantly expanded the utilization of computer systems and services in its operations

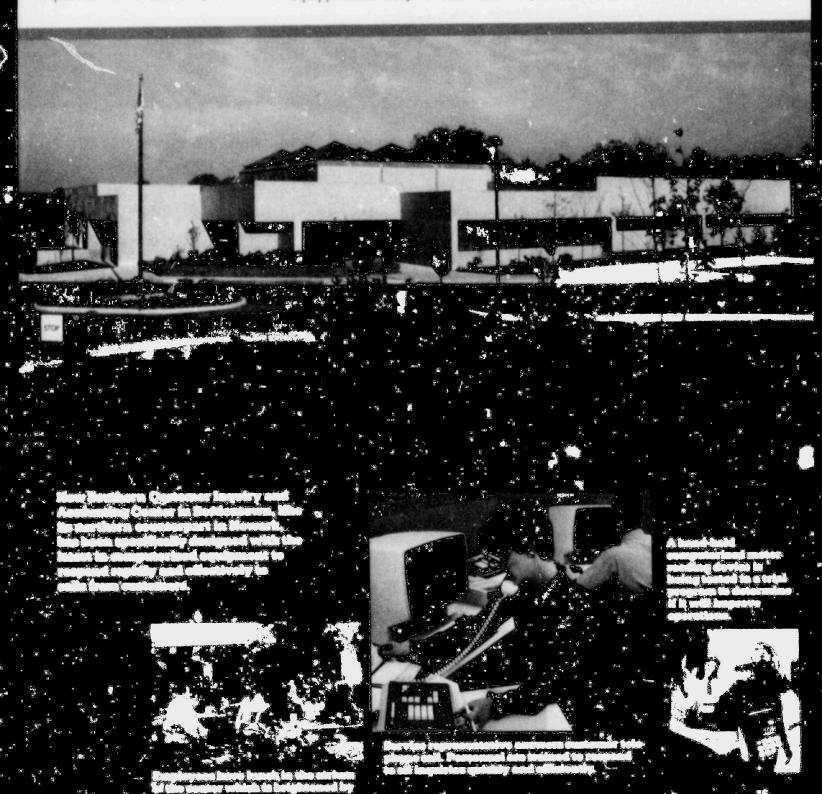
A new computer-based customer service system was placed in operation during the year. Two computerized customer inquiry and accounting centers were established, one in the Newark headquarters for the northern part of the Company's service area and the other in a newly-constructed facility in Bordentown for the southern area.

The centers provide a more efficient and effective means of handling telephone inquiries from customers regarding billing questions, service orders, repair requests or other problems.

Telephone calls from customers are answered 24 hours a day at one of the two centers which are equipped with a sophisticated telephone traffic management system. Accounting data and service orders are entered through terminals and transmitted to the computers. Terminals at appropriate field locations provide printouts of service orders.

At year end, inquiry and accounting functions for nearly half of the Company's customers were being handled by the two centers.

This centralization of service and accounting constitutes a third phase in the modernization of the



Company's customer system.

The first phase was the centralization of bill payment processing. The second was the establishment of customer master record data in computers for terminal display when responding to inquiries.

Future phases will involve improvements to pinpoint areas affected during electric outages, the production of customer bills on the computer system, and manpower scheduling.

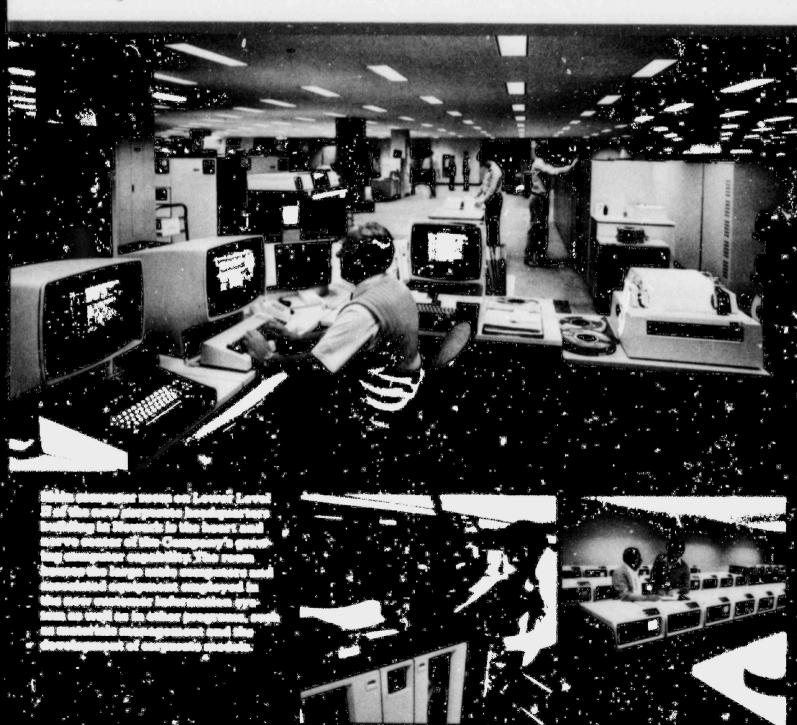
#### # System Expanding

Computerization of customer service is only one facet of the application of computers. Few aspects of the Company's operations do not employ computers in some measure.

More than 1,200 terminals — video display screens, printers and graphic devices — are now part of the computer system. By the end of 1962, some 2,000 are expected to be in use.

A computerized stockholder accounting system has expedited processing of the Company's shareholder accounts, and improved the ability to respond to inquiries.

Corporate models for the next five years — or the next 30 — covering financial and other data are available from the computer system as well as current information on such routine items as accounts payable or inventories.



A user information center in the corporate headquarters enables professional employees to have access to the main computer system. Over 250 employees currently use the system in carrying out their work for the Company.

Mini-computers are used extensively in word processing, the forerunner of office automation which is expected to lead to increased productivity by professional employees and managers.

## Energy Dispatching Computerized

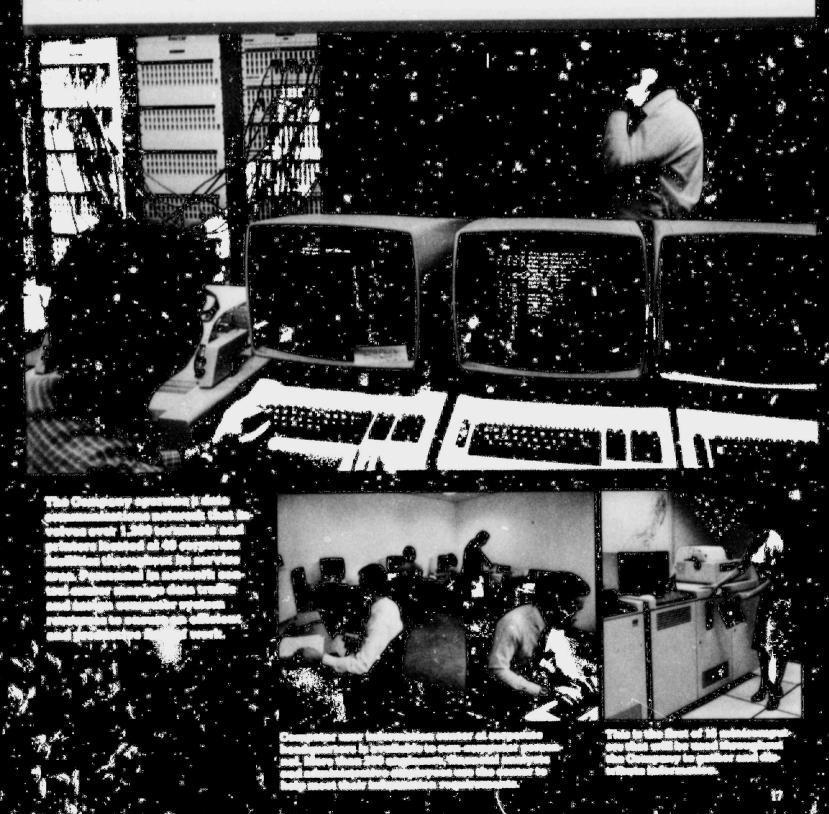
Computers also have increased efficiency and productivity at production and distribution facilities.

Advanced computer technology is employed in a new gas system operating center which was completed and placed in service in 1981 at the Newark headquarters.

The center utilizes the latest microprocessor technology for remote control and data collection at all major metering and regulating stations.

As the second part of the new Corporate Energy Management Center, the gas complex complements the electric system operating center which went into service in 1980

The electric operations center utilizes one of the most sophisti-



cated computer systems for bulk electric dispatching in the nation. The system is actually three separate computers, each with a twin that functions as its backup.

The system provides the operations center staff with the means of readily monitoring and obtaining data from electric facilities throughout the Company territory for display and review on video screens. Various components of the electric system can be operated remotely. Staff members are able to continuously analyze the bulk electric system for potential problems and plan corrective actions with the assistance of computer-suggested options.

Center support personnel use the computer to perform studies that help economically plan maintenance work on the electrical system and simulate situations that might occur if particular events occurred

#### E Linked with PJM

The center computers exchange data with those of the Pennsylvania-New Jersey-Maryland Interconnection of which PSE<sub>&</sub>G is a member, ensuring efficient operation with the power grid.

Further improvements in electric dispatching, as well as telemetering, will be realized with the installation of mini-computers at each of the Company's fossil-fueled generating stations. The first unit is



being installed at the Mercer Generating Station and work on the others will follow. Communication with the station operator is by a keyboard linked to a seven-color graphic video monitor.

A computerized experimental Energy Management Standards Program which proved itself at the Bergen Generating Station will be implemented on the new mini-computers. The program improves operating efficiency and reduces fuel costs.

## III Graphic Planning System

The transmission and distribution department utilizes a Graphic Planning System computer which stores diagrams of electric facilities. The diagrams can be displayed on video screens with normal and emergency circuit flows or short circuit conditions being simulated and compared with ratings. This enables engineers to run more studies in a shorter time to determine when and where system expansions or reinforcements are required.

Numerical data can be displayed automatically as graphs, bar or pie charts at substantial savings over manual drafting methods. The displays can be transformed into a four-color hard copy print in minutes using the system's high-speed plotter.

The combined electric and gas computerized facilities represent the most modern installations in the utility industry.



## CUSTOMER OPERATIONS REORGANIZED

Reorganization of customer and marketing operations, begun in 1980, continued during the year. The reorganization is designed to improve efficiency of operations and provide better customer service.

The program includes replacement of large antiquated commercial offices with smaller modern service facilities. The old offices are being sold and the new quarters leased.

Implementation of a new customer service system is part of the reorganization. The new centralized inquiry and accounting centers opened in Newark and Bordentown in 1981 are an integral part of the new system.

On completion of the reorganization, three field divisions will oversee nine district offices. 16 customer service centers and two meter reading offices. The two inquiry and accounting centers and a payment processing center are supervised by a centralized customer services division

At the close of 1981, the Company was serving 1,693,776 electric customers and 1,309,793 gas customers.

#### ## Conversions to Gas Continue

As a result of expanded marketing activities, customer requests for gas heating service were bolstered in the last quarter of 1981 despite a weak economy, high interest rates and stabilized oil prices.

During 1981, the Company connected 33,009 new gas heating customers, of whom 30,216 were residential, 2,501 commercial and 292 industrial. The residential customers included 24,387 conversions from oil to gas heating, the second highest annual number on record. Of these conversions, 11,164 were ir. the last three months of 1981 as customers responded to additional sales efforts.

Emphasis on the electric space heating market continued in 1981 as this type of business provides significant off-peak revenue. A total of 2,327 new electric heating customers were connected. Of these, 1,950 were residential and 377 were industrial and commercial. The primary effort in this market was the encouragement of builders and customers to install electric heat pumps because of their efficient use of energy. As a result, 1,570 heat pumps were installed during the year.

Sales efforts in the street lighting and dusk-to-dawn lighting markets also were emphasized in 1981. These installations benefit the Company by increasing the amount of electricity used during off-peak periods. A total of 6,835 high pressure sodium and mercury vapor lights were installed in 1981 as the State and municipalities continued to upgrade street lighting. In addition, 4,629 dusk-to-dawn units were installed, bringing the total number to more than 84,000.

The new gas and electric connections will provide approximately \$70 million in additional revenues annually

#### ## Energy Conservation Promoted

The marketing services staff and consumer advisers throughout the year promoted conservation of energy. The Company seeks new or additional uses of energy while at the same time attempting to assure that it is used efficiently.

A major consumer-oriented activity was the Home Energy Savings Program, revised March 1 in accordance with requirements of the National Energy Conservation Policy Act. During the year 3,027 residential audits were performed which

provided customers information on how to improve the energy efficiency of their homes. A do-it-yourself workbook was sent to 4,629 customers so they could perform their own audits.

Marketing engineers and representatives conducted 994 audits for industrial and commercial customers. A five-session Energy Management Action Course was held for representatives of large industrial and commercial customers to instruct them in energy



A 30-minute film featuring Laurel and Hardy characters was produced by the Company to deliver a conservation message with a comic touch. The film, which combines humor with important facts about energy conservation in the home, has become a valuable addition to Company presentations for community and school groups.

management so as to reduce waste and increase efficiencies.

Every opportunity was taken to encourage energy conservation. Company representatives made numerous appearances on radio and television programs, addressed various groups and conducted seminars. A wide range of exhibits on energy conservation was made available for use in consumer, trade and professional programs.

#### # Load Management and Conservation Planning

The Company has been in the forefront of the electric utility industry in developing methodologies for planning and assessing customer activities involving load management and conservation.

Under study are options designed to improve overall system efficiency to stabilize costs for the benefit of the Company and its customers. By influencing customers use of electricity by means of specialized devices, control equipment or new rates, it is possible to exercise beneficial management of electric loads on the system. A program has been developed which could result in an estimated reduction in peak electric capacity requirements of about 1,000 megawatts by 1995.

For several years the Company has had an interruptible service electric rate available for large industrial and commercial customers. Under this rate customers agree to reduce their electric use at times of peak system demand when notified to do so by the Company. This has resulted in nearly 200 megawatts of controllable load.

Load management through rate provisions now includes a new voluntary rate schedule for storage water heating with low off-peak nighttime pricing. In addition, mandatory time-of-use pricing was approved for an additional 900 large industrial and commercial customers and to residential customers using more than 24,000 kilowatt-hours annually.

Studies are being made of the load management potential of devices which can store energy at night for space heating or air condi-

tioning during the following day. Equipment for the cycling of customer appliances such as air conditioners and electric water heaters by remote control also is being investigated.

## Solar Water Heating Program Approved

Among the components of the load management program is the Company's plan to offer residential customers an opportunity to purchase solar water heating systems.

In September the New Jersey Board of Public Utilities and the State Department of Energy approved a proposal under which customers whose homes meet certain criteria will be able to buy systems installed under Company supervision.

The units will use either electricity or gas for backup service. Those that use electricity will have available a new lower off-peak solar electric rate.

Approximately 1,000 customers have expressed interest in the units. Installations in the homes which meet criteria for the units are expected in mid-1982.

## LOOKING TO THE FUTURE

In 1981 the Company's research and development program continued to seek solutions for near and long-term energy problems. The program, carried out by PSE&G Research Corporation, a subsidiary, includes projects to reduce dependence on conventional fuel sources, to develop alternate energy technologies, to conserve energy, and to make innovative use of wasted heat.

The Company's total R&D expenditures in 1981 amounted to \$14.5 million of which \$3.7 million was obtained from outside sources. Actual cost to the Company for internal R&D activities was \$4.5 million and support of research performed by industry organizations was \$6.3 million.

The Research Advisory Council, composed of prominent citizens, who represent a broad public interest in energy matters, continued in 1981 to advise PSE&G Research Corporation. Formed in 1979, the council reviews research and development programs, including the level of funding, from an economic and social viewpoint. The council also serves as a communications link with the public.

## Testing of Advanced Batteries Set

The Battery Energy Storage Test (BEST) facility was dedicated on May 14 as a national center for testing large-scale advanced battery systems and power conversion equipment for energy storage.

The project is a cooperative effort of the Company, the U.S. Department of Energy (DOE), and the Electric Power Research Institute (EP 3), the research organization of the nation's electric utilities.

The facility was designed and built by the Company to support the national load-leveling battery development program. At year end the Company signed a modification to an ongoing contract with DOE and EPRI which provides \$2.3 million over a period of 18 months for facility operation and installation of the first advanced battery system.

PSE&G Research Corporation will operate the facility, as well as plan and conduct tests for evaluating battery performance.

Development of such batteries would permit power produced by nuclear and coal generating units during nighttime periods of low demand to be stored and used during daytime hours of peak electric load. This would mean fewer oil-burning generating units would be needed to meet peak electric requirements.

In testing the advanced batteries, which will be produced by several manufacturers, alternating current from the Company system will be converted to direct current for storage at the facility. The power will be subsequently discharged from the large battery modules and converted back to alternating current for transmission by the Company system.

During initial operation of the facility a large 1.8 megawatthour lead-acid battery was used to train the operating staff and gain experience in the use of batteries as load-

The Battery Energy Storage Test (BEST) facility, dedicated in 1981, will be a national center for testing advanced batteries as electric load-leveling devices. Initial operation of the facility is providing training and experience for the staff. The project is a joint effort of the Company, the U.S. Depart ment of Energy and the Electric Power Research Institute.

#### ## Landfill Gas Heating Greenhouse

Studies were begun in 1981 on the use of methane gas from landfills for heating greenhouses. The gas is being tested as a fuel for two 75.000-Btu-an-hour space heaters. The heaters and related equipment are in a 24-by-40-foot plastic-covered greenhouse where they are being tested for combustion performance corrosion and efficiency.

Data obtained will enable the Company to evaluate the commermode of transportation. **##** Biofouling Control

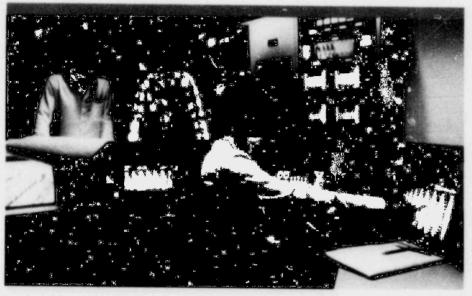
### Studied

before these vehicles will be accepted by the public as a viable

A major problem in power plant condenser operation is biofouling the deposit of organic material on cooling-system surfaces. Chlorine is widely used as a means of biofouling control to achieve improved plant efficiency.

While laboratory studies have demonstrated the ability of ozone to prevent biofouling on heat exchanger surfaces, practical applications made more detailed information necessary. A current Company research project uses a mobile test facility with three pilotscale condensers to simulate actual once-through water cooling operations.

Testing showed that ozone was effective while at the same time less offensive to the environment than chlorine at the Bergen Generating Station. The testing facility has been improved and moved to Mercer Generating Station Testing there will be expanded to study the effectiveness of low chlorine dosage levels and dechlorinization required to meet stringent water quality standards.



leveling devices. The first advanced battery set for testing is a zinc-chloride system scheduled during 1983.

#### ## Fish Farming

An aquaculture project at the Mercer Generating Station continued during the year to explore the possibility of raising fish in commercial quantities in pools utilizing waste heat in water discharged from the plant

The pools at the station were stocked in November with 200,000 seven-inch trout reared at the Lime stone Springs Fishing Preserve in Pennsylvania, which the Company began operating in 1980. Approximately 800,000 rainbow trout were hatched and reared at Limestone Springs.

In 1982 fish production at Mercer is expected to amount to over 270,000 pounds and at Limestone Springs, about 560,000 pounds.

cial possibilities and future uses of landfill gas.

The experimental greenhouse uses gas from a landfill in Cinnaminson, N.J. Since 1979 the Company has been obtaining methane from this landfill and selling it to a large industrial customer adjacent to the site. Other sites also are being evaluated for their potential of supplying methane for commercial use.

#### ## Electric Vehicle Tested

Initial trial and evaluation of a Lectric Leopard passenger electric vehicle was completed. The vehicle was driven 1,600 miles under a variety of road, weather and traffic conditions on public roads and highways. The maximum range was found to be 40 miles and the top speed 50 miles an hour.

The second phase of evaluation will be a three-month trial under commuter conditions. The auto is the latest of a number of vehicles that have been tested. Improvement in range, cost performance and design have been found to be essential

#### **\*\* Laboratory Work** Expands

PSE&G's Research and Testing Laboratory continued in 1981 to provide testing and analysis programs for the Company. The laboratory. part of PSE&G Research Corporation, also experienced increased demand for its commercial services.

Utilizing its experience and technical resources, the Laboratory met specialized testing needs of outside clients, including utilities, industries, hospitals and other institutions

The Laboratory assisted in the work of getting Salem No. 2 on line by carrying out numerous tests during the unit's startup, evaluating the chemical, mechanical and electrical characteristics of the items tested The Laboratory's radiological monitoring program in the area of the Salem station was expanded to include emergency response activities for the State of Delaware as well as of PSE&G

Completion and opening in 1981 of the 20,000-seat indoor arena of the New Jersey Sports and Exposition Authority in the meadowlands in East Rutherford provided another attraction for the public. The arena, home of the New Jersey Nets of the National Basketball Association, complements Giants Stadium and the Meadowlands Racetrack. Other sports events, as well as concerts, conventions and expositions, are held at the arena. Development of the complex has served as a catalyst in the commercial and residential growth of the meadowlands area that has meant millions of dollars in additional revenues for the Company.

## 

Construction of new office facilities and relocations were at a high level in 1981, particularly in the northern portion of the Company's service area, spurred by higher costs in New York City. There also was a notable increase in office relocations in the southern section from the Philadelphia area.

Although higher interest rates and the economic slowdown reduced industrial expansion, there were some manufacturing gains, particularly in the pharmaceutical field and container manufacturing.

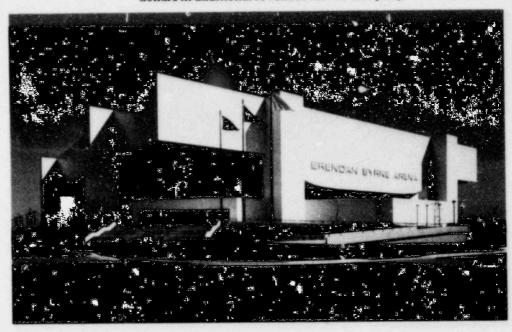
The Company's territory continued to attract foreign firms.

Among countries represented were Japan, West Germany, Republic of China, the United Kingdom and France.

During the year 209 major industrial and commercial firms, employing approximately 15,370 persors, relocated or expanded in the Company's area. A total of 47 companies, employing 4,860, moved or closed operations, leaving a net gain of approximately 10,510 jobs.

Company area development representatives provided assistance to firms in obtaining locations or planning expansions

Development was promoted in an advertising program which included several television commetcials. The program emphasized the arivantages of the Company's service area for the location of corporate offices and as a good place for employees to live.



The Hackensack Meadowlands Development Commission approved plans for the \$1 billion Berry's Creek Center to be located south of Route 3 in East Rutherford. The proposed center will include a shopping mall, several large office buildings, 4,000 housing units and a hotel.

Another major developer, Hartz Mountain Industries, broke ground for a \$1 billion commercial development to be called Harmon Meadow, off Route 3 in Secaucus. The project will include as many as tane office buildings, a retail center, and an eight-story, 156-room hotel. In addition, 4,000 residential units will be built in an area designated as Harmon Meadow Village

The 20,000-seat arena of the New Jersey Sports and Exposition Authority was opened during the year in the complex that includes Giants Stadium and the Meadowlands Race Track Redevelopment efforts in Newark and New Brunswick also made substantial progress.

Renaissance Newark, Inc., a non-profit group formed by government and business leaders, served as catalyst in moves to revive the city's downtown area.

Construction was begun on a \$33 million, 18-story office building to be known as One Washington Park in which New Jersey Bell Telephone Company will be the major tenant. Prudential Insurance Company announced plans for a third office building in the Gateway complex, and Mutual Benefit Life Insurance Company revealed plans for a \$30 million, 12-story building to adjoin its present headquarters.

In New Brunswick, Johnson & Johnson's new \$73 million corporate headquarters and a \$20 million hotel neared completion in the downtown area.

A new employee information program will provide monthly videotapes that will be shown on television sets installed at various locations throughout the Company. Employees will have an opportunity to view the tapes in small groups. A meeting of the Communications Coordinating Committee is shown being videotaped.

# 

#### ## Community Involvement

As in the past, various departments as well as individual employees participated during 1981 in community activities throughout the Company's service area. Employees served in voluntary positions in many civic, cultural, charitable and educational organizations.

The Company maintained its commitment to agencies that seek to improve the social, economic educational and living conditions in the communities and urban areas it serves

Urban activities were focused on strengthening ties with organizations working on inner-city problems. Part cular emphasis was placed on increasing educational and job opportunities for urban youth.

Company officials filled key roles in Renaissance Newark as it sought to revitalize the city's commercial district.

#### ## Communications Emphasized

A broad-range communications program was conducted that provided information about the Company and its activities to the public, stockholders and the financial community. Information was supplied to the media on a regular basis.



More than 300 presentations attended by over 17,000 persons were given by the Company's Speakers' Bureau. Generating station tours were held for over 3,900 persons.

Over 19,000 persons visited the Second Sun, the Company's energy information center at the Salem Generating Station.

There were presentations on a wide variety of timely energy-related topics and other subjects of community interest to civic, social and school groups totaling more than 198,000 persons. A wide variety of a diences were reached through film, slide and lecture programs. Community concerns of many types were reviewed and assistance provided where appropriate.

Company representatives appeared on numerous television and radio interview programs.

Company advertising emphasized the need for conservation and nuclear power, and sought to encourage business and industry to locate in the Company's service area.

#### ## Employee Relations

A pilot study in which employees participated was carried out during the year to help solve problems shown in the 1980 employee attitude survey. The program proved effective and was expanded in the Fall to include representatives of employees throughout the Company.

At the end of the year about 1,000 employees serving in more than 100 Local Action Groups were attempting to solve problems at all levels to make the Company a better place in which to work.

A management succession planning program was instituted on a Company-wide basis to insure that qualified replacements are available for key employees. Personnel development activities, including ongoing training sessions for all managerial levels, were expanded.

During the year 561 management employees attended supervisory and managerial skills training programs. In addition, 553 employees attended job-related college courses under the Company's tuition-aid plan.

The number of Company employees at the end of 1981 was 12,782 compared with 12,326 at the close of 1980. Wages and salaries for the year totaled \$341 million, including \$10 million for disability benefits and workers compensation.

Affirmative Action Programs continued to be emphasized in the employment of women and members of minority groups. At the end of 1981 there were 1,924 female employees and 1,859 minority group employees.

The Company participated as a corporate partner of the U.S. Council for the International Year of Disabled Persons.

#### **Financial Statement Responsibility**

The management of PSEsO is responsible for the integrity and objectivity of the financial statements of the Company. These statements are prepared by the Company in accordance with generally accepted accounting principles applied on a consistent basis and include the use of informed estimates where appropriate. Management believes that they present fairly the Company's financial condition. Information in other parts of this Annual Report is consistent with these financial statements.

The Company maintains an accounting system established with sound accounting and business policies which are communicated to the appropriate personnel. The system is designed to provide reasonable assurance that transactions are executed in accordance with management's authorizations and that assets are safeguarded. The concept of reasonable assurance recognizes that the costs of internal controls should not exceed the related benefits. The system, together with its related internal controls, is continually reviewed by the Company's staff of internal auditors.

Management believes the effectiveness of this system is enhanced by a program of continuous and selective training of employees. In addition, management has communicated to all employees its Policies on Business Conduct, Company Assets and Internal Control.

The firm of Deloitte Haskins & Sells, independent certified public accountants, is engaged to examine the Company's financial statements and issue an opinion thereon. Their examination is conducted in accordance with generally accepted auditing standards and includes a review of internal controls and tests of transactions.

The Board of Directors carries out its responsibility of financial disclosure through the Audit Committee currently consisting of five directors who are not employees of the Company. The Audit Committee meets periodically with management as well as representatives of the internal auditors and independent certified public accountants and reviews the work of each to ensure that their respective responsibilities are being carried out, and to discuss related matters. Both groups have full and free access to the Audit Committee.

#### Summary of Significant Accounting Policies

#### Accounting Principles

Financial statements are presented in accordance with generally accepted accounting principles (GAAP). As a result of accounting requirements imposed under ratemaking decisions by the Board of Public Utilities of the State of New Jersey (BPU), the applications of GAAP by the Company differ in certain respects from applications by non-regulated businesses. The Company is under the jurisdiction of the Federal Energy Regulatory Commission (FERC) and the BPU and maintains its accounts in accordance with their prescribed Uniform Systems of Accounts, which are the same.

#### Investments in Subsidiaries

The Company's investments in its subsidiaries, which in the aggregate are not significant as defined by the Securities and Exchange Commission, are reported in the accompanying financial statements on the equity method of accounting. Under this method, investments in subsidiaries are reported under Other Property and Investments in the Balance Sheets, and earnings or losses of such subsidiaries are reported under Other Income in the Statements of Income.

#### Revenues

Revenues are recorded based on estimated service rendered, but are billed to customers through monthly cycle billings on the basis of actual usage.

#### Amortization of Deferred Items

Deferred debits are amortized and recovered through rates as prescribed by the BPU. Prior to 1981, portions of such amounts estimated to be recoverable within one year, together with related taxes, were classified as current items in the balance sheets. All financial statements presented herein reflect appropriate reclassifications to conform with the current presentation.

#### Fuel Costs

The Company projects the costs of fuel for electric generation, purchased and interchanged power, gas purchased and materials for gas produced for twelve-month periods. Adjustment clauses in the Company's rate structure allow the recovery of the excess of such projected costs over those included in the Company's base rates through levelized monthly charges over the period of projection. Any under or overrecoveries are deferred and charged to operations in the period in which they are recovered. Prior to 1981, such under or overrecoveries were classified as current items in the balance sheets. All financial statements presented herein reflect appropriate reclassifications to conform with the current presentation.

In addition, the BPU has allowed the Company to amortize and recover through base rates the balance of electric energy costs which had not been recovered prior to July 1, 1977. The Commission has also authorized the recovery through the levelized electric energy adjustment clause of underrecovered costs from the 1979-1980 levelized period over a period ending June 30, 1982.

#### Utility Plant and Related Depreciation and Amortization

The cost of replacements of units of property is charged to utility plant. The cost of maintenance, repairs and replacements of minor items of property is charged to appropriate expense accounts. At the time depreciable properties are retired or otherwise disposed of, the original cost less net salvage value is charged to the appropriate provision for accumulated depreciation.

Depreciation and Amortization, for financial reporting purposes, are computed under the straight-line method. Depreciation is based on estimated average remaining lives of the several classes of depreciable property. Amortization of leasehold improvements is based on the term of the lease. Depreciation applicable to nuclear plant provides for estimated costs of dismantling or decommissioning. These estimates are reviewed continuously and necessary adjustments are made as approved by the BPU Depreciation provisions stated in percentages of original cost of depreciable property are 3.49% for 1981 and 3.48% for 1980 and 1979.

#### Amortization of Nuclear Fuel

Nuclear energy burnup costs are charged to fuel expense on the basis of the number of units of thermal energy produced as they relate to total thermal units expected to be produced over the life of the fuel. The rate calculated for fuel used at the Company's Salem Unit No. 1 includes a provision for estimated spent fuel disposal costs. The rates for fuel used at Salem Unit No. 2 and the Peach Bottom units do not include such a provision. By rate order effective February 14, 1982 such disposal costs related to these units will be recovered through the levelized energy adjustment clause

#### Income Taxes

The Company and its subsidiaries file a consolidated Federal income tax return and income taxes are allocated, for reporting purposes, to the Company and its subsidiaries based on taxable income or loss of each Deferred income taxes are provided for differences between book and taxable income to the extent permitted for rate-making purposes.

Investment tax credits are deferred and amortized over the useful life of the related property including nuclear fuel.

For rate-making and financial reporting purposes the Company's tax normalization practices are in compliance with the requirements of the Economic Recovery Tax Act of 1981

#### Allowance for Funds Used During Construction

Allowance for funds used during construction (AFDC) is a cost accounting procedure whereby the cost of financing construction (interest and equity costs) is transferred from the income statement to construction work in progress (CWIP) in the balance sheet. This results in treating such cost in the same manner as construction labor and material costs. The rate used for calculating AFDC was 8% for 1981, 1980 and 1979 which was within the limits set by the FERC. Effective February 14, 1982, the BPU has issued a new rate order which requires the Company to raise the rate used for calculating AFDC to 8½%, also within the limits set by FERC.

As a result of BPU rate orders the Company is allowed to include \$250,000,000 of CWIP in rate base on which a current return is permitted to be recovered through operating revenues. Therefore no AFDC has been accrued on that amount for the years shown. In addition, by order effective February 14, 1982, the BPU is allowing the Company to include in rate base an additional \$125,000,000 of CWIP raising the total amount to \$375,000,000.

#### Pension Plan

Pension costs are determined on the basis of an acceptable actuarial method and are charged to operating expenses, utility plant and other accounts. The Company's policy is to fund pension costs accrued. Prior service costs are being funded over a period of 35 years which began January 1, 1967.

#### Statements of Income

For the Years Ended December 31,	1981	1980	1979
Operating Revenues		(Thousands of Dollars)	
Electric	\$2,322,042	\$2,083,900	\$1,689,857
Gas	1,149,610	910,154	726,850
Total Operating Revenues	3,471,652	2,994,054	2,416,707
Operating Expenses			
Operation	* 050 500		
Fuel for Electric Generation and Interchanged Power — net	1,059,539	866,802	620,546
Gas Purchased and Materials for Gas Produced	692,319	513,988	384,759
Other	385,149 192,768	322,220 169,813	287,086 149,027
Maintenance Depreciation and Amortization	178.532	169,987	162,989
Amortization of Property Losses (note 5)	15,362	11,024	303
Taxes Other than Federal Income Taxes	474,979	431,890	364,411
Federal Income Taxes (note 1)	118,737	131,178	123,965
Total Operating Expenses	3,117,385	2,616,902	2,093,086
Operating Income	354,267	377,152	323,621
Other Income			
Allowance for Funds Used During Construction — Equity	51.877	45.655	36,887
Earnings of Subsidiaries — net (note 2)	9,490	4,831	1,721
Miscellaneous – net	6,290	5,428	4,542
Total Other Income	67,657	55,914	43,150
Income Before Interest Charges	421,924	433,066	366,771
Interest Charges			
Long-Term Debt	184,133	173,199	146,673
Short-Term Debt	16,574	11.236	2,448
Other	882	5,127	4.027
Allowance for Funds Used During Construction — Debt	(43,802)	(31,897)	(19,706
Net Interest Charges	157,787	157,665	133,442
Income Before Extraordinary Items	264,137	275,401	233,329
Extraordinary Items, net of income tax			
Unrecoverable costs of Atlantic Project (note 5)		(13,219)	
Gain on sale of Transport of New Jersey (note 3)		19,535	J. HITCH
Net Extraordinary Items		6,316	
Net Income	264,137	281,717	233,329
Dividends on Cumulative Preferred Stock and \$1.40 Dividend Preference Common Stock	51,538	46,341	46,799
Earnings Available for Common Stock	\$ 212,599	\$ 235,376	\$ 186,530
Share of Common Stock Outstanding			
Shares of Common Stock Outstanding End of Year	86,089,491	76,614,995	68,914,349
Average for Year	80,962,344	73,068,848	65,409,325
Earnings per average share of Common Stock			
before Extraordinary Items	\$ 2.63	\$ 3.13	\$ 2.85
Extraordinary Items, net of income tax			
Unrecoverable costs of Atlantic Project (note 5)		(.18)	
Gain on sale of Transport of New Jersey (note 3)		27	
Net Extraordinary Items		.09	
Earnings per average share of Common Stock	\$ 2.63	\$ 3 22	\$ 2.85
Dividends paid per share of Common Stock	\$ 2.44	\$ 2.29	\$ 2.20

See Summary of Significant Accounting Policies and Notes to Financial Statements

#### **Balance Sheets**

December 31,	1981	1980
Assets		
Utility Plant — original cost	(Thousands	s of Dollars)
Electric Plant	\$4,459,245	\$4,042,035
Gas Plant	1,020,236	963,876
Common Plant	126,561	101,111
Nuclear Fuel	55,445	26,473
Utility Plant in Service	5,661,487	5,133,495
Less Accumulated Depreciation and Amortization	1,874.668	1,703,956
Net Utility Plant in Service	3,786,819	3,429,539
Construction Work in Progress	1,637,277	1,720,912
Plant Held for Future Use	21,997	26,798
Net Utility Plant	5,446,093	5,177,249
Other Property and Investments		
Nonutility Property, net of accumulated depreciation — 1981, \$204, 1980, \$199	8,408	8,245
Investments in and Advances to Subsidiaries (note 2)	261,010	220,494
Total Other Property and Investments	269,418	228,739
Current Assets		
Cash (note 4)	5,595	3,751
Working Funds	10,665	9,377
Accounts Receivable, net of allowance for doubtful accounts —		
1981, \$12,563, 1980, \$10,678	377,924	351,995
Unbilled Revenues	176,948	163,346
Fuel, at average cost	218,223	183,059
Materials and Supplies, at average cost	40,071	30,424
Prepayments	8,646	6,704
Total Current Assets	838,072	748,656
Deferred Debits (note 5)		
Extraordinary Property Losses	202 552	
Hope Creek Unit 2	290,750	
Atlantic Project	275,472 3,632	290,532
Other Gross Receipts Tax	31,867	3,934 48,915
Deferred Electric Energy and Gas Fuel Costs — net	98,146	202.345
Unamortized Debt Expense	23,639	24,490
Total Deferred Debits	723,506	570,216
Total	\$7,277,089	\$6,724,860

Certain reclassifications have been made of previously reported 1980 amounts in order to conform to current classifications.

See Summary of Significant Accounting Folicies and Notes to Financial Statements

	1981	1980
Liabilities		
Capitalization	(Thousands	of Dollars)
Common Equity Common Stock (see statements, page 32)	\$1,423,739	\$1,252,103
Premium on Capital Stock	557	557
Paid-In Capital	26.143	26,093
Retained Earnings (see statements, page 31)	827,497	813,181
Total Common Equity	2,277,936	2,091,934
Preferred Stock without mandatory redemption (see statements, page 32)	554,994	554,994
Preferred Stock with mandatory redemption (see statements, page 32)	77,913	29,750
Long-Term Debt (see statements, page 33)	2,410,823	2,319,346
Total Capitalization	5,321,666	4,996,024
Current Liabilities		
Long-Term Debt due within one year	2.230	33,065
Preferred Stock to be redeemed within one year	2,200	930
Commercial Paper (note 6)	207,551	180,865
Accounts Payable	262,734	205,896
Taxes Accrued, including New Jersey gross receipts tax —		
1981, \$475,856, 1980, \$399,996	492,010	436,150
Deferred Income Taxes — Unbilled Revenues (note 1)	81.396	75,139
Interest Accrued	47,750	45,956
Gas Purchased	83,641	74,879
Other	45,111	44,294
Total Current Liabilities	1,222,423	1,097,174
Deferred Credits		
Accumulated Deferred Income Taxes (note 1):		
Deferred Electric Energy and Gas Fuel Costs — net	45.619	93,807
Extraordinary Property Losses		
Hope Creek Unit 2	126,327	
Atlantic Project	115,896	122,232
Depreciation and Amortization	312,595	274,879
Other	11,577	16,217
Accumulated Deferred Investment Tax Credits (note 1)	113,890	108,889
Other	7,096	15,638
Total Deferred Credits	733,000	631,662
Commitments and Contingent Liabilities (note 8)		
Total	\$7,277,089	\$6,724,860

Statements of Changes in Financial Position

For the Years Ended December 31,	1981	1980	1979
Sources of Funds	(1	housands of Dollar	
Income before Extraordinary Items	\$264,137	\$275,401	\$233,329
Add (Deduct) Items not affecting Working Capital:			****
Depreciation and Amortization of Utility Plant	199,021	181,847	169,927
Amortization of Atlantic Project Abandonment	15,060	10,753	** 000
Amortization of Gross Receipts Taxes	17,048	14,747	11,872
Recovery (Deferral) of Electric Energy and Gas Fuel Costs — net	104,199	(28,068)	(123,626
Provision for Deferred Income Taxes — Hope Creek Unit 2 (note 1)  Provision for Deferred Income Taxes — Other — net (note 1)	126,327	43,937	101,362
Investment Tax Credits — net	(21,448) 4,998	5,844	101,362
Allowance for Funds Used During Construction (AFDC)	(95,679)	(77,552)	(56,593
Equity in Net harnings of Subsidiaries	(9,490)	(8,610)	(3,002
Other	(1,117)	444	147
Total Funds from Operations	603,056	418,743	343,835
Income from Extraordinary Items — net (notes 3 and 5)	000,000	6.316	
Related Items not affecting Working Capital			
Sale of Transport of New Jersey (note 3)		18,155	
Unrecoverable Costs of Atlantic Project (note 5)		13,219	
Total Funds from Extraordinary Items		37,690	
Total Funds from Internal Sources	603,056	456,433	343,835
Net proceeds from sales of			
Long-Term Debt	99,320	99,042	268,073
Preferred Stock	49,456		
Common Stock	171,420	144,839	92,459
Total Security Sales	320,196	243,881	360,532
Total Funds Provided	\$923,252	\$700,314	\$704,367
Applications of Funds			
Additions to Utility Plant, excluding AFDC	\$588,170	\$547,978	\$481,542
Cash Dividends	249,061	215,158	190,981
Advances to Subsidiaries	31,026	45,154	28,743
Reductions of Long-Term Debt Hope Creek Unit 2 Abandonment (note 5)	5,572	34,345	28,342
Total Construction Costs, including AFDC of \$33,000	(223,000)		
Recoverable Costs, including deferred cancellation costs	290,750		
Miscellaneous	17,506	(6,011)	10,365
Total Funds Applied	959,085	836,624	739,973
	333,003	555,52	
Changes in Working Capital — Increase (Decrease): Short-Term Debt	(26,686)	(85,990)	(94,875)
Long-Term Debt due within one year	30,835	(8,866)	32,888
Accounts Receivable	25,929	118,811	19,727
Unbilled Revenues	13,602	49,469	(4,728)
Fuel	35,164	7,363	41,025
Accounts Payable	(56,838)	(84,580)	10,281
Taxes Accrued	(55,860)	(73,500)	(28,927)
Deferred Income Taxes (note 1)	(6,257)	(22,756)	2,175
Gas Purchased	(8,762)	(25,934)	(9,562)
		(10,327)	(3,610)
Other	13,040	(10,061)	10-1-1-1
	(35,833)	(136,310)	(35,606)

Certain reclassifications have been made of previously reported 1979 and 1980 amounts in order to conform to current classifications.

See Summary of Significant Accounting Policies and Notes to Financial Statements

#### Statements of Retained Earnings

For the Years Ended December 31,	1981	1980	1979
Balance January 1 Add Net Income	\$ 813,181 264,137	(Thousands of Dollars) \$ 747,076 281,717	\$704,909 233,329
Total	1.077,318	1,028,793	938,238
Deduct Cash Dividends: Preferred Stock, at required rates \$1.40 Dividend Preference Common Stock Common Stock*	49,657 1,881 197,523	44,414 1,881 168,863	44,954 1,881 144,146
Total Cash Dividends Capital Stock Expenses	249,061 760	215,158 454	190,981 181
Total Deductions	249,821	215,612	191,162
Balance December 31	\$ 827,497	\$ 813,181	\$747,076

<sup>\*</sup>Restrictions on the payment of dividends are contained in the Charter, certain of the supplemental indentures to the Company's Mortgage, and certain debenture bond indentures. However, none of these restrictions presently limits the payment of dividends out of current earnings. The amount of retained earnings free of these restrictions at December 31, 1981 was \$817,497,000.

#### Independent Accountants' Opinion

#### Deloitte Haskins Sells

Certified Public Accountants 550 Broad Street Newark, New Jersey 07102

To the Stockholders and Board of Directors of Public Service Electric and Gas Company:

We have examined the balance sheets and statements of capital stock and long-term debt of Public Service Electric and Gas Company as of December 31, 1981 and 1980 and the related statements of income, retained earnings, and changes in financial position for each of the three years in the period ended December 31, 1981. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Ir our inion, such financial statements, appearing on page 25 to 39, inclusive, present fairly the financial position of Public Service Electric and Gas Company as of December 31, 1981 and 1980 and the results of its operations and the changes in its financial position for each of the three years in the period ended December 31, 1981, in conformity with generally accepted accounting principles applied on a consistent basis.

Soitte Hosling & Sells

March 4, 1982

See Summary of Significant Accounting Policies and Notes to Financial Statements

#### Statements of Capital Stock

Outstanding Shares (note A)	Current Redemption Price Per Share	Certain Refundings Restricted Prior to	1981	1980
(note B)			(Thousan	ds of Dollars)
279 128	\$112.00	2/1/85	¢ 27 012	\$ 30,680
				\$ 007,000
			50,000	930
			\$ 77.913	\$ 29.750
1,600,000	\$ 26.50		\$ 40,000	\$ 40,000
1 100 000	26.50		50,000	50,000
250,000	103.00		25,000	25,000
249,942	103.00		24.994	24,994
250,000	102.75		25,000	25,000
250,000	103.00		25,000	25.000
250,000	103.00			25,000
250,000	102.00		25.000	25.000
350,000	107.00			35.000
500,000	103.00			50.000
500.000	106.00			50,000
150,000	106.00			15,000
750,000	106.00			75,000
600,000	106.56			60,000
300,000	108.90	10/1/82	30,000	30,000
			\$554,994	\$554,994
	Shares (note A) (note B)  279,128 500,000  1,600,000 250,000 250,000 250,000 250,000 250,000 500,000 500,000 150,000 750,000 600,000	Outstanding Shares (note A) Price (note B)  279.128 \$112.00 500,006 113.44  1.600,000 \$26.50 700,000 26.50 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 500,000 106.00 500,000 106.00 150,000 106.00 600,000 106.56	Outstanding Shares Price (note A) Per Share Price (note B)  279.128 \$112.00 2/1/85.500,006 113.44 4/1/86  1.600,000 \$26.50 250,000 103.00 249.942 103.00 250,000 102.75 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 103.00 250,000 106.00 350,000 106.00 500,000 106.00 750,000 106.00 600,000 106.56	Outstanding Shares Price Restricted (note A) Per Share Prior to 1981  (note B) (Thousan 279.128 \$112.00 2/1/85 \$27.913 500,000 113.44 4/1/86 50,000 \$700,000 26.50 \$40,000 250,000 102.75 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 250,000 103.00 25,000 25,000 103.00 25,000 25,000 103.00 25,000 25,000 103.00 25,000 25,000 103.00 25,000 350,000 107.00 35,000 500,000 106.00 50,000 150,000 150,000 106.00 75,000 600,000 106.56 60,000 75,000 600,000 106.56

#### Notes.

A. In addition, there are 2,070,930 shares of \$100 par value and 6,400,000 shares of \$25 par value Cumulative Preferred Stock which are authorized and unissued, and which upon issuance may or may not provide for mandatory annual sinking fund redemption provisions.

and 4,793,916 shares issued for \$92,640 in 1979)

B. As of December 31, 1981 the annual dividered requirement and embedded dividend costs were \$10,139,000 and 13,27% in spectively, for Preferred Stock with mandatory redemption and \$40,629,000 and 7,38% respectively, for Preferred Stock without mandatory redemption.

If divice desupon any sharer of such stock are in arrears to an amount equal to the annual dividend thereon, voting rights for the election of a majority of the Board of Directors become operative and continue until all accumulated and unpaid dividends thereon have been paid, whereupon all such voting rights cease subject to being again revived from time to time.

C. The 12.25% series is subject to a mandatory annual sinking fund redemption of 17.500 shares which is cumulative, plus redemption of up to an additional 17.500 shares at the option of the Company, all at a redemption price of \$100 per share. An aggregate of 27.672 shares and 43.200 shares of the 12.25% series were purchased and redeemed in 1981 and 1980 respectively. On March 31. 1987, the 13.44% series will become subject to a

mandatory annual sinking fund redemption of 25,000 shares which is cumulative, plus redemption of up to an additional 25,000 shares at the option of the Company, all at a redemption price of \$100 per share. Both series are subject to optional redemption upon payment of the applicable optional redemption price. A redemption of shares—either series also requires payment of all accumulated and unpaid dividends to the date fixed for redemption.

- D. Preferred Stock without mandatory redemption is subject to redemption solely at the option of the Company upon payment of the applicable redemption price plus accumulated and unpaid dividends to the date fixed for redemption.
- E. Each share of \$1.40 Dividend Preference Common Stock is entitled to cumulative dividends, to two votes, and, on liquidation or dissolution to twice as much as each share of Common Stock. There were no changes in outstanding shares in 1981. 1980 or 1979.
- F. Includes 7:528,567 shares of Common Stock reserved for possible issuance under the Company's Dividend Reinvestment and Stock Purchase Plan. Tax Reduction Act Employee Stock Ownership Plan. Employee Stock Purchase Plan and Thrift Plan. See Summary of Significant Accounting Policies and Notes to Financial Statements.

#### Statements of Long-Term Debt

December 31,		1981 19	
First and Refunding Mortgage Bonds (note A)		(The sands of Dollars)	
Series			
3¼ % October 1, 1983	\$	21,004	\$ 21,556
3¼ % May 1, 1984		50,000	50,000
4%% November 1, 1986		50.000	50,000
4% % September 1, 1987		60,000	60,000
4% % August 1, 1988		60,000	60,000
51/8 % June 1, 1989		50,000	50,000
4% September 1, 1990		50,000	50,000
4% % August 1, 1992		40,000	40,000
4% % June 1, 1993		40,000	40,000
4% % September 1, 1994		60,000	60,000
4%% September 1, 1995		60,000	60.000
6¼ % June 1, 1997		75,000	75,000
7 % June 1, 1998		75,000	75,000
7% % April 1, 1999		75,000	75,000
91/4 % March 1, 2000		98,000	98.000
83/4 % A May 15, 2001		69,300	69,300
75% % B November 15, 2001		80,000	80,000
7½ % C April 1, 2002		125,000	125,000
8½% D March 1, 2004		90,000	90,000
12 % E October 1, 2004		10,730	10,730
8% % F April 1, 2006		60,000	60,000
8 45% G September 1, 2006		60,000	60,000
8¼ % H June 1, 2007		125,000	125,000
81/8 %   September 1, 2007		59,900	59,900
9% % J November 1, 2008		100,000	100,000
9% % K July 1, 2009		100,000	100,000
12 % L November 1, 2009		125,000	125,000
121/4 % M June 1, 2010		100,000	100,000
15% % N August 1, 1991		100,000	
8 % June 1, 2037		7,463	7.463
5 % July 1, 2037		7,538	7,538
Pollution Control Series			
6.30% A October 1, 200F		14,300	14,300
6.90% B September 1, 2009		42,620	42,620
6 90% C September 1, 2009		2,990	2,990
Total First and Refunding			
Mortgage Bonds	\$2	2,144,145	\$2,044,397

#### Notes

A. The Company's Mortgage, securing the First and Refunding Mortgage Bonds, constitutes a direct first mortgage lien on substantially all property and franchises.

B. As of December 31, 1981 the annual interest requirement on Long-Term Debt was \$191,902,000 of which \$171,729,000 was the requirement for First and Refunding Mortgage Bonds. The embedded interest cost on Long Term Debt was 8.08%.

C. As of December 31, 1981, the Company had unexercised commitments under a Credit Agreement with a group of banks for issuance of up to an aggregate amount of \$125,000,000 to be outstanding at any time to April 1, 1982. The Company is re-

	1981	1980
Debenture Bonds unsecured	(Thousand	is of Dollars)
4¾ % October 1, 1981	\$	\$ 31,000
4% % October 1, 1983	24,832	25,742
5% % June 1, 1991	40,557	41,904
7¼ % December 1, 1993	29,329	30,140
9 % November 1, 1995	56,145	57,154
73/4 % August 15, 1996	59,040	60,046
8¾ % November 1, 1996	43,059	45,103
6 % July 1, 1998	18,195	18,195
Total Debenture Bonds	271,157	309,284
November 15,1983  Total Long-Term Debt	1,200	1,680
Principal amount out- standing (notes B and C) Less amount due within	2,416,502	2,355,361
one year (note D)	2,230	33,065
Long-Term Debt excluding amount due within one		
year (note D)	2,414,272	2,322,296
Net Unamortized Discount	(3,449)	(2,950
Long-Term Debt less Net Unamortized	\$2,410,823	\$2,319,346
Discount	φ2,410,023	φ2,013,3°R

quired to pay commitment—es of ½ of 1% per annum on any unused portion. The Company may at any time terminate the commitments, in whole or in part, without penalty or premium. The banks also agreed to make term loans, at the Company's option, on or about April 1, 1982 up to the commitment then in effect, which term loans would be due April 1, 1985.

D. The aggregate principal amounts of requirements for sinking funds and maturities for each of the five years following December 31, 1981 is as follows.

Year	Sinking Funds	Maturities	Total
1982	\$ 1.750	(Thousands of Dollars) \$ 480	\$ 2,230
1983	5,816	46,820	52,636
1984 1985	6,200 6,200	50,000	56,200 6.200
	6,200	50,000	56,200
	\$26,136	\$147,300	\$173,466

For sinking fund purposes, certain First and Refunding Mortgage Bond issues require annually the retirement of \$20,400,000 principal amount of bonds or the utilization of bondable property additions at 60% of cost. The portion expected to be met by property additions has been excluded from the table above. Also, the Company may, at its option, retire additional amounts up to \$6,200,000 annually through sinking funds of certain debenture bonds. The election of any such option is included in long-term debt due within one ye

See Summary of Significant Accounting Policies and Notes to Financial Statements

#### **Notes to Financial Statements**

#### 1. Federal Income Taxes

A reconciliation of reported Net Income with pre-tax income and of Federal income tax expense with the amount computed by multiplying pre-tax income by the statutory Federal income tax rata of 46% is as follows:

	1981	1980	1979
	(Thou	sands of Do	lars)
Net Income	\$264,137	\$281,717	\$233,329
Federal income taxes			
included in			
Operating income:			
Current provision	2,603	58,641	14,359
Provision for deferred income			
taxes — net* Investment tax credits — net	111,136	66,693 5,844	99,187
	4,550	0,044	10,413
Total included in operating income	118,737	131,178	123,965
Miscellaneous other	119,737	101,170	160,500
income - net	3,586	1.703	1.952
Extraordinary Items		(54,885)	
Total Federal income tax			
provisions	122,323	77,996	125,917
Subtotal	386.460	359,713	359,246
Earnings of subsidiaries —	0.000, 000	0.000,1 839	W. C.
net	(9,490)	(4,831)	(1,721)
Pre-tax income	\$376,970	\$354,882	\$357,525
Tax expense at the			
statutory rate	\$173,406	\$163,246	\$164.462
Adjustments to pre-tax			
income, computed at			
statutory rate, for which			
deferred taxes are not			
provided under current rate			
making policies			
Tax depreciation under book			
depreciation	18,608	16,161	11,367
Allowance for funds used			
during construction	(44,012)	(35,674)	(26,033)
Overhead costs capitalized	(8,858)	(7,262)	(6,935)
Extraordinary Items		(32,543)	
Other	445	(2,890)	(1,276)
Subtotal	(33,817)	(62,208)	(22,887)
Amortization of deferred tax			
items	(17,266)	(23,042)	(15,658)
Subtotal	(61,083)	(85,250)	(38,545)
Potal Federal income tax			
provisions	\$122,323	\$77,996	\$125,917
The provision for deferred			
income taxes represents the			
tax effects of the following			
items:			
Current Liabilities			
Unbilled revenues	\$ 6,257	\$22,756	\$ (2,175)
Defetred Credits			
Hope Creek Abandonment	126,327		
Atlantic Abandonment	(6,336)	(4,587)	
Additional tax depreciation	41,479	31,799	32,287
. Repair allowance property	(5,236)	6,362	6,701
Gross receipts tax	(2,033)	(985)	5,924
Deferred fuel costs — net	(48,188)	12,634	- 56,859
Loss on reacquired debt	(571)	(570)	(572)
Other	(563)	(716)	163
Subtotal	104.879	43,937	101,362
lotal	\$111.136	\$66,693	\$ 99,187

The balance of investment tax credits not utilized as of December 31, 1981 in the amount of \$173 million is available as a carryover to future years and will expire as follows: 1993—\$16 million, 1994—\$47 million, 1995—\$42 million, and 1996—\$68 million. For the years 1979 and 1980 investment tax credits can be utilized to offset 70% of tax liability and for 1981, 80% of tax liability, before investment credit.

The Company has a Tax Reduction Act Employee Stock Ownership Plan (TPASOP) under provisions of the Internal Revenue Code. Such provisions permit the Company to elect an additional 1% investment tax credit if the Company transfers to the TRASOP an equivalent amount of cash for the purchase of shares of Common Stock. The Company may also claim an additional ½% investment tax credit if it contributes an equivalent amount of cash to the TRASOP, but only to the extent that such amount is matched by contributions by participants.

## Investments in and Advances to Subsidiaries Investments in and advances to subsidiaries (including the Company's equity in undistributed earnings or losses) are summarized as follows

December 31.	1981	1980	1979
Energy Development Corporation	(1)	nousands of l	Dodars)
Investment Advances		\$ 14,245 123,034	\$ 8,514 80,554
Transport of New Jersey* Investment			12.732
Other Subsidiaries, primarily LNG Project Advances	84,179	83,215	82,494
Total	\$261,010	\$220,494	\$184,294

\*On October 14, 1980, the Company sold Transport of New Jersey See note 3

The major subsidiary included in "Other Subsidiaries" above is Energy Terminal Services Corporation (ETSC). Its principal asset, which has not been placed in operation, is a Liquefied Natural Gas (LNG) terminal on Staten Island in the New York City harbor area. Annual expenditures for protection and maintenance of the terminal, including local real estate taxes, are approximately \$3.5 million.

The Company had originally intended to utilize the terminal for the importation of LNG. However, due to uncertainties and delays relating to the importation project, including lack of regulatory approvals which resulted in a loss of a supply of LNG, the terminal has not been placed in operation. ETSC is now pursuing the utilization of the two storage 'anks at the terminal to provide an LNG peaking service for the Company and others. This will necessitate the construction of a liquefaction facility at the site. The additional construction will not proceed until the necessary permits are obtained from the appropriate federal, state and local regulatory agencies. The proposed service will increase the Company's capability to store supplies of domestic natural gas in order to meet the demands of its customers for gas on the coldest winter days.

If necessary permits are not received and the facilities are not placed in service, the Company would anticipate seeking favorable rate treatment from the BPU for any loss which may occur. Any loss not provided for, in the opinion of management, would not have a material effect on the financial position or results of operations of the Company.

#### 3. Sale of Transport of New Jersey

On October 14, 1980, the Company sold all of the outstanding capital stock of Transport of New Jersey (TNJ) to New Jersey Transit Corporation (NJTC), an agency of the State of New Jersey, for \$32.1 million incurring a pre-tax loss of \$30.0 million. As a result of such sale, control of Maplewood Equipment Company (MEC), a wholly-owned subsidiary of TNJ, was also transferred to NJTC. As required by the Stock Purchase Agreement between the Company and NJTC, the purchase price paid by NJTC, together with pension fund assets of TNJ and MEC and other funds, were combined with a net contribution by the Company of \$11.4 million to purchase pension annuities for employees and pensioners of TNJ and MEC to provide benefits accrued as of June 30, 1980. The net cash contribution by the Company of \$11.4 million was more than offset by income tax benefits to the Company of \$49.5 million arising from the immediate deductibility of pension contributions and by the deductibility of the tax basis of the TNJ stock which was in excess of the book investment. Such tax benefits resulted in a non-recurring credit to earnings for 1980 of \$19.5 million or 270 per average share of Common Stock.

#### 4. Compensating Balances

Cash at December 31, 1981 and December 31, 1980 consisted primarily of conspictating balances under informal arrangements value banks to compensate them for services and to support lines of credit of \$178.2 million and \$170.8 million, respectively. There are no legal restrictions placed on the withdrawal or other use of these bank balances. In addition, as of both dates, the Company had \$30.0 million of credit lines compensated by fees.

#### 5. Deferred Debits

#### Abandonment of Hope Creek Unit No. 2

On December 23, 1981, the Company abandoned the construction of Hope Creek Generating Station Unit No. 2 in Lower Alloways Creek Township, New Jersey. Total unrecovered costs of \$290.8 million, including an estimated \$67.8 million of cancellation and close-out costs, were charged to Extraordinary Property Losses and the associated tax reduction of \$126.3 million was included in Accumulated Deferred Income Taxes.

On March 4, 1982, the BPU authorized the transfer of \$112 million of Hope Creek 2 costs to Hope Creek 1 and recovery of all after-tax abandonment costs for Hope Creek 2 from customers through rates. The recovery will be over 15 years on an accelerated method commencing July 1, 1982. During 1982 the amount of amortization will be \$18.2 million, less related taxes of \$7.4 million.

## Abandonment of Atlantic Project

In December 1978, the Company cancelled its floating nuclear plant project and terminated its contract with Offshore Power Systems for the construction of four generating units. At the time of the Company's decision to abandon the Atlantic Project, total unrecovered costs of \$319.9 million, before tax reduction, was charged to Extraordinary Property Losses and the associated tax reduction of \$132.2 million was included in Accumulated Deferred Income Taxes.

The BPU rendered a decision, effective April 17, 1980, permitting the Company to recover, over a period of 20 years, \$174.5 million of the \$187.7 million of net costs, after tax reduction, incurred prior to the abandonment. Following this decision the Company recorded a loss of \$18.6 million which, after a related tax reduction of \$5.4 million, resulted in a net extraordinary charge to income in 1980 of \$13.2 million or 18° per average share of Common Stock.

Costs are being amortized in the amount of \$15.1 million annually, less related taxes of \$6.3 million.

#### Gross Receipts Tax

Effective January 1, 1973, the Company began accruing New Jersey gross receipts tax on current revenues rather than on the previous basis of taxes paid. The gross receipts tax on 1972 revenues was deferred and is being charged to operations by an amount equivalent to ½ % of revenues subject to the gross receipts tax and is currently expected to become fully amortized during 1983. During 1982 the Company expects to amortize approximately \$19.6 million, less related taxes of \$9.0 million.

## Deferred Electric Energy and Gas Fuel Costs - net

A substantial portion of deferred electric energy costs, \$58.3 million, will be recovered during 1982 and an additional \$12.5 million will be recovered by February 1984. The remaining costs are recoverable through the Company's levelized electric energy and gas raw materials adjustment clauses.

#### Unamortized Debt Expense

These costs, associated with the issuance or reacquisition of debt, are deferred and amortized over the lives of the related issues. Amounts shown in the Balance Sheets consist principally of costs associated with the Company's tender offer for its 12% Series E Mortgage Bonds which will mature in October 2004. The Company expects to amortize \$1.1 million of these costs in 1982.

## 6. Bank Loans and Commercial Paper

Bank loans represent the Compary's unsecured promissory notes issued under informal credit arrangements with various banks and have a term of eleven months or less. Such notes were issued to a limited extent in 1981 and 1980.

Commercial paper represents the Company's unsecured bearer promissory notes sold to dealers at a discount with a term of nine months or less. Certain information regarding short-term debt follows:

	1981	1980
	(Thousand	s of Dollars)
Maximum amount outstanding at any		
month end	\$207,551	\$180,865
Average daily outstanding (A)	\$101,226	\$ 79,516
Weighted average annual interest rate (B)	16.27%	13.90%
Weighted average interest rate for		
commercial paper outstanding		
at year end	12.72%	19.37%

(A) Computed by dividing the sum of the daily principal amounts outstanding during the year by the total number of days in the year.

(b) Computed by dividing short-term interest expense by the average daily short-term net proceeds.

#### 7. Pension Plan

The Company has a non-contributory, trusteed plan covering all employees who complete one year of service. As of December 31, 1981, the unfunded prior service cost was approximately \$299,029,000. Information on accumulated plan benefits and net assets follows

December 31.	1981	1980
Actuarial present value of	(Thousan	ds of Dollars)
accumulated plan benefits Vested Nonvested	\$326,343 33,616	\$335,353 32,528
	\$359,959	\$367.881
Market value of Plan Net Assets	\$282,991	\$269,039

The assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 10.5% for 1981 and 9% for 1980. The market value of the plan's net assets increased during 1981 as a result of contributions (net of pension payments) and net investment income.

The Company's annual contribution is actuarially determined to provide for full funding by December 31, 2001. Pension costs for the past three years were charged as follows:

	1981	1980	1979
	(Thou	isands of Do	olians)
Operating Expenses Utility Plant and Other	\$47,505	\$38,042	\$34,452
Accounts	10,954	10,284	9,662
Total Pension Costs	\$58,459	\$48,326	\$44,114

The Company offered a special early retirement program during the period from June 1, 1980 to October 1, 1980 to employees meeting certain age and service requirements. Under the program, 1,367 employees retired. Employees who retired under the program are paid an unreduced pension under the Company's Pension Plan and a special supplement, initially \$500 per month and increasing to \$650 per month, payable out of the Company's general funds. The special supplement ceases at age 65, upon death, or upon re-employment by the Company It is estimated that the special supplement will cost the Company \$50 million over ten years beginning 1980. The unreduced pension provision under the Plan requires additional funding which is included in the unfunded prior service cost.

#### 8. Commitments and Contingent Liabilities

The Company has substantial commitments as part of its construction program as well as commitments to obtain sufficient sources of fuel for electric generation and adequate gas supplies. Construction expenditures of \$3.9 billion, including \$772 million of AFDC, are expected to be incurred during the years 1982 through 1986.

In September 1980, a contract with Kerr-McGee Nuclear Corporation to supply uranium concentrates was amended to substantially curtail open pit mine operations until November 1, 1982. As of December 31, 1981, the Company and the co-owners of the Salem and Hope Creek Generating Stations had advanced \$40.4 million to Kerr-McGee against deliveries of uranium concentrates.

Credits have been received amounting to \$14.3 million, including interest of \$4.7 million. The recoupment of \$30.8 million, the balance of such advances, of which approximately 30% is the responsibility of the other coowners, is dependent upon the sale of uranium concentrates by Kerr-McGee to the Company or other buyers or upon the sale by Kerr-McGee of the project properties. The Company cannot presently predict the extent to which such advance payments will ultimately be recovered. For additional information see page 11.

The Company's insurance coverages for its nuclear opera-

Maximum Coverage	Maximum Retrospective Assessment for a single incident
(Million	is of Dollars)
\$160	None
400	\$ 8.5(B)
\$560 (C)	
\$450	\$26.7
\$247	\$ 7.0
\$ 2 3 (F)	\$13.9
	(Million \$160 400 \$560 (C)

- (A) Combined retrospective premium program under the Price-Anderson liability provisions of the Atomic Energy Act of 1954 and indemnity agreements with the Nuclear Regulatory Commission. Subject to retrospective assessment with respect to loss from incident at any licensed nuclear reactor in the United States.
- (B) Maximum assessment would be \$17.0 million in the event of more than one incident in any year.
- (C) Limit of liability under the Atomic Energy Act of 1954 for each nuclear incident.
- (D) Utility-owned mutual insurance company of which the Company is a member. Subject to retrospective assessment with respect to loss at any nuclear generating station covered by such insurance.
- (E) Maximum weekly indemnity for 52 weeks which commences after the first 26 weeks of an outage. Also provides \$1.15 million weekly for an additional 52 weeks

## 9. Accounting for Leases

The Company has certain leases for property and equipment which meet the criteria for capitalization, but in accordance with rate-making treatment are accounted for as operating leases. The capitalization of such leases would not have a significant effect on assets, liabilities or expenses.

# 10 Supplementary Informatic a Concerning the Effects of Inflation (Unaudited)

The Company's financial statements are prepared in accordance with generally accepted accounting principles and are stated on the basis of historical costs, namely, the prices that were in effect when the underlying transactions occurred. The following supplementary financial information, prepared in accordance with Financial Accounting Standards Board Statement No. 33 (FASB No. 33), is an estimate of the effects on the Company of general inflation (Constant Dollar) and changes in specific prices (Current Cost).

The Company advises readers of the imprecise nature of this data and of the many subjective judgments required in the restatement of selected historical costs to Constant Dollar and Current Cost. This data should not be used to make adjustments to the Company's primary financial statements and the related earnings per average share of Common Stock other than those adjustments shown in the following supplementary financial data.

Constant Dollar costs were determined by adjusting historical costs of Utility Plant and certain other items into dollars of the same general purchasing power by using the Consumer Price Index for All Urban Consumers (CPI-U).

Current Cost data purports to show the estimated cost of currently replacing existing Utility Plant and was measured by applying primarily the Handy-Whitman Index of Public Utility Construction Costs to the historical costs of Utility Plant

Depreciation and Amortization expense, and Amortization of Nuclear Fuel (included in Electric Fuel, Interchanged Power and Gas) were adjusted for Constant Dollar and Current Cost using the rates and methods for computing book depreciation and amortization applied to the appropriate inflation adjusted Utility Plant balances. In accordance with FASB No. 33, income tax expense was not adjusted.

FASB No. 33 requires the disclosure of the amount required to reflect Net Utility Plant at its Recoverable Cost if that cost is lower than the inflation adjusted amounts. Also required under Current Cost is the disclosure of the increase in Current Cost of Net Utility Plant held during the year and the related effect of general inflation. The amounts shown in the following table, which reflect the increase in general inflation over the increase in Current Cost of Net Utility Plant and the adjustment to net recoverable cost, illustrate that during 1981 the rate of general inflation was greater than the increase in the Current Cost of Net Utility Plant. In addition, the amounts shown as Adjustments of Net Utility Plant to Recoverable Cost (both Constant Dollar and Current Cost) are adjustments to Historical Cost in average 1981 dollars. Historical Cost is the amount permitted to be recovered under the rate regulatory piocess for utilities in New Jersey.

During inflationary periods, holders of monetary assets, such as cash and receivables, suffer losses of general purchasing power while holders of monetary liabilities experience gains. In 1981 the Company's monetary liabilities, primarily long-term debt, exceeded its monetary assets resulting in a gain in purchasing power. Since this gain is primarily attributable to long-term debt which has been used to finance Utility Plant, it is netted against the excess of the increase in general inflation over the increase in Current Cost of Net Utility Plant after adjustment to recoverable cost in the following table.

## Supplementary Financial Data Adjusted for the Effects of Changing Prices for the Year Ended December 31, 1981 (Unaudited)

	Historical Cost (Condensed from the Financial Statements)	Constant Dollar (Average 1961 Dollars)	Current Cost (Average 1981 Dollars)
Operating Revenues	\$3.471.652	(Thousands of Dollars) \$3 471,662	\$3,471,652
Operating Expc uses Electric Fuel, Interchanged Power and Gas Other Operation and Maintenance Depreciation and Amortization Taxes	1,751,858 593,279 178,532 593,716	1,764,782 593,279 395,526 593,716	1.764.171 593.279 442.984 593.716
Total Operating Expenses	3,117,385	3,337,303	3,394,150
Operating Income Other (including Interest Expenses)	364.267 (90.130)	134,349 (90,130)	77.502 (90.130)
Income (Loss) from Continuing Operations (excluding Adjustment of Net Utility Plant to Recoverable Cost)	\$ 264.137	\$ 44,219 <b>*</b>	\$ (12.628)
Increase in Current Cost of Net Utility Plant hek? during the year ** Adjustment of Net Utility Plant to Recoverable C. st Effect of the increase in General Inflation		\$ (236,638)	\$ 696,994 (113,074) (762,711)
Excess of increase in general inflation over increase in Current Cost, of Net Utility Plant after adjustment to Recoverable Cost Purchasing Power Gain on Net Monetary Liabilities Owed During			(179.791)
the Year	والمستوالية	221,567	221.567
Net		\$ (15.071)	\$ 41,776

Including Adjustment of Net Utility Plant to Recoverable Gest. Income (Lass) from Continuing Oper
 At December 31, 1981, the Current Cost of Net Utility Plant was \$9.247,762,000, while history at first.

## Supplementary Five-Year Comparison of Selected Financial Data Adjusted for Effects of Changing Prices

(Unaudited)

(000 omitted where applicable and all adjusted figures are in average 1981 dollars)

For the Years Ended December 31,	1981	1980	1979	1978	1977
Operating Revenues Historical Adjusted for General Inflation	\$3,471,652 \$3,471,652	\$2,994,054 \$3,304,620	\$2,416,707 \$3,028,109	\$2,219,785 \$3,094,521	\$2,032,796 \$3,050,872
Income (Loss) From Continuing Operations (excluding Adjustment of Net Utility Plant to Recoverable Cost) Historical	\$ 264,137	\$ 275,401	\$ 233,329		
Adjusted for General Inflation Adjusted for Current Cost	\$ 44.219 \$ (12.628)	\$ 108,882 \$ 37,228	\$ 97,152 \$ 18,991		
Income (Loss) From Continuing Operations per Average Common Share (excluding Adjustment of Net Utility Plant to Recoverable Cost) * Historical	\$ 2.63	\$ 3 13	\$ 2.85		
Adjusted for General Inflation Adjusted for Current Cost	\$ (09) \$ (79)	\$ 79 \$ (19)	\$ 58 \$ (61)		
Excess of increase in general inflation over increase in Current Cost of Net Utility Plant after adjustment to Recoverable Cost	\$ (179.791)	\$ (374.038)	\$ (439,982)		
Purchasing Power Gain on Net Monetary Liabilities Owed During the Year	\$ 221,567	\$ 312,022	\$ 341,415		
Net Assets at Year End ** Historical Adjusted for General Inflation and Current Cost	\$2.832.930 \$2.741.360	\$2,646,928 \$2,790,337	\$2,435,516 \$2,885,752		
Cash Dividends Declared per Common Share Historical Adjusted for General Inflation	\$ 2.44 \$ 2.44	\$ 2.29 \$ 2.53	\$ 2.20 \$ 2.76	\$ 2.08 \$ 2.90	\$ 1.92 \$ 2.88
Market Price per Common Share at Year End Historical Adjusted for General Inflation ***	\$18 00 \$18 00	\$17.00 \$18.52	\$19.25 \$23.57	\$20 25 \$28 10	\$22.88 \$34.61
Consumer Price Index (1967=100) Average Year End	272 4 281 5	246 8 258 4	217.4 229.9	195.4 202.9	181 5 186 1

After deducting Cumulative Preferred Stock and \$1.40 Dividend Treference Common Stock dividends on a historical basis in 1981 and in Average 1981 Dollars for prior years.

Inflation has been increasing over the last five years. The average CPI-U Index increased from 181.5 in 1977 to 272.4 in 1981, an average annual increase of 10.7%. The increase from 1980 to 1981 was 10.4%.

Revenues for the five-year period increased from \$2.033 billion in 1977 to \$3.472 billion in 1981, an average annual increase of 14.3%. Restated in average 1981 dollars, revenues for the same period would have increased from \$3.051 billion to \$3.472 billion, an average annual increase of only 3.3%.

Cash Dividends Declated per Common Share went from \$1.92 in 1977 to \$2.44 in 1981 or an average annual increase of 6.2%. However, such dividends would have decreased at an average annual rate of 4.1% or from \$2.88 in 1977 to \$2.44 in 1981 when restated in average 1981 dollars.

Market Price per Common Share at Year End from 1977 to 1981 had an average annual decrease of 5.8% or from \$22.88 to \$18.00. Restated in year-end 1981 dollars the Market Price would have been \$34.61 instead of \$18.00 reflecting an average annual decrease of 15.1% for the same period.

As shown in the tables above, the purchasing power gain on net monetary liabilities was not enough to offset the significant effect of inflation on capital costs (utility plant), nuclear fuel costs and depreciation.

Lack of adequate recognition of inflation in rate-making in addition to delayed rate relief accelerates attrition, thereby contributing to poorer cash flow. By the time increased costs are included in rates, the related funds have already been expended.

<sup>\*\*</sup> Equals Common Equity and Preferred Stock without mandatory redemption

<sup>\*\*\*</sup> Year end 1981 Dollars

#### 11. Jointly-Owned Facilities

The Company has an ownership interest and is responsible for providing its share of the necessary financing for the following jointly-owned facilities. All amounts reflect the Company's share of each jointly-owned project and the corresponding direct expenses are included in the Statements of Income as an operating expense

				A	State Physics	Accumulated	Description	A service of	F Dinner
Plant		Ownership interest		Amount of Utility Plant In Service		for Deprec		Amount of Plant Under Construction	
						(Thousands	of Dollars)		
Coal Generating									
Conemaugh		22.50	N	\$ 65,30	14	\$ 16,4			
Keystone		22.84	%	53,51	16	17,0	31		
Nuclear Generating									
Perch Bottom		42.49	*	390.46	55	95.9	138		
Salem		42.59	%	696.01	53	70.3	169		
Hope Creek		95.00	%					\$1,349.	598
Nuclear Training	Center	varior	18					5.	592
Pumped Storage Gene									
Yards Creek		50.00	%	16.29	)3	3.1	71		
Transmission Facilitie		vario	is	65.1	12	5.1	92		
Mernill Cres Reservoi		13.906	3%					2,	319
Linden Synthetic Nati		90.00		65,5	38	29.4	143		
Financial Inform	ation by Ru	einace Sag	mente						
r manciai miorm	ation by bu							400.000	
		Electric			Gas			Total	
Charles Street Co. Co. Co.									
For the rears Ended									
For the Years Ended December 31.	1981	1980	1979	1981	1980	1979	1981	1980	197
For the Years Ended December 31.	1981	1980	1979		1980 sands of Doll		1981	1980	197
December 31.	1981				sands of Doll	ars)			
December 31.	1981 \$2,322,042	1980 \$2.083,900	1979 \$1,689,857				1981 \$3,471.652	1980 \$2.994.054	
December 31.  Operating Revenues				(Thous	sands of Doll \$910,154	ars) \$726,850	\$3,471.652	\$2.994.054	\$2,416,70
December 31.  Operating Revenues				(Thous	sands of Doll	ars)			\$2,416,70
Operating Revenues Depreciation and Amortization	\$2,322,042	\$2.083,900	\$1,689,857	(Thous	sands of Doll \$910,154	ars) \$726,850	\$3,471.652	\$2.994.054	\$2,416,70
Operating Revenues Depreciation and Amortization	\$2,322,042	\$2.083,900	\$1,689,857	(Thous	sands of Doll \$910,154	ars) \$726,850	\$3,471,652 178,532	\$2.994.054	\$2,416,70 162,98
Operating Revenues Depreciation and Amortization Operating Income	\$2,322,042	\$2.083,900	\$1,689,857	(Thous	sands of Doll \$910,154	ars) \$726,850	\$3,471.652	\$2.994.054	\$2,416,70 162,98
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes	\$2,322,042 134,950	\$2.083,900 127,655	\$1,689,857 122,953	(Thous \$1,149,610 44,482	\$910.154 42,332	\$726,850 40,036	\$3,471,652 178,532 473,019	\$2,994,054 169,987 508,809	\$2,416,70 162,98 447,85
December 31.  Operating Revenues Depreciation and Amortization Operating Income Refore Income	\$2,322,042 134,950	\$2.083,900 127,655	\$1,689,857 122,953	(Thous \$1,149,610 44,482	\$910.154 42,332	\$726,850 40,036	\$3,471,652 178,532	\$2.994,054 169,987	\$2,416,70 162,98 447,87
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant	\$2,322,042 134,950 378,082	\$2,083,900 127,665 407,562	\$1,689,857 122,953 369,409	(Thous \$1.149,610 44,482 94,937	\$910.154 42,332 101.147	\$726,850 40,036 78,468	\$3,471,652 178,532 473,019	\$2,994,054 169,987 508,809	\$2,416,70 162,98 447,85
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant  December 31.	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	(Thous \$1.149,610 44.482 94,937 67,873	\$910,154 42,332 101,147 74,420	\$726,850 40,036 78,468 53,779	\$3,471,652 178,532 473,019 683,849	\$2,994,054 169,987 508,809 625,530	\$2,416,70 162,91 447,01 538,11
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant  December 31.  Net Utility Plant	\$2,322,042 134,950 378,082	\$2,083,900 127,665 407,562	\$1,689,857 122,953 369,409	(Thous \$1.149,610 44,482 94,937	\$910.154 42,332 101.147	\$726,850 40,036 78,468	\$3,471,652 178,532 473,019	\$2,994,054 169,987 508,809	\$2,416,70 162,91 447,01 538,11
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant December 31.  Net Utility Plant Gras Exploration	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	(Thous \$1.149,610 44.482 94,937 67,873	\$910,154 42,332 101,147 74,420	\$726,850 40,036 78,468 53,779	\$3,471,652 178,532 473,019 683,849	\$2,994,054 169,987 508,809 625,530	\$2,416,70 162,91 447,01 538,11
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant December 31.  Net Utility Plant Gas Exploration Subsidiary and	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	\$1.149,610 44,482 94,937 67,873 \$632,218	\$910,154 42,332 101,147 74,420 \$606,894	\$726,850 40,036 78,468 53,779 \$579,862	\$3,471,652 178,532 473,019 683,849 \$5,446,093	\$2,994,054 169,987 508,809 625,530 \$5,177,249	\$2,416,70 162,91 447,01 538,13 \$4,736,90
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant December 31.  Net Utility Plant Cas Exploration Subsidiary and LNG Project	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	(Thous \$1.149,610 44.482 94,937 67,873	\$910,154 42,332 101,147 74,420	\$726,850 40,036 78,468 53,779	\$3,471,652 178,532 473,019 683,849	\$2,994,054 169,987 508,809 625,530	\$2,416,70 162,98 447,87 538,13 \$4,735,98
December 31.  Operating Revenues Depreciation and Amortization Operating Income Refore Income Taxes Gross Additions to Utility Plant December 31.  Net Utility Plant Gas Exploration Subsidiary and LNG Project	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	\$1.149,610 44,482 94,937 67,873 \$632,218	\$910,154 42,332 101,147 74,420 \$606,894	\$726,850 40,036 78,468 53,779 \$579,862	\$3,471,652 178,532 473,019 683,849 \$5,446,093 261,000	\$2,994,054 169,987 506,809 625,530 \$5,177,249 220,484	\$2,416,70 162,98 447,03 538,13 \$4,736,98
December 31.  Operating Revenues Depreciation and Amortization Operating Income Before Income Taxes Gross Additions to Utility Plant December 31.  Net Utility Plant Cas Exploration Subsidiary and	\$2,322,042 134,950 378,082 615,976	\$2.083,900 127,665 407,562 551,110	\$1,689,857 122,953 369,409 484,356	\$1.149,610 44,482 94,937 67,873 \$632,218	\$910,154 42,332 101,147 74,420 \$606,894	\$726,850 40,036 78,468 53,779 \$579,862	\$3,471,652 178,532 473,019 683,849 \$5,446,093	\$2,994,054 169,987 508,809 625,530 \$5,177,249	\$2,416,70 162,98 447,17 538,13 \$4,736,98 171,55 1,181,23

## 13. Selected Quarterly Data (Unaudited)

The information shown below in the opinion of the Company includes all adjustments, consisting only of normal recurring accruals, (except for the extraordinary items incurred in 1980 resulting from the abandonment of

the Atlantic Project and the sale of Transport of New Jersey) necessary to a fair presentation of such amounts Due to the seasonal nature of the business, quarterly amounts vary significantly during the year

Calendar Quarter Ended		March 31.		June 30,	Sep	tember 30,	De	cember 31
	1981	1980	1981	1980	1981	1980	1981	1980
			(T)	housands whe	re applicable)			
Operating Revenues	\$982,938	\$757,530	\$733,255	\$611.087	\$809,805	\$776,190	\$945,654	\$849,247
Operating Income	101.669	87,409	74.183	90.838	94,677	114,997	83,738	83,908
Income Before Extraordinary Item	77.404	59.465	52,941	68,181	71,665	88,778	62,127	58,977
Extraordinary Item				(13,219)				19.535
Net Income	77,404	59,465	52,941	54.962	71,665	88,778	62.127	78.512
Earnings Available for Common								
Stock Before Extraordinary Item	65.865	47,837	39,339	56,603	58,447	77,211	48,948	47,409
Earnings Available for Common								
Stock	\$ 65.865	\$ 47.8.	\$ 39,339	\$ 43,384	\$ 58,447	\$ 77,211	\$ 48,948	\$ 66,944
Earnings per Average Share or								
Common Stock Before								
Extraordinary Item	\$.86	\$.69	\$.51	\$ 78	\$ 69	\$1.03	\$.57	\$.62
Effect of Extraordinary Item				(18)				26
Earnings per Average Share of								
Common Stock	\$ 96	\$ 69	\$.51	\$.60	\$ 69	\$1.03	\$ 57	\$.88
Average Shares of Common Stock								
Outstanding	76,680	68,945	77,526	72:180	84.252	75,179	85,261	75,917

**Operating Statistics** 

			% Annual I 1981 comp	
(000 omitted where applicable)	1981	1980	1980	197
Electric				
Revenues from Sales of Electricity (a)				
Residential	\$ 728,642	\$ 684,343	6.47	12.7
Commercial	871,377	765,356	13.85	15.5
Industrial	684,976	598,716	14.41	14.7
Public Street Lighting	33,249	32,693	1.70	8.3
Total Revenues from Sales to Customers	2,318,244	2,081,108	11.39	14.2
Interdepartmental	1,612	1,720	(6.28)	10.3
Total Revenues from Sales of Electricity	2,319,856	2,082,828	11.38	14.2
Other Electric Revenues	2,186	1,072	103.92	5.7
Total Operating Rezenues	\$2,322,042	\$2,083,900	11.43	14.2
Sales of Electricity — kilowatthours (a)				
Residential	7,795,988	8,129,198	(4.10)	.8
Commercial	10,940,509	10,726,086	2.00	3.6
ndustnal	10,923,042	11,049,642	(1.15)	(.1
Public Street Lighting	275,489	265,126	3.91	1.3
Total Sales to Customers	29.935,128	30,170,052	(.78)	1.3
Interdepartmental	25,567	27,684	(7.65)	.0
Total Sales of Electricity	29,960,695	30,197,736	(.78)	1.36
Kuowatthours Produced, Purchased and Interchanged — net	32,204,191	32,703.504	(1.53)	1.39
Load Factor	52.3%	52.0%		
Capacity Factor	33.2%	35.6%		
Heat Rate — Btu of fuel per net kwh generated	10,725	10,713	.11	.0
Net Installed Generating Capacity at December 31 — kilowatts	9,101	9.242	(1.53)	1.9
Net Peak Load — kilowatts (60-minute integrated)	7,034	7,159	(1.75)	1.7
Cooling Degree Hours	8,615	9,869	(12.71)	(.1
Temperature Humidity Index Hours	15,494	16,526	(6.24)	(.8
Average Annual Use per Residential Customer — kwh	5,261	5,443	(3.34)	.1
Meters in Service at December 31	1,739	1,732	.40	.5'
Gas				
Revenues from Sales of Gas (a)				
Residential	¢ 604 501	¢ 515.010	17.00	125
Commercial	\$ 604,521	\$ 515,013	17.38	13.50
ndustrial	302,281	228,577	32.24	16.99
Street Lighting	240,711	164,762 282	46.10 2.84	20.65
otal Revenues from Sales to Customers	290			
nterdepartmental	1,147,803 1,075	908,634 925	26.32 16.22	15.55
Otal Revenues from Sales of Gas				_
Other Gas Revenues	1,148,878	909,559 595	26.31 23.03	15.55 25.42
Obtal Operating Revenues	\$1,149,610	\$ 910,154	26.31	15.55
Sales of Gas — therms (a)				
Residential	993,527	1.023.027	(2.88)	(.21
Commercial	555,806	506,550	9.72	2.04
ndustrial	514,136	447,474	14.90	.55
Street Lighting	334	335	(.30)	(2.81
otal Sales to Customers	2,063,803	1,977,386	4.37	.54
nterdepartmental	2,430	2.322	4.65	(2.08
btal Sales of Gas	2,066,233	1,979,708	4.37	.53
Gas Produced and Purchased — therms	2,145.326	2,077,653	3.26	.68
ffective Daily Capacity at December 31 — therms	19,010	18,439	3.10	1.51
Maximum 24-hour Gas Sendout — therms	14,812	14,444	2.55	1.41
leating Degree Days (a)	5,082	5,256	(3.31)	.50
werage Annual Use per Residential Customer — therms	857	875	(2.06)	(.58
Meters in Service at December 31	1,378	1,370	.58	.36

<sup>(</sup>a) Starting in 1973, revenues and sales by customer classification include accrued and unbilled dollar amounts and sales volumes from meter reading date to the end of the calendar year. To better

reflect temperature effect on these recorded sales, heating degree days are also reported on a calendar year basis effective with 1973. For 1971, heating degree days remain on a sales year basis.

1979	1978	1977	1976	1971
\$ 545,049	\$ 512.071	\$ 492,473	\$ 443,531	\$ 219,614
625,596	574.557	531,118	474,791	205,318
484,037	444,595	414,058	367,470	172,902
31,437	29,925	27.622	25,863	14,947
1,686,119	1.561.148	1,465,271	1.311.655	612,781
1,559	1,670	1,916	1,585	605
 1.687,678	1,562,818	1,467,187	1.313.240	613,386
2,179	2,016	2,931	2,837	1,251
\$1,689,857	\$1,564,834	\$1,470,118	\$1,316,077	\$ 614,637
	# ### AND	7 700 000	7 744 050	7 102 021
7,777,369	7,760,868	7,769,629	7,711,953	7,183,821
10,336,445	10,152,827	9,747,908	9,514,574	7,633,053
11,185,952	11,134,634	10,627,734	10,472,054	11,091,985
260,915	260,922	259,277	259,151	241,449
29,560,681	29,309,251	28,404,548	27,957,732	26,150,308
 26,629	32,638	38,331	34,996	25,500
29,587,310	29,341,889	28,442,879	27,992,728	26,175,808
32,021,737	31,628,876	30,771.719	30,376,187	28,055,190
54.3%	54.6%	50.9%	55.9%	54.09
31.8%	34.4%	32.7%	32.0%	45.69
10,566	10,599	10,677	10,593	10,642
9.023	9,061	9,247	8,741	7,483
6.736	6,615	6,895	6,190	5,925
7,201	7,188	8,269	6,512	8,717
14.545	13.899	14,883	12,701	16,814
5,233	5.378	5.403	5,395	5,184
1,724	1,713	1,704	1,697	1,643
\$ 415,157	\$ 399.134	\$ 344,444	\$ 342.524	\$ 170,380
179,970	163.931	137,811	140,809	63,164
	90.240	78,474	68,341	36,831
129,665 274	248	178	159	85
 725,066	653,553	560,907	551,833	270,460
790	802	572	476	333
725,856	654,355	561,479	552,309	270,793
994	596	1,198	1,149	76
\$ 726,850	\$ 654,951	\$ 562,677	\$ 553,458	\$ 270,869
070.400	1 010 010	000 570	1 045 627	1 014 997
970,462	1,013,043	980,570	1,045,627	1,014,887
456,902	447,923	432,810	468,761	454,237
410,605	306,672	329,211	307,949	486,685
350	367	376	389	444
1,838,319	1.768,005	1,742,967	1,822,726	1,956,253
2.328	2,490	2,064	1,764	2,999
 1,840,647	1,770,495	1,745,031	1,824,490	1,959,252
1,931,549	1,852,869	1,811,019	1,895,041	2,004,791
18.639	18.639	18,933	19,449	16,372
13,349	12,235	14,006	12,803	12,872
4,677	5,317	5,155	5,349	4,833
833	893	862	924	908
900		1,350	1,354	1,330

## **Financial Statistics**

\$2,322,042 1,149,610 3,471,652 1,059,539 692,319 385,149 192,768 178,532 15,362 474,979	1981 % 67 33 100 31 20 11 6 5	\$2,083,900 910,154 2,994,054 866,802 513,988 322,220	70 30 100
1,149,610 3,471,652 1,059,539 692,319 385,149 192,768 178,532 15,362 474,979	33 100 31 20 11 6	910,154 2,994,054 866,802 513,988 322,220	30 100 29
1,149,610 3,471,652 1,059,539 692,319 385,149 192,768 178,532 15,362 474,979	33 100 31 20 11 6	910,154 2,994,054 866,802 513,988 322,220	30 100 29
3,471,652 1,059,539 692,319 385,149 192,768 178,532 15,362 474,979	31 20 11 6	2,994,054 866,802 513,988 322,220	100
1,059,539 692,319 385,149 192,768 178,532 15,362 474,979	31 20 11 6	866,802 513,988 322,220	29
692,319 385,149 192,768 178,532 15,362 474,979	20 11 6	513,988 322,220	
692,319 385,149 192,768 178,532 15,362 474,979	20 11 6	513,988 322,220	
385,149 192,768 178,532 15,362 474,979	11 6	322,220	4.79
192,768 178,532 15,362 474,979	6		17
178,532 15,362 474,979	5	169,813	6
474,979		169,987	6
		11,024	
	14	431,890	14
118,737	3	131,178	4
3,117,385	90	2,616,902	87
200.007			
			10
	-		3
		377,152	13
	3		2
	(6)		(6)
			(6)
204,137		2/5,401	9
		(12 210)	
264,137	7		9
51,538	1	46,341	1
\$ 212,599	6	\$ 235,376	8
		76,615	
		73,069	
			b)
			25.3
\$25.66			
\$7,320,764		\$6,881,209	
\$1,874,668		\$1,703,960	
\$7,277,089		\$6,724,860	
\$0.440.00F	40		
			41
	3		5
	45		46
77,913	2		1
			11
			_
	21		25
26,143			1
827,497	16		16
	43		42
			100
	\$1,538 \$212,599 86,089 80,962 \$2.63 \$2.44 93% 9.82% 2.95 \$25.66 \$7,320,764 \$1,874,668 \$7,277,089 \$2,140,835 269,268 720 2,410,823 77,913 554,994 1,423,739 557 26,143 827,497 2,277,936	288,087 8 66,180 2 354,267 10 95,679 3 15,780 (201,589) (6) 264,137 7 51,538 1 \$ 212,599 6  86,089 80,962 \$2.63 \$2.44 93% 9.82% 2.95 \$25.66 \$7,320,764 \$1,874,668 \$7,277,089  \$2,140,835 40 269,268 5 720 2,410,823 45 77,913 2 554,994 10 1,423,739 27 557 26,143 827,497 16 2,277,936 43	288,087 8 307,372 66,180 2 69,780 354,267 10 377,152 95,679 3 77,552 15,780 10,259 (201,589) (6) (189,562) 264,137 7 275,401  (13,219) 19,535 6,316 264,137 7 281,717 51,538 1 46,341 \$ 212,599 6 \$ 235,376   86,089 76,615 80,962 73,069 \$2,63 \$3,13 ( \$2,44 \$2,29 93% 73% 9,82% 11,95% 2,95 3,19 \$25,66 \$26,38 \$7,320,764 \$6,881,209 \$1,874,668 \$1,703,960 \$7,277,089 \$6,724,860  \$2,140,835 40 \$2,041,556 269,268 5 276,590 720 1,200 2,410,823 45 2,319,346 77,913 2 29,750 554,994 10 554,994 1,423,739 27 1,252,103 557 26,143 26,093 827,497 16 813,181 2,277,936 43 2,091,934

<sup>(</sup>a) See Summary of Significant Accounting Policies, page 25. Notes to Financial Statements, page 34, and Management's Discussion and Analysis of Financial Condition and Results of Operations, page 44

<sup>(</sup>b) Excludes the net extraordinary gain of \$6,316,000 or \$.09 per share.
(c) Balance available for \$1.40 Dividend Preference Common Stock and Common Stock divided by the average of beginning and end-of-year Total Common Equity

		1979		1978		1977		1976		19/1
	Amount	16	Amount	. %	Amount	- %	Amount	%	Amount	. %
	\$1,689,857	70	\$1,564,834	70	\$1,470,118	72	\$1,316,077	70	\$ 614,637	69
	726,850	30	654,951	30	562,677	28	553,458	30	270,869	31
	2,416,707	100	2,219,785	100	2,032,795	100	1,869,535	100	885,506	100
	620,546	- 26	541,802	24	538,916	27	484,194	26	171.963	19
	384,759 287,086	16	327,990	15 12	257,897 250,531	13	261,190	14	100,296	11
		12	267,731	6		12	226,175	12	151,952	17
	149,027 162,989	6	127,423 158,248	7	124,876 147,652	6 7	99,617	5	66 789	8
	303	,	1.038	. /	1,185		133,087	- /	84,474 774	10
	364,411	15	328,216	15	293,796	14	275.254	15	112,576	13
	123,965	- 5	146,937	7	120,969	6	100,380	6	18,166	2
										_
	2,093,086	87	1,899,385	86	1,735,822	85	1,581,097	85	706,990	80
	260 442	13.	266 512	1.0	2EU 30E	19	226.250	10	142 606	16
	269,443 54,178	11	266,513 53,887	12	250,395 46,588	13	236,359 52,079	12	142,585 35,931	16 4
							52,079			4
	323.621	13	320,400	14	296,973	15	288,438	15	178,516	20
	56,593	3	41,305	2	49,540	2	43,547	3	33,465	4
	6,263		4,515		1,447		2,654		(1,278)	
	(153,148)	(6)	(137,434)	(6)	(135 718)	(7)	(130,615)	(7)	(87,204)	(10)
	233,329	10	228,786	10	214,242	10	204.024	11	123,499	14
	233,329	10	228,786	10	214,242	10	204,024	11	123,499	14
	46,799	2	46,799	2	45,065	-2	41,257	2	15,445	2
	\$ 186,530	- 8	\$ 181,987	8	\$ 169,177	8	\$ 162,767	9	\$ 108,054	12
	68,914		64,120		59,806		58,976		39,475	
	65,409		61,783		59,243		58,308		36,876	
	\$2.85		\$2.95		\$2.86		\$2.79		\$2.93	
	\$2.20		\$2.08		\$1.92		\$1.78		\$1.64	
	77		71		679		649		569	
	10.39		11.00°		10.96%		11.189	0	12.099	
	3.36		3.77		3.52		3.34		2.60	
	\$26.26		\$26.13		\$25.57		\$24.71		\$23.14	
	\$6,325,033		\$5,810,329		\$5,654,097		\$5,255,286		\$3,577,248	
	\$1,589,049 \$6,088,766		\$1,447,039 \$5,518,778		\$1,314,916 \$5,130,399		\$1,194,467 \$4,748,782		\$ 765,642 \$3,016,585	
	\$0,000,700		\$3,010,770		\$3,130.300		\$1,710,702		40,010,000	
	\$1,940,513	41	\$1,692,642	39	\$1,647,445	40	\$1,549,579	39	\$1,116,127	40
	314,726		322.682	7	330.812	8	341.511	-9	440.028	16
	1,680		2 160		2.640		3.120			
	2,256,919	48	2.017,484	46	1,980,897	48	1,894,210	48	1,556,155	56
-	31,500		35.000	-	35.000	1	35,000	1		
	554,994		554,994		554.994	13	524.994	13	234,994	9
		-						_		-
	1,106,824 557	23	1.014,184 557	23	919,752 557	22	900,384	22	528,577 252	19
	26,065	1	26,065	1	26.065		26,065	1	26.065	1
	747,076		704,909		651.885	16	596.745	15	420.919	15
	1,880,522		1,745,715		1,598,259	32	1,523,744	38	975,813	35
-	\$4,723,935		\$4,353,193		\$4,169,150	100	\$3,977,948	100	\$2,766.962	. 100
-	4 11 601000	-	4 1,000 100	-	4 1/100/100		And the Little and		4-17-17-17-17-17-17-17-17-17-17-17-17-17-	-

<sup>(</sup>d) Not Income plus Income Taxes, Deferred Income Taxes, Investment Tax Credits and Fixed Charges divided by Fixed Charges, Fixed Charges include Interest on Long Term and Short-Term Debt and Other Interest Expense.

<sup>(</sup>e) Total Common Equity divided by year-end Common Stock shares plus double the \$1.40 Dividend Preference Common Stock shares.

# Management's Discussion and Analysis of Financial Condition and Results of Operations

By order effective February 14, 1982, the BPU has granted the Company a \$389.9 million increase in rates. Of this amount, \$337.8 million was for electric service and \$52.1 million for gas (see page 6). However, certain problems discussed below will continue to impact PSE<sub>&</sub>G as well as the utility industry as a whole. Additional rate relief will be required from time to time to finance construction, maintain reliability of service, keep pace with inflation, and pay a fair rate of return to the shareholders.

A more detailed discussion of the Company's operating results, liquidity and capital resources follows.

## Earnings and Dividends

Earnings per average share of Common Stock were \$2.63 for 1981, a decline of 50° or 16% from 1980 before giving effect to the net extraordinary gain of 9° in 1980. After extraordinary items, earnings were lower by 59° per share. Revenues did not keep pace with operating costs as a result of continuing inflation, minimal sales growth due to customer conservation and the sluggish economy, and the lack of additional rate relief.

As a result of Salem 2 being placed in commercial operation on October 13, 1981, annual depreciation charges will increase by approximately \$10.9 million and AFDC will decrease by approximately \$20.3 million per year.

Earnings por share of \$3.13 for 1980 before the 9° gain from extraordinary items improved 28° or 9.8% over 1979, as rate increases and moderate sales growth outpaced inflation, record-high money rates, and a sluggish economic clip ate. The extraordinary gain in 1980 consisted of the effects, after taxes, of the write-off of unrecoverable costs due to the abandonment of the Atlantic nuclear generating station project (see Note 5 of Notes to Financial Statements) which reduced earnings by 18° per share, and the gain on the sale of Transport of New Jersey (see Note 3 of Notes to Financial Statements) which added 27° per share.

Dividends per share paid to holders of Common Stock have grown over the last three years rising from \$2.20, paid in 1979, to \$2.29 in 1980 and then to the level of \$2.44 for 1981. Such amounts, compared to earnings before extraordinary items, resulted in payout ratios of 77%, 73% and 93%, respectively. Total dividend payments in 1981 increased 37% over 1979 due in large part to the 24% increase in common shares outstanding as well as the higher dividend rates.

## Revenues and Sales

Total revenues increased in 1981 and 1980 due primarily to greater recoveries of electric energy and gas fuel costs and higher rates. There is no element of profit on recoveries of electric energy and gas fuel costs, and hence they do not affect earnings.

Electric revenues increased 11% in 1981 and 23% in 1980. The components of these changes are highlighted in the table below

	Increase or (Decrease)	
	1981 vs 1980	1980 vs. 1979
	(Millions of Dollars)	
Changes in base rates	\$ 36	\$102
Recoveries of higher energy		
costs	218	364
Kilowatthour sales	(16)	38
	\$238	\$394

In 1981, total electric sales decreased 1%. Despite an increase in customers, Residential sales decreased 4% primarily due to the cooler and less humid weather during the summer. The 1% decline in Industrial sales was due to a drop in production levels as a result of the sluggish economy during the year. Commercial sales increased 2%, principally due to a slight increase in customers. All classes of sales continue to reflect the overall impact of the economic slump throughout the Company's service area during the year and the effect of continued energy conservation.

In 1980, electric sales increased 2% led by Residential and Commercial sales which rose 5% and 4%, respectively. Those gains were partially due to air conditioning demands during the hotter and more humid weather in the summer of 1980. Also, the heating needs of these customers in the closing months of 1980 contributed to the increases for the year.

Gas revenues rose 26% in 1981 and 25% in 1980. The principal factors are shown below.

	Increase of (Decrease)	
	1981 vs 1980	1980 vs. 1979
	(Millions of Dollars)	
Changes in base rates	\$ 24	\$ 34
Recoveries of higher gas costs	196	108
Therm sales	19	41
	\$239	\$183

In 1981, total gas sales increased 4%. Commercial and Industrial sales increased 10% and 15%, respectively. These gains came about as the price advantage and availability of gas continued to spur conversions from oil during the year. Over 300 large Commercial and Industrial customers were added in 1981. Despite an increase in customers, Residential therm sales decreased 3% from last year as winter temperatures were less severe and customers continued to conserve.

In 1980, sales of gas increased 8% as customer usage, especially in the firm classes of sales, increased due to colder weather in the closing months of 1980. Also contributing to the increase in sales was the large number of conversions from oil to gas heat, particularly in the Residential class. In addition, over 250 large Commercial and Industrial customers were added during 1980.

Substantially all revenues are subject to New Jersey Gross Receipts tax and as a result the amount of this tax varies in direct proportion to revenues. The effective rate is approximately 13%.

## **Energy Costs**

The costs of fuel for electric generation as well as purchased and interchanged power continued to rise in 1981 though somewhat less severely than in previous years. The Company exerted successful efforts to counter the increasing prices of heavy oil by a 28% reduction in use, thereby cutting expenditures for oil by \$38 million in 1981. The curtailment in oil-fired generation was compensated for by a 9% increase in lower-priced nuclear generation and a higher level of purchases of largely coal-fired generation from other utilities. The Company anticipates that nuclear generation from Salem 2, which was placed in commercial operation late in 1981, will further moderate energy costs.

The Company is a member of the Pennsylvania-New Jersey-Maryland Interconnection and is a party to several agreements which provide for the purchase of available power from neighboring utilities. These arrangements enable the Company to optimize its mix of internal and external sources using the lowest cost energy available at any given time. Energy costs are adjusted to match amounts permitted to be recovered through revenues and, to the extent so allowed, have no effect on earnings. Total energy costs increased 22% and 40% in 1981 and 1980, respectively, as described below.

	Increase or (Decrease)	
	1981 vs 1980	1980 vs 1979
Higher prices paid for fuel sup-	(Millions of Dollars)	
plies and power purchases	\$110	\$103
Kilowatthour output	(13)	16
Adjustment of actual costs to match recoveries through		
revenues Replacement energy costs for	93	127
which recovery was disallowed by BPU	3	
	\$193	\$246

Gas costs are adjusted to match amounts recovered through revenues and do not affect earnings. Costs were 35% higher in 1981 and 34% higher in 1980. Contributing factors are shown below.

	Increase or (Decrease)	
	1981 vs. 1980	1980 vs 1979
	(Millions of Dollars)	
Higher prices paid for gas		
supplies	\$141	\$132
Refunds from pipeline suppliers	(17)	(2)
Therm sendout	18	30
Adjustment of actual costs to		
match recoveries through		
revenues	36	(31)
	\$178	\$129

#### Cash Position

Heavy demands upon the Company's cash position have been brought about by problems which confront the entire utility industry, including the slowing of customer payments as electric and gas rates have increased Energy costs continue to rise, and the Company is still not able to benefit fully from the forward-looking, fuel-recovery mechanism built into its rate structure. As of December 31, 1981, underrecovered electric energy costs were \$99 million, slightly more than half what they were a year ago. The reduction is due largely to recoveries allowed by the BPU of costs remaining from prior periods.

During 1981, the BPU issued an order effective August 1, 1981 designed to produce additional annual revenues of approximately \$160 million through the levelized energy adjustment clause. All estimated underrecoveries at July 31, 1981 were included in the new levelized charge. The gas raw materials adjustment charge was also increased in November 1981 to produce approximately \$108 million of additional revenues over the next 10½ month period. The Company anticipates that in 1982, in addition to recoveries of its projected current period expenditures, it will recover \$58 million of deferred energy costs plus \$54 million of other deferred charges.

The Company's average daily short-term debt during 1981 was \$101 million — \$21 million over last year's average. At year end the Company had \$208 million of short-term debt outstanding.

The Company also needs to finance larger customer accounts receivable. As of the end of 1981 accounts receivable including unbilled revenues approached \$555 million and were \$40 million more than at the end of 1980. Customer payments have slowed as the amounts of bills have increased. Furthermore, net write-off of uncollectible accounts this year was \$9.5 million greater than the \$17.5 million in 1980. The increases in accounts receivable and uncollectible accounts also reflect a requirement of the BPU prohibiting the termination of electric and gas service in New Jersey during the winter months with respect to certain customers with financial need who are unable to pay utility bills. In an attempt to reverse these trends, the Company has recently implemented a comprehensive program designed to reduce the backlog of unpaid customer accounts.

In order to continue its essential construction program, the Company will require significant amounts of capital. See Construction Activities.

In addition to commitments for construction and fuel supplies over the coming years, the Company will be required to pay an estimated \$68 million of cancellation and close-out costs related to the abandonment of Hope Creek 2, principally during 1982. Funds must also be provided in the future for bond maturities and sinking fund requirements. It is anticipated that low interest cost debt will have to be replaced at much higher current interest rates. Certain mortgage bond sinking funds may be satisfied by the retirement of bonds or the utilization of property additions and are expected to be satisfied by the latter. The annual sinking funds for debenture bonds are met by the retirement of bonds.

## Construction Activities

Utility plant, by far the largest item on the balance sheet, continues to increase as new construction, as well as capital improvements reflect the spiralling effects of inflation. See Note 10 of Notes to Financial Statements for the effects of inflation.

The Company maintains a continuous construction program, which includes payments for nuclear fuel and investments in and advances to energy resources subsidiaries. Expenditures for construction were \$717 million for 1981 and \$680 million for 1980 including AFDC of \$96 million and \$78 million, respectively. This program is periodically revised as a result of changes in economic conditions, and the ability of the Company to finance construction costs and to obtain timely rate relief. Changes in the Company's plans and forecasts as well as price changes and cost escalation under construction contracts, and requirements of regulatory authorities also result in revisions of the construction program.

Construction expenditures during the five years ending in 1986 are estimated at \$3.9 billion including \$772 million of AFDC and reflect the recent abandonment of Hope Creek Unit 2 (see page 6). While these estimates are based on certain expected completion dates and anticipate escalation due to inflation of approximately 9.5%, any construction delays or inordinate inflation levels could cause significant increases in these amounts. The Company expects to generate internally approximately 50% of its construction expenditure requirements, excluding AFDC. Such expectation is based in part upon receiving future rate increases, as to which no assurance can be given. The balance will be provided by permanent financing through the sale of securities.

#### Financing Activities

The Company's interest rates and dividend requirements continue to climb reflecting higher rates for security issuances in the capital market. In 1981, the Company issued \$50 million of 13 44% Preferred Stock and \$100 million of ten-year Mortgage Bonds at 15%%.

During the year, the Company also issued 9.5 million shares of Common Stock, including 6 million through an underwritten offering. The remainder was issued primarily under the Dividend Reinvestment and Stock Purchase Plan.

Book value per share of \$25.66 at year-end 1981 declined from \$26.38 at December 31, 1980 and \$26.26 at the end of 1979. The market value of common shares expressed as a percentage of book value was 70.1%, 64.4%, and 73.3% at these respective dates.

The Company's expansion of the Dividend Reinvestment and Stock Purchase Plan to include holders of Preferred Stock and \$1.40 Dividend Preference Common Stock, and the tax deferral available for reinvestment of utility dividends under the new Economic Recovery Tax Act should help to bring in much needed capital in the future In addition to periodic sinking fund redemption requirements, four bond issues aggregating \$146 million will mature and will require refinancing by the end of 1986.

For interim financing, the Company is authorized to have a total of \$300 million of short-term obligations outstanding at any given time. The availability of short-term financing provides the Company greater timing flexibility in the issuance of long-term financing. At year end, the Company's Short-Term Debt balance was \$208 million.

Under the terms of the Company's Mortgage and Restated Certificate of Incorporation the Company could issue an additional \$478 million principal amount of Mortgage Bonds or \$263 million of Preferred Stock as of December 31, 1981. Present plans for 1982 call for the issuance of Preferred Stock, Common Stock, and Mortgage Bonds.

In January 1982, the Company entered into a Letter Agreement establishing a \$75 million Two-Year Revolving Credit Facility with a group of international banks, under which the Banks have agreed to make revolving loans of one month, three months or six months for up to an aggregate amount of \$75 million as requested by the Company during the two-year period ending January 1984. The Company has paid a one-time management fee of 1% of 1% of \$75 million and will pay a commitment congression of 1% of 1% per annum of the daily unused portion of the commitments. Any drawings made by the Company would bear interest at a rate equal to 3% of 1% plus a rate which approximates the London Interbank Offered Rate for deposits in United States Dollars.

## Effects of Inflation

High inflation continues to grip our national economy. In 1981 the Consumer Price Index juriped over 10%, the third consecutive year of double-digit inflation. As this relates to the Company, inflation has evidenced itself in record interest charges and dividend requirements at a time when hundreds of millions of dollars must be raised in the capital markets to finance needed construction, as well as in the effects of rising prices on construction, fuel and labor costs.

For additional information on the effects of changing prices, see Note 10 of Notes to Financial Statements.

Stock Symbol PEG

The Company's Common Stock and the \$1.40 Dividend Preference Common Stock are traded on the New York Stock Exchange and the Philadelphia Stock Exchange.

The following table shows the quarterly dividends paid for the periods indicated and the high and low sale prices of such stock as reported in the consolidated transaction reporting system.

Common Stock

	1981	1980
Dividend	610	580*
Price		
First Quarter	1914-17	191/2 - 151/2
Second Quarter	19% - 17	21 -163/s
Third Quarter	1914 - 161/2	21 -17%
Fourth Quarter	201/s -161/s	18%-16

## \$1.40 Dividend Preference Common Stock

	1981	1980
Dividens	350	350
Price First Quarter Second Quarter Third Quarter Fourth Quarter	10% -10% 10% -10 10% - 9½ 11 - 9½	12½ -10¾ 12½ -10¾ 12½ -11½ 12 -10

<sup>\*55¢</sup> First Quarter only.

Transfer Agents All Stocks

Morgan Guaranty Trust Company of New York, 30 West Broadway, New York, N.Y. 10015

E'nckholder Services.

Public Service Electric and Gas Company.

80 Park Plaza, P.O. Box 570.

Newark, N.J. 07101

Registrars All Stocks Fidelity Union Bank,

765 Broad Street, Newark, N.J. 07101

Morgan Guaranty Trust Company of New York, 30 West Broadway, New York, N.Y. 10015

## Form 10-K Available

Stockholders or other interested persons wishing to obtain a copy of the Company's 1981 Annual Report to the Securities and Exchange Commission, filed on Form 10-K, may obtain one without charge by writing to the Vice President and Treasurer, Public Service Electric and Gas Company, PO. Box 570, Newark, New Jersey 07101. The copy so provided will be without exhibits. Exhibits may be purchased for a specified fee.

#### Financial and Statistical Review

A comprehensive statistical supplement to this report, containing financial and operating data for the years 1971-1981 will be available this Spring. If you wish to receive a copy, please write to the Vice President and Treasurer, Public Service Electric and Gas Company, PO. Box 570, Newark, N. J. 07101.

# Officers

Robert I. Smith

Chairman of the Board and Chief Executive Officer

Harold W. Sonn

President and Chief Operating Officer

Edward G. Outlaw

Executive Vice President - Corporate Planning

William E. Scott

Executive Vice President - Finance

Stephen A. Mallard

Senior Vice President - Planning and Research and President of PSEx G Research Corporation

James B. Randel, Jr.

Senior Vice President of the Company and President of Energy Development Corporation

Richard M. Eckert

Senior Vice President - Energy Supply and Engineering

Robert W. Lockwood

Semor Vice President - Administration

John F. McDonald

Semor Vice President - Governmental Affairs

Everett L. Morris

Senior Vice President - Customer Operations

Donald A. Anderson

Vice President - Computer Systems and Services

Frederick M. Broadfoot

Vice President - Law

Robert M. Crockett

Vice President - Fuel Supply and President of Energy Pipeline Corporation and Energy Terminal

Fredrick R. DeSanti

Vice President - Rates and Load Management

Carroll D. James

Vice President - Administrative Planning

Edward J. Lenihan

Vice President - Public Relations

Charles E. Maginn, Jr.

Vice President - Human Resources

Wallace A. Maginn Vice President and Treasurer

Winthrop E. Mange, Jr.

Vice President - Corporate Services

Thomas J. Martin

Vice President - Engineering and Construction

Parker C. Peterman

Vice President and Comptroller

Louis L. Rizzi

Vice President - Customer and Marketing Services

Frederick W. Schneider

Vice President - Production and Assistant to the Senior Vice President - Energy Supply and Engineering

Robert J. Selbach

Vice President - Transmission and Distribution

Rudolph D. Stys

Vice President System Planning

Richard A. Uderitz

Vice President - Nuclear

Robert S. Smith

# Changes in Organization

In accordance with the Company's retirement policy for Directors, John F. Betz, former President and Chief Operating Officer, Reynold E. Burch and Nathan H. Wentworth retired as Directors effective April 21, 1981. James R. Cowan, Robert R. Ferguson, Jr. and Irwin Lerner were elected Directors for the first time at the Company's Annual Meeting held on April 21, 1981.

Malcoim Carrington, Jr., Vice President and Secretary, retired effective May 31, 1981, after more than 42 years of service. The Board of Directors elected Robert S. Smith, Secretary, effective June 1, 1981.

Gifford Griffin retired as Vice President - Interconnections on July 20, 1981, after 43 years of service

Effective October 1, 1981, Richard A. Uderitz, General Manager -Nuclear Production, was elected Vice President — Nuclear

In addition to being Vice President - Production, Frederick W. Schneider was also named Assistant to the Senior Vice President -Energy Supply and Engineering, effective October 1, 1981

## Directors

## James R. Cowan, M.D.

President and Chief Executive Officer, United Hospitals Medical Center, Newark, New Jersey Member of Audit Committee

## W. Robert Davis

Former Chairman of the Board and Chief Executive Officer, Bancshares of New Jersey, Moorestown, New Jersey

Chairman of Audit Committee and Member of Nominating Committee.

## T.J. Dermot Dunphy

President, Chief Executive Officer and director, Sealed Air Corporation (manufacturer of protective packaging systems), Saddle Brook, New Jersey. Member of Nominating Committee and Organization and Compensation Committee

## Robert R. Ferguson, Jr.

President, Chief Executive Officer and director, First National State Bancorporation, Newark, New Jersey

Member of Finance Committee

## Margery Somers Foster

Professor of Economics Emeritus, and former Dean of Douglass College, Rutgers, The State University of New Jersey, New Brunswick, New Jersey Member of Audit and Nominating Committees

## D. Wayne Hallstein

Director and former President, Ingersoll-Rand Company (Giversified manufacturer of machinery, equipment and tools), Woodcliff Lake, New Jersey Member of Finance Committee and Organization and Compensation Committee

#### Irwin Lerner

President, Chief Executive Officer and director. Hoffmann-La Roche Inc. (manufacturer of pharmaceuticals and fine chemicals), Nutley, New Jersey

Member of Organization and Compensation Committee.

## William E. Marfuggi

Chairman of the Board and director, Victory Optical Manufacturing Company (manufacturer of ophthalmic frames) and Chairman of the Board and director, Plaza Sunglasses, Inc. (manufacturer of sunglasses), both of Newark, New Jersey

Member of Finance Committee.

## Marilyn M. Pfaltz

Partner of P and R Associates (public relations and publicity specialists), Summit, New Jersey Member of Audit Committee

## James C. Picney

Partner in the law firm of Pitney, Hardin, Kipp & Szuch, Newark and Morristown, New Jersey

Member of Audit and Executive Committees

## Kenneth C. Rogers

President, Stevens Institute of Technology. Hoboken, New Jersey Chairman of Nominating Committee and Member of Organization and Compensation Committee

#### William E. Scott

Executive Vice President – Finance of the Company Member of Executive Committee and Chairman of Finance Committee

#### Robert I. Smith

Chairman of the Board and Chief Executive Officer of the Company

Chairman of Executive Committee and Member of Finance Committee.

#### Harold W. Sonn

President and Chief Operating Officer of the Company

Member of Executive and Finance Committees.

#### Robert V. Van Fossan

Chairman of the Board, Chief Executive Officer and director, The Mutual Benefit Life Insurance Company, Newark, New Jersey

Member of Executive and Finance Committees and Chairman of Organization and Compensation Committee



# Public Service Electric and Gas Company 80 Park Plaza, Newark, New Jersey 07101

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