

Annual Report for

Annual Report for 1978 In addition to the review of LILCO activities during 1978, our report this year includes a special center section. "Managing Energy in a Changing World" explores the background of the major energy issues which : emerged in the 1970s, and discusses some of the actions taken by utilities such as LILCO to respond effec-itively to the new priorities. On the cover, our photo-graph of a meeting in prog-ress shows the beginning of the problem-solving pro-cess—the clear communica-tion of ideas and experience. among people in different areas of the Company's operations.

1978 Annual Report Highlights





To Our Shareowners



Charles R. Pierce Chairman of the Board and Chief Executive Officer Wilfred O. Uhl President In recent years the conditions under which we operate our business have undergone a marked transformation. The nature of these changes, and our approach to successfully meeting the resulting challenges, are discussed in a special section of this report starting on page 17. Upon reading this section, we believe you will concur with us that a new level of stability is within sight, and that the transitional process will be effectively managed.

The Company's response to these radically changed conditions has been favorably recognized in the recently completed audit of the Company's operations by the consultant firm of Booz, Allen & Hamilton, Inc. Conducted under the direction of the Public Service Commission as part of a State-wide program covering all major electric and gas utilities, the audit concluded that LILCO is an efficient and well-managed utility. A particularly valuable contribution of the audit team was an incisive and

objective analysis of how profoundly external change has impacted the utility business and made utility operations more complicated than ever before. The auditors commented favorably on the Company's consistent orientation toward customer service and operational efficiency, and further concluded that our ratepayers are receiving cost-effective electric and gas service. In addition to the overall favorable assessment of the Company's management, the audit has offered a number of helpful recommendations for further improvements. The auditors have pointed out that these improvements are not expected to yield significant savings, but will fine-tune internal operations. Plans are now under way for implementing these recommendations.

In our remarks at the 1978 Annual Meeting we noted that the revenue level established by the Public Service Commission in its January 1978 electric rate decision would probably cause 1978 per share earnings to fall short of those achieved in 1977. The results were in accord with that prediction as 1978 earnings of \$2.44 per share failed to equal 1977's \$2.59, although total earnings available for comnon stock did increase from. \$104.6 million to \$111.3 milion. Following the January 1978 rate decision, we pared operating expenses by \$10 million at some sac-'ifice in service improvements we had hoped to nitiate. But slow growth in sales, as a result of mild weather and added conservation on the part of our cuscomers, combined with inadequate rates, made the samings insufficient to pro-/ide for the 13.0% increase n the average number of common shares outstandng. In March the dividend was increased by 7¢ per share to an annual rate of \$1.70, still amply covered by he \$2.44 earnings. This was he nineteenth increase in he past 20 years.

n May 1978, we filed for additional gas and electric rate ncreases to offset inflation, allow for needed service mprovements, and restore samings to an appropriate evel. With inflation currently unning at 8.3% per year, short-term interest over 11% per annum, and the cumulaive effect of a series of inidequate rate decisions. periodic applications for ate increases have beome a necessary way of ife. The remarkable fact is hat on an inflation-adjusted basis, electric and gas rates nave shown little change over the past three years. A lecision on the current rate upplication is not expected intil late April 1979.

The greatest opportunity to protect consumers from future higher energy costs continues to rest on our ability to switch our generating system from heavy use of foreign oil to the use of nuclear energy. The recent arbitrary oil price increase instituted by the OPEC nations and the withdrawal of Iranian-oil brings home once again the constantly lurking economic dangers that are a consequence of this reliance. Substantial relief from this dependence will be achieved with the start of operation of the Shoreham Nuclear Station in 1980. Shoreham's operation will result in the reduction of LILCO's oil consumption by some eight million barrels a year, and will provide an important stabilizing influence on electric costs.

Unfortunately, additional regulatory delay at the State level once again threatens to set back the scheduled start of the Jamesport Nuclear Station and the substantial economic benefits its operation would provide consumers. With the recent

receipt of the Nuclear Regulatory Commission's final approval to build Jamesport, State approval now remains as the sole obstacle to the plant's construction. As a result of further prolongation of the State hearing process, the plant's 1988 commercial operation now seems in leopardy. The economic impact on consumers could be substantial, since each year of delay increases the cost of Jamesport by \$300 million and State-wide consumption of foreign oil by 21 million barrels.

To balance the economic and political uncertainties that have intruded so heavily upon our Company's operations, we note the presence of a number of strengths that warrant optimism when we look ahead. Important among these is the new sense of community feeling that is being demonstrated in the Long Island area. Prominent leaders from all sectors of the community are joining together in a concerted effort to promote a unified Long Island identity for the planning of a new asset base of economic activity and to pursue the solution of problems on a regional scale. We believe this new community partnership bodes well for Long Island's future.

Our most significant strengths, of course, are those that are contained within the Company. Outstanding among these are the talents, skills, and dedication of LILCO people. The positive Booz, Allen & Hamilton assessment of the Company's operations is really a tribute to the 5.400 LILCO employees and their willingness and skill in finding and applying more productive ways to get their jobs done. Their leadership both on the job and in their communities lends confidence to our anticipation of a stronger LILCO and a better Long Island in the months and years ahead.

Ch.l.

Chairman and Chief Executive Officer

Wilfred Q. Uh

President

1978 in Review

Our review of LILCO's 1978 activities benefits from a new and valuable perspective, an independent study of Company operations conducted by the management consulting firm of Booz, Allen & Hamilton, Inc. The study was ordered and the firm was selected by the Public Service Commission (PSC), in compliance with a 1976 State law requiring a management audit of each major electric and gas utility in New York at least once every five years.

Among the general findings of the two-part report, which covered LILCO's general management and project management for major construction, was the auditors' conclusion that LILCO is an efficient and well-managed utility whose ratepayers are receiving cost-effective electric and gas service. The auditors found that LILCO management demonstrates a consistent and active interest in improving operational efficiency and effectiveness wherever possible, and that the management team is strong overall, with experienced and capable senior executives guiding the Company. In its exami- nation of the Shoreham nuclear project, Booz, Allen &

Hamilton found expenditures to be generally reasonable despite the escalation in costs of the project.

Both parts of the audit report contained a number of recommendations for management improvements. The Company is in agreement with the majority of these suggestions, many of which constitute recommendations for expansion or acceleration of programs already begun by LILCO. Some of the key findings of the audit will be mentioned in this report.



Long Island's economy grew at a moderate pace during 1978. Improved labor market conditions were reflected in a record year-end total of 1,232,100 employed residents of Nassau and Suffolk Counties. This represented a gain of 79,800 jobs over the 1977 year-end level. The unemployment rate declined significantly from a year earlier, reaching 5.3% at the end of 1978. A total of 81 new industrial plants and warehouses were added in the area, and operations were expanded by 243 existing plants and warehouses.

The total population of LILCO's service area of Nassau and Suffolk Counties and the Rockaway Peninsula of Queens County is now over 2.9 million, according to LILCO estimates. This is greater than the population of each of 25 states in the nation. For the third consecutive year, the Nassau-Suffolk area ranked among the nation's 10 largest population centers in total personal income, consumer spendable income, and retail sales per household.

Newsday, now one of the 10 largest newspapers in the country, will move to Melville in 1979, to the new building pictured above. The 315,000-square-foot structure was one of several new commercial/ industrial construction projects begun on Long Island in 1978.

Housing construction activity remained slow; as a result, the 8,100 new residential electric customers connected to the LILCO system was the smallest number since 1945. However, for the first 11 months of 1978. newly authorized nonresidential construction reached a dollar value of \$159 million, an increase of 18.8% over the same 1977 period. The 2,600 new LILCO commercial customers connected in 1978 was 8.0% higher than in 1977.

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Long Island's business, labor, government, and educational leaders began a strong regional effort to stimulate the area's economy and formulate solutions to its problems. Catalysts in the process were a series by Newsday, "Long Island at the Crossroads," and a conference at the State University of New York at Stony Brook, which sought to define the region's strengths, identify its major problems, and report progress towards their solution. One of the important groups established as a result was the Long Island Action Committee, formed by business, labor, and community leaders to study key issues such as taxes. Among the Committee's priorities is the attraction of high-technology

Another promising new organization is the Long Island Economic Development Agency, the first attempt by the Nassau and Suffolk County governments to approach economic projects on a joint basis. This 30-member agency, which includes 21 private-sector appointees, is working to attract federal and state funding for economic development projects, and to promote a unified Long Island identity to other parts of the country.

industry to the Island.

Kilowatt-hour sales of electricity to system customers increased 0.5% over the previous year. Reflecting moderate summer weather in 1978, residential sales declined 1.1%. Commercial and industrial sales rose 2.2%.

The peak demand for electricity in 1978 occurred on August 17, when system demand reached 2,997,000 kW. This was below the record peak demand of 3,107,000 kW experienced on July 21, 1977, following several days of very hot weather. Under normal weather conditions, the pattern of modest growth which has developed over the past few years can be expected to continue, according to the Company's latest electric load forecast. Customer application of conservation measures, combined with improving appliance efficiencies, are among the factors contributing to a slower rate of growth of electric demand and sales.

Construction of the LILCO/Consolidated Edison intertie was completed, and the new line was put into service in August 1978. This major transmission interconnection enables LILCO to receive up to an additional 900,000 kW of power from other utilities for limited periods in the event of an emergency. In addition to reinforcing system reliability, the new intertie will facilitate LILCO's purchase of energy from, and sale to, other utilities. Purchases of economy energy in 1978 saved LILCO about \$10.4 million. These savings were passed on to customers through the fuel adjustment clause. Earnings from sales of electricity to other utilities exceeded \$1.6 million in 1978.

A major portion of the new intertie consists of a 345 kV cable extending 17.4 miles underground and under Long Island Sound, from LILCO's substation at Glenwood Landing in Nassau County to a Consolidated Edison substation at Yonkers in Westchester County. An additional 138 kV underground extension runs 8.5 miles from Glenwood to Lake Success, where it connects to an 8.2 mile line continuing to Con Edison's substation in Jamaica, Queens. With the completion of this intertie project, LILCO is linked to other power grids by four separate interconnections.

At the end of 1978, construction of the Shoreham Nuclear Plant was approximately 78% complete. with commercial operation scheduled for the fall of 1980. Operating license hearings conducted by the Nuclear Regulatory Commission (NRC) are expected to begin in the third quarter of 1979. The Company is particularly concerned that the hearings be conducted in a timely manner. Every day of delay in operating the plant deprives the Company and its customers of the opportunity to save approximately \$300,000 in fuel costs through the displacement of expensive foreign oil by nuclear generation. The capital costs of the plant also increase by about \$240,000 with each day of delay.

The operating organization for Shoreham, assembled over a five-year period, is essentially in place, and is in the final phase of its training for operating licenses.

Escalating costs accompanying the extensive delay of the Shoreham project have been the focus of public concern, prompting the PSC to order the recent audit of LILCO's major construction projects. In analyzing the delay and increased costs, Booz, Allen & Hamilton cited changing regula-

tory requirements, interventions in the licensing process, and inhospitable

political and economic climates as key factors largely beyond the Company's control. Concluding that LILCO had developed considerable strength in its management of the Shoreham project, the report noted some of the contributions of individual departments and organizations within the Company: LILCO's procurement procedures were called highly effective. The Shoreham start-up organization was credited with having adopted a unique and innovative approach to structuring the start-up effort.

With the generation of nuclear power on the LILCO system, the Company expects to realize substantial economic benefits for its customers through the displacement of costly foreign oil now used in LILCO's steam electric generating units. When compared to the only available alternative, a coal-fired generating plant, the Shoreham Unit's operation can be expected to produce savings of nearly \$2 billion over the 30-year life of the plant. After the first year of operation, nuclear power generated by the 820,000 kW Shoreham Unit will represent about 30% of total customer electric requirements, reducing LILCO's consumption of oil by about eight million barrels a year. In 1978, generation of electricity on the LILCO system required 21 million barrels of oil, primarily obtained from member nations of the OPEC cartel.





At top, the reactor building at the Shoreham Nuclear Plant, which is currently approaching completion. Below, a view of the refueling area under construction within the reactor building.

To provide flexibility in financing LILCO's share of Nine Mile Point Unit 2, the Tri-Counties Construction Trust was established. The new Trust is similar to the Tri-Counties Resources Trust, established in 1977 to finance the Company's investment in nuclear fuel.

Cost and output of the plant, which is being built in Oswego, New York, by Niagara Mohawk Power Corporation, will be shared by LILCO and four other New York State utilities. The Company's 18% share will add 195,000 kW to system generating capability. Commercial operation is scheduled for 1984.

Tri-Counties Construction Trust will hold title to LILCO's share of Nine Mile Point Unit 2. This facility is scheduled to be among the first units acquired in the future by Empire State Power Resources, Inc. (ESPRI), a proposed generating company to be owned by the investorowned electric utilities of New York State, which will provide electricity to customers in the future at least cost. PSC approval of ESPRI is required. Additional federal approvals are also required before ESPRI can be implemented.

Ownership of Nine Mile Point Unit 2 by the Trust, rather than by the Company directly, will facilitate its transfer to ESPRI. All expenditures for the unit are now made by the Trust. Funds are obtained by borrowing under a 10-year, \$300 million bank credit which allows the Trust to borrow funds through 1986.

When the plant is completed or if the unit is transferred to ESPRI, the Company or ESPRI will take title to the unit and repay the Trust for the cost it has incurred to that point. The added option of giving the Trust a note with a June 30, 1988, maturity in exchange for the plant has also been provided. Payments under the note will begin no earlier than March 31, 1985. This arrangement will permit the Company to spread these payments over a period of time if its financing requirements are large in the year in which the transfer of title takes place.

Although the cost of oil for generating LILCO electricity in 1978 was lower than in 1977, it still was nearly six times the cost in 1969-1970. This increase in fuel costs has been the major reason for the rise in the cost of electricity to LILCO customers.

Average Annual Cost of Fuel (Cents per kWh)

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Final approval was received from the Nuclear **Regulatory Commission** to build two nuclear units at Jamesport. In its decision, issued in December 1978, the Atomic Safety and Licensing Board (ASLB) of the NRC stated it had found that a nuclear facility at Jamesport would be superior to all available alternatives, including coal, purchased power, solar and wind power, refuse-derived power, conservation, and a combination of these.

Earlier in the year, the ASLB had issued a partial initial approval of the two Jamesport Units, in which it noted that the greatest benefit of the plant will be reducing Long Island's dependence on expensive OPEC oil: "The need for providing against a partial or total loss of oil supply is especially acute on Long Island since all of LILCO's generating plants are oil-fired....Unless new generating capacity derived from some other fuel is added to LILCO's system, it is overwhelminaly clear...that the consequences [of loss of oil supply] on Long Island would be catastrophic. In such a situation, the benefits of having Jamesport would be incalculable."

A reciprocal agreement between LILCO and New York State Electric & Gas Corporation (NYSEG) calls for ownership and capacity of the Jamesport Units to be shared equally by LILCO and NYSEG. In turn, LILCO will assume an equal share of the costs and generating capacity of two 1,250,000 kW nuclear units to be built by NYSEG at New Haven, in upstate New York, in the 1990s. In November 1978, joint applications were filed with the NRC and the New York State Board for Electric Generation Siting and the Environment (Siting Board) for permission to begin construction of the nuclear station at New Haven. Hearings are expected to be initiated before the end of 1979.

State approval of the Jamesport project is still pending. In May 1978, recommendations supporting nuclear power on Long Island were made to the Siting Board by two hearing examiners in the proceedings. However, in November, the Siting Board announced that it would reopen the Jamesport hearings in order to review the latest electric load forecasts, the subject of need, and associated issues. The financial impact of further delay in these proceedings could be substantial, since each month of delay increases the total cost of the Jamesport Plant by approximately \$25 million.

Early in 1978, as a result of licensing delays in the Jamesport project, LILCO and NYSEG deferred further engineering and materials procurement except engineering primarily in support of licensing applications and construction planning. The Company is prepared to resume Jamesport engineering activities as soon as the necessary permits have been finalized. In the Booz, Allen & Hamilton audit, LILCO's plans for managing the Jamesport project were said to reflect a fundamentally sound approach to the organization and management of the Company's engineering and construction effort.

Economic advantages of the Jamesport Units over 30 years of operation are considerable: lower fuel and operating costs for the nuclear units are expected to save LILCO customers about \$10 billion compared to costs for coal-fired units of equivalent capacity. The protection of the Island's air quality is a key environmental advantage of nuclear power; reduced dependence on imported oil is another important benefit. With the addition of Nine Mile Point Unit 2 and Jamesport capacity to that of Shoreham, about 60% of LILCO system electricity will be nuclear-generated. Operation of all three nuclear projects is expected to reduce future foreign oil requirements by more than 30° million barrels a year-a greater volume of oil than the total currently used for all residential space heating. in Nassau and Suffolk Counties.

In 1978, LILCO completed additional arrangements to secure reasonably priced uranium fuel for its nuclear reactors, and negotiated a financing agreement with Bokum **Resources Corporation** (Bokum). Under the terms of the agreements, LILCO will purchase four million pounds of uranium concentrates in addition to the six million pounds provided for under a 1976 contract. In addition, LILCO will lend Bokum up to \$51.1 million through 1980 to complete the uranium mine and construct a mill in Marquez. New Mexico. The loan will be repaid by 1986, with interest at 10.5% annually. As a result of the favorable pricing provisions in the contracts, LILCO estimates these arrangements will save its customers approximately \$100 million compared to projected uranium costs at market prices between now and 1989. PSC approval of the loan was received in November 1978.

Litigation against Westinghouse Electric Corporation continued in 1978, as the Company and nine other utilities continued their efforts to obtain the nuclear fuel committed to them in contractual agreements. In October 1978, the court rejected the Westinghouse defense of commercial impracticability. LILCO is continuing the litigation on the question of damages and other matters.

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Early in 1979, LILCO received 619,000 pounds of uranium concentrates in the form of uranium hexafluoride from Westinghouse. This completed delivery over two years of 1.5 million pounds, or about 16%, of the original Westinghouse contractual commitments to LILCO at prices substantially below the current market, as directed by a court order issued in February 1976.

While LILCO continues to seek additional quantities of uranium for the future, the arrangements made by the Company to date have already provided for sufficient nuclear fuel to operate the Shoreham Unit and the two Jamesport Units until at least 1995, or the Shoreham Unit alone for its entire service life. Increased availability of natural gas in 1978 enabled LILCO to begin supplying gas service to new customers, and provide additional service to existing customers who requested greater use of the fuel. As the winter of 1978-79 approached, LILCO was confident its gas supplies would be more than adequate to meet the demands of all firm gas customers, even in the event of severe weather conditions. The Company's major pipeline supplier has forecast increasing supplies over the next 12 months. Planning the use of available gas supplies during the year enabled the Company to place over 13 billion cubic feet of gas in storage prior to the start of the 1978-79 heating season, using regularly contracted storage service and LILCO's liquefied natural gas plant at Holbrook.

Other factors serving to reinforce LILCO's expectations of a modest excess of natural gas during the next few years were the conservation practices adopted by many customers, and the natural attrition of gas customers since restrictions were first imposed. LILCO system sales of gas in 1978 were 1.6% below those in 1977. In June 1978, the PSC approved LILCO's petition. filed in late 1977, to expand gas sales by as much as one billion cubic feet of new natural gas load annually. By the end of the year, LILCO had committed the total additional gas to residential, commercial, and industrial customers, and had received PSC approval to sell an additional 0.6 billion cubic feet of gas in 1979. The availability of natural gas to the industrial market provided a needed stimulus for Long Island business, since the fuel is essential to many manufacturing processes. Based on its evaluation of improved gas supply and the strong demand for natural gas on Long Island, the Company is seeking approval for further substantial sales.

Passage of the Natural Gas Policy Act in 1978 provides for gradually rising prices over a seven-year period, with deregulation of new gas effective January 1, 1985. The higher prices are intended to bring gas prices closer to those of other forms of energy, and to stimulate development of significant new gas supplies. Other energy legislation passed at the same time will also affect gas usage. Because regulations under these laws are still being formulated, their impact on the Company cannot yet be fully assessed.

The Company continued its efforts to introduce time-of-use rates for certain customers. Historically, utility rates have not reflected the fact that the costs of producing electric energy vary not only from

season to season but also from one part of the day to another. Time-of-use rates are designed to approximate these changes in costs, enabling the customer to make a choice be-, tween paying the higher price at a particular point in time or deferring consumption until lower rates are in effect. One result of timeof-use rates can be to shift customer demand from peak to off-peak periods, thereby reducing the need for additional plant investment. A second result can be to help hold down costs by enabling LILCO to make more efficient use of existing electric generating equipment.



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The average price per kWh of electricity to LILCO's residential customers is still lower today than it was in 1935. In contrast, the consumer price index rose almost 400% between 1935 and 1978.

Consumer price index
 Residential price per kWh



In 1977, the Company introduced mandatory time-ofuse rates for about 200 of its largest commercial/industrial customers. Plans were also made by LILCO, and approved by the PSC, to introduce time-of-use rates for residential customers. However, implementation of this program was delayed in 1978 following a legal action against the PSC. In December, the New York State Court of Appeals upheld the initial application of LILCO's time-of-use rates to the Company's large commercial/industrial customers. clearing the way for LILCO to proceed with implementation of time-of-use rates for large residential customers as well. Following PSC approval and installation of the special meters required, LILCO expects the rates will take effect in the fall of 1979,

Three experimental programs studying the use of electricity priced at lower rates during off-peak periods were pursued by LILCO in 1978. Two of these will also provide the Company with important information about the use of solar energy supplemented by electric backup systems.

At Wading River, five solar homes were completed for a national project being conducted by the Electric **Power Research Institute** (EPRI), with LILCO acting as host utility. Each home is equipped with a different heating and cooling system that combines solar energy and efficient electric heat pumps. With five typical Long Island families now living in the homes, LILCO will participate in the monitoring of the systems for three years to determine their efficiency and reliability. The project will investigate the practicality of such systems to conserve expensive and irreplaceable fossil fuel resources.

One type of off-peak electric energy rate introduced by LILCO in 1977 offers customers lower prices for electricity used from 12:00 midnight to 7:00 a.m. for storage purposes, such as charging batteries of electric vehicles or heating water in storage. Using this rate, a new demonstration project studying thermal energy storage is being conducted by LILCO. the U.S. Department of Energy (DOE), and the Empire State Electric Energy Research Corporation (ESEERCO).



LILCO helped its customers conserve energy and save money by mailing to them the device pictured above, which restricts the flow of shower water. By reducing their use of hot water, a family could save from \$20 to \$100 a year on water heating bills.

Two experimental systems for space heating or cooling will be studied in the homes of 100 Long Islanders in 1979. During off-peak periods at night, the units use electricity to heat or cool water, which is then stored in highly insulated tanks for use during the day. LILCO will monitor the systems remotely by radio as it tests the efficiency of the units under various operating conditions.

A third project announced by the Company in October 1978, was developed entirely by LILCO to explore the potential of solar water heating. Six hundred Long Island families will be chosen to participate in the program, the largest of its kind in the nation. The domestic water heating system has been designed to meet the needs of a typical family of four or five, and to take advantage of LILCO's off-peak electric energy storage rate. When the sun is shining, hot water is provided by solar energy; at night and during extended cloudy periods, the volume of water in the storage tank is automatically heated by a backup electric element.

The excellent response of Long Islanders to the announcement of the program brought the Company more than 2,000 customer inquiries. Because of this interest, LILCO revised the target date for completion of the installations from three vears to 18 months. In addition to fuel savings, customers purchasing the systems will qualify for the new income tax credits specified in the National Energy Act, amounting to 30% of the cost of solar system equipment-in the case of the LILCO system, more than \$500. Monitoring of the systems by LILCO will provide information on operating data and cost.

Cost of Energy for Home Heating on Long Island 1968-1978 (Percent increase)

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0	50	100	150	200	250%

Over the past 10 years, the cost of a gallon of home heating oil on Long Island has more than tripled, increasing by 220%. By comparison, during the same period, the cost of a kilowatt-hour of electricity for home heating has increased 161%, and the cost of gas per mcf has risen 142%.



Responding to the worst storm emergency in the Company's history, LILCO employees worked long hours to restore service during the ice storm of January 1978. More than 340,000 electric customers were affected by the storm. Heavy icing conditions combined with severe winds to cause substantial tree destruction and attendant electric line damage. The restoration effort required 5,455 people, of whom 4,184 were LILCO personnel and retirees, with the remaining assistance provided by other utilities and contractors. The dedication of LILCO employees was demonstrated to an extraordinary degree in their restoration effort performance.

During normal operations, the Company's emphasis on productivity has done much to help keep the number of employees almost constant from year to year. Over the past 20 years, 342,300 electric and 74,600 gas customers have been added to the LILCO system, and the amount of each energy form supplied has tripled. Despite these greater demands, today only 4.70 employees are required to serve 1,000 customers, whereas in 1958 the number of employees per 1,000 customers was 6.94. The difference represents a savings in employee wages and benefits of over \$70 million a year.

With the installation of the Performance Management System (PMS) in additional areas of the Company in 1978, more than 40% of all LILCO employees are now utilizing the system. Productivity improvement is achieved through PMS by setting job standards, measuring performance, and providing prompt feedback to personnel. The Booz, Allen & Hamilton audit concluded that LILCO's work force productivity management system is advanced by utility standards. Integration of PMS with the operating, accounting, and customer relations functions will continue in 1979.

Under LILCO's Affirmative Action Program, efforts to promote equal employment opportunity continued in 1978. Since the program was initiated in 1966, the number of minorities and women in management positions has increased almost fivefold.

In November 1978, the Company announced it was participating as the largest contractor in a national electric vehicle demonstration program being conducted by the DOE. Through a costsharing arrangement with the federal agency, LILCO will obtain 40 electric vehicles in three different models, to be used for meter reading, general transportation, and employee vanpooling. These will be added to the existing fleet of 12 electric vehicles. The Company will also arrange for the sale of another 20 electric vehicles to Long Island organizations. The goal of the project is the development of the electric vehicle as an alternate means of transportation.

Late in 1978, DOE selected LILCO to participate in a second phase of the electric vehicle program, which would involve the addition of another 50 electric vehicles to the program. A decision on the Company's participation will be made following completion of negotiations with DOE. Electricity generated in the process of solidwaste disposal entered the LILCO system for the first time in the fall of 1978. Designed to process 2,000 tons of solid waste per day, the Hempstead Resources Recovery Plant, located in the Town of Hempstead, is the largest refuse-to-energy facility in the country. Reusable materials such as metal and glass are recovered for resale. Steam produced from the combustion of nonrecoverable materials is sold to LILCO and used to generate electricity in two LILCO-owned on-site turbine generators with a capability of 32,000 kW. The price paid for the steam is related to LILCO's average system fuel cost. The plant is expected to be fully operational in 1979.

LILCO participated in this project as a means of helping the area solve a serious solid-waste disposal problem. There are related conservation benefits as well, since every kilowatt-hour of electricity generated with steam produced in the refuse-treatment process displaces a kilowatt-hour which would have been produced using fossil fuels. The Company continued discussions in 1978 with other municipalities interested in the possibilities of linking solid-waste disposal and electric generation.



LILCO's continuing environmental protection efforts won the Company a Phillips Award for Protection of the Physical Environment. The award is given annually by the C.W. Post Center of Long Island University to corporations which have shown an unusually high awareness of their social responsibilities. LILCO was cited in 1978 for high environmental standards and its programs to protect air and water quality; for reducing noise levels near system facilities; for recovering vanadium from the waste of oil combustion; for land use and beautification efforts; and for cooperation with environmental groups.

The first phase of a research and development project exploring the feasibility of an automated distribution system was completed by LILCO in 1978. LILCO is serving as the host utility in the new EPRI project, which entails a field demonstration of a radio communications system for remote control of electric distribution power lines. Pole-mounted radio control devices are being installed which can detect a power disruption along a distribution line and relay the information to a central computer. The radio control device isolates the problem so that service can be restored immediately to customers not directly affected by the damaged line. LILCO expects the system will be operational in 1979, at which point it will begin a one-year trial period.

Programs to protect air and water quality were expanded in 1978, as LILCO began construction of waste water treatment facilities. Virtually all the liquid industrial waste at LILCO's five fossil-fueled steam electric generating stations will be processed by these facilities. Completion of the treatment systems at the Glenwood and Far Rockaway Stations is scheduled for mid-1979. The larger Northport, Port Jefferson, and Barrett Stations will have finished systems approximately a year later. These systems qualify for financing through taxexempt pollution control securities similar to those sold in 1976.

LILCO's efforts to preserve the environment reflect a commitment of long standing. Since 1972, the Company has operated what was then the first automatic air quality monitoring system in the country, its Environmental Quality Control System (EQUAC). By maintaining a continuous reading of ambient air quality, the system enables LILCO to burn lower-cost, high sulfur oil routinely, and provides for rapid switching to low sulfur fuel when air quality readings indicate sulfur dioxide values are approaching established limits.

Operation of the EQUAC system at LILCO's two power stations in Suffolk County continued through 1978, with air quality meeting all applicable standards by a wide margin. Fuel cost savings to LILCO customers



Above, nesting platforms are being installed on salvaged utility poles to encourage the breeding of ospreys on Long Island, and protect electric service reliability. In the past, the birds nested on poles supporting electric wires, causing service interruptions and sometimes killing the birds. The program is a joint effort of LILCO and the New York State Department of Environmental Conservation.

achieved through the use of EQUAC amounted to \$17 million last year. Savings realized by customers since the system was introduced total \$170 million.

The Company's application to extend the EQUAC system to generating plants in Nassau County was approved in 1978 by the New York State Department of Environmental Conservation (DEC). Federal approval was withheld by the **Environmental Protection** Agency (EPA), however, pending the resolution of certain technical questions. The Company anticipates a final resolution of this matter in 1979. At current oil prices. the potential fuel cost savings from EQUAC operation in Nassau County are estimated to be at least \$8 million annually.

Financial Analysis

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1978 Results

Calendar year earnings were \$2.44 per share compared with \$2.59 in 1977. The average number of common shares outstanding was 13% higher in 1978 than in the prior year.

The quarterly dividend on the common stock was raised in March 1978, to 421/2¢ per share. This was equivalent to a 7¢ increase in the annual rate to \$1.70 per share. The dividend rate has been raised in 19 of the last 20 years. The quarterly dividends paid in 1978 and 1977, respectively, are shown below:

Dividends		
Payment Dates	Paid p 1978	er Share 1977
Feb. 1	40344	39 ¢
May 1	421/2	40¾
Aug. 1	421/2	40¾
Nov. 1	421/2	4034
Total Paid *	\$1.681/4	\$1.611/4

The Company estimates that 70% of the common stock dividends paid in 1978 represented a return of capital for federal income tax purposes and, therefore, may not be taxable as ordinary income. Such estimates are subject to audit by the Internal Revenue Service.

Dividends on all series of the Company's preferred stock were paid quarterly based on the stated annual dividend rates as shown on page 31.

Rate Increases

On January 17, 1978, the **Public Service Commission** (PSC) authorized permanent electric relief of \$59.7 million, including \$15.0 million previously granted on an interim basis effective August 1, 1977. As a part of this rate action, the PSC allowed the Company to increase the amount of construction work in progress (CWIP) included in rate base from \$100 million to \$300 million, thereby improving internal cash generation for the coverage of fixed charges. The PSC also granted the Company an additional electric rate increase of \$4.9 million effective August 24, 1978, to offset most of the increases resulting from the negotiation of new contracts with the Company's local labor unions.

Both the \$59.7 million electric and the prior gas rate increases were less than those requested and needed to support our construction program to meet the future energy needs of our customers and to provide an adequate return to LILCO's operating and maintenance expenses excluding fuel and purchased power per kWh of electricity sold have increased only 66% since 1968. These are the expenses most subject to management control, but represent the smallest component of cost. By contrast, the cost of fuel and purchased power per kWh, the largest cost component, have soared 493%. Taxes per kWh have risen 92%.

Operations and maintenance Total taxes Fuel and purchased power

our shareowners. Accordingly, on May 31, 1978, LILCO filed rate increase requests totaling \$171.0 million, comprised of a \$147.1 million, or 18.5%, increase in electric rates and a \$23.9 million, or 13.1%, increase in gas rates based upon forecasted sales for the 12 months ending June 30, 1980.

The electric and gas rate increases requested are designed to offset increased costs due to inflation and to improve earnings performance. Additionally, the higher electric rates are designed to improve the quality of earnings and internal cash generation. Further, the electric relief requested is needed to permit improved service quality as well as to provide an adequate return on additional plant placed in service. The Company has requested a 14.3% return on average common equity, compared with the 13.3% granted by the PSC, and the inclusion of an additional \$400 million of CWIP in rate base.

The PSC will give consideration to the impact of the recently issued wage and price guidelines in determining the increases to be _ granted. By law, decisions must be rendered as to the amounts of both the electric and gas rate increases by April 28, 1979.

12

5

\$ 160



Revenues

Revenues totaled \$898.9 million in 1978. Electric revenues were \$738.3 million. Gas revenues were \$160.6 million. The increases from prior years were:

Revenues (Millions of dollars)						
1978	1977					
\$55.3	\$93.3					
19.5	6.2					
\$74.8	\$99.5					
	1978 \$55.3 19.5 \$74.8					

Electric revenues in 1978 reflect most of the \$59.7 million electric rate increase effective January 17, 1978, including the \$15.0 million effective August 1, 1977, and approximately onethird of the \$4.9 million rate increase effective August 24, 1978. Changes in electric revenue were also influenced by changes in system sales of electricity (excluding sales to other utilities) which were 0.5% higher in 1978 than in 1977. System sales in 1977 were 3.2% above 1976. KWh sales to power pools were up 128.3% in 1978 over 1977 and 38.4% in 1977 over 1976.

Changes in gas revenues reflect the \$9.4 million rate increase effective August 16, 1977, the increased cost of gas and changes in system mcf sales of gas which in 1978 were 1.6% below those in 1977. System mcf gas sales in 1977 were 1.1% below 1976. The decline from 1977 to 1978 was due largely to lower sales to interruptible customers equipped to use alternate fuel.

Operations and

Maintenance Expenses Operations and maintenance expenses increased due to higher wage rates and other costs reflecting inflation. Changes in electric fuels and purchased power and gas fuels expense between periods are influenced by changes in energy sales (see Revenues) and fuel prices.

Operations and Maintenance Expenses (Mations of dotars)							
Increase or (Decrease) from Prior Year	1978	1977					
Electric fuels and purchased power Gas fuels Other operations and maintenance	\$ 4.3 10.5	\$52.4 5.4					
Total	\$25.6	9.5 \$67.3					

The average costs of fuel for electric generation and gas sendout were as follows:

Average Fuel Costs						
	1978 1977					
For electric						
S/million Btu	\$1.87 \$1.98					
For gas sendout— .\$/mcf	\$1.58 \$1.36					

The changes in electric and gas fuel costs were offset in each year by changes in revenues obtained through the appropriate fuel adjustment clause.

Operations and maintenance expenses excluding all fuels and purchased power increased \$10.8 million, or 7.8%, in 1978 and \$9.5 million, or 7.4%, in 1977, largely as a result of higher payroll and employee benefit costs in both years. The increase in 1978 was limited in part because some normal operation and maintenance activities were not performed, in order to divert manpower and funds to restoration and cleanup necessitated by the severe ice and snow storms during the first quarter of 1978. The costs of this restoration were not charged to operating expenses. Portions of such costs have either been recovered through insurance or charged to the Company's storm reserve: the balance of these costs await final disposition in the pending rate case.

Depreciation and Taxes

Increases in depreciation result from the addition of plant in service. Increases in operating taxes are principally due to the addition of new plant and increased property tax rates, as well as higher state and local gross income and franchise taxes on increased revenues. Changes in federal income taxes are due principally to variations in net income before income taxes, utilization of investment tax credits. and items capitalized for financial statement purposes that are current deductions on the Company's tax return. (See Note 7 of the Notes to Financial Statements.)

Depreciation and Taxes (Makions of dollars)

Increase or (Decrease) from Prior Year	1978	1977
Depreciation	\$ 6.1	\$ 2.3
Operating taxes	9.6	9.5
Federal income taxes	12.0	1.1



Common and Preferred Stock

The common stock, the preferred stock \$100 par value Series B, E, I, J, and K, and the preferred stock \$25 par value Series O and P of the Company, are traded on the New York Stock Exchange. Trading in the Preferred Stock, \$100 par value, Series N, ended on December 1, 1977, on the New York Stock Exchange.

Common Stock					Preferred Stock													
			Series	B-5%	Series	E-4.35	% Series	sI-5¾%	Series	J-8.129	% Series	K-8.30	% Series	N-13%	Series	sO-\$2.4	7 Series	P-\$2.43
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1977								٠										
1st Quarter	191⁄4	17%	57	55	51%	49%	89	85	931⁄4	89	961/4	921/2	131¼	1251/2	28	27	28	26%
2nd Quarter	20%	17%	58	55	50¾	47	95	841/2	95	89	95	91	130	1251/2	28%	26%	27%	261/2
3rd Quarter	20	18%	59%	56	51	481⁄2	941⁄2	881/2	95¾	901/2	991⁄2	921⁄2	131	119 `	281⁄2	27½	283%	271/8
4th Quarter	19¼	17¾	58	551⁄2	51	49	91	87	93	90	96½	91½	122	120	28	26%	28	26%
1978		·																
1st Quarter	19¼	17%	57	54	48%	45%	90	86 -	921/4	87	94	891⁄2			27%	26	27¾	26
2nd Quarter	191⁄2	181⁄2	521/2	50	471/2	4434	92	881⁄2	861/8	80	92	80			27	24%	2634	241/2
3rd Quarter	193⁄4	18½	54	52	48%	43	921/2	911/2	90	81	93¾	83		•	27¾	241/4	27	25
4th Quarter	18%	17	521/2	49	441/2	43	851⁄2	83	85	77	891⁄2	80		•	26%	251/8	261⁄2	23

The Series D-4.25% Preferred Stock is traded in the over-the-counter market. We have been advised of scattered trading at prices ranging between \$39½ and \$46¼ per share during 1978. The Series F, H, L, M, Q, and R Preferred Stock are held privately. All outstanding shares of Series N Preferred Stock were redeemed on December 2, 1977.

AFC and Other Items Record levels of construction and associated financing, which are expected to continue in 1979, coupled with higher costs of capital, have resulted in increases in interest charges, preferred stock dividend requirements, and allowance for funds used during construction (AFC). The increases in interest charges and preferred stock dividends result primarily from the sale of additional securities. Under PSC rules, the recording of AFC, which is not an item of current cash income, is an accepted accounting practice designed to capitalize the cost of money invested

during the construction period in a manner similar to construction labor and materials.

The amount of AFC fluctuates from period to period with changes in the cost of money, the level of construction, the amount of construction work in progress (CWIP) included in rate base, and modifications in regulatory policy. Accordingly, AFC would be expected to increase in conjunction with the Company's continuing construction program and to decline when major generating units begin commercial operation. The

average amount of CWIP allowed in rate base was \$288.4 million in 1978 and \$125.1 million in 1977. The increase in the amount of AFC in 1978 from prior periods has been limited as a result of including additional amounts of CWIP as well as the Northport 4 electric generating unit, which went into commercial operation in December 1977, in rate base.

The increases in AFC; which resulted primarily from financing associated with increases in the level of construction and, commencing in 1975, compounding of AFC, contributed substantially to income for common stock in 1978 and 1977. (See Note 1 of Notes to Financial Statements.) Dividends declared on the common stock of the Company in 1978 and 1977 amounted to approximately 70.7% and 63.8%, respectively, of income for common stock. Such income includes earnings attributable to AFC.

AFC and Other Items (Includes Trusts) (Millions of dollars)								
Increase or (Decrease) from Prior Year	1978	1977						
	-							

Interest charges (ex- cluding AFC related to borrowed funds)	\$14.9	\$13.3
Preferred stock dividends	3.0	2.9
AFC related to borrowed funds)	3.9	15.1

The number of LILCO common shareowners increased 13,300 in 1978 to 143,300. Since 1968, the number of shareowners has risen over 70%.



Financing Trusts

In September 1977, the Company entered into arrangements with Tri-Counties Resources Trust for financing its nuclear fuel. These arrangements give the Company extensive financing flexibility throughout the nuclear fuel cycle. An initial \$75 million fiveyear bank revolving credit agreement was established by the Trust. For the long term, approval of the PSC has been obtained for indebtedness of the Trust up to \$200 million.

In August 1978, the Company entered into arrangements to finance its 18% share of the Nine Mile Point Unit 2 through Tri-Counties Construction Trust. The Company's contract with the Construction Trust requires all the obligations to be repaid after the unit becomes operational. A \$300 million credit agreement, which will mature not later than June 30, 1988, has been established by the Trust.

Both Trusts may make certain investments, including investments in LILCO longterm promissory notes, to the extent their available credit lines are not required to directly finance nuclear fuel or plant assets held by the Trusts. In addition, the Trusts may borrow funds from LILCO. Additional information on the operation of the Trusts is provided in Note 4 of the Notes to Financial Statements.

Capital Requirements LILCO's capital requirements, including AFC, totaled \$415.8 million in 1978:

Capital Requirements (Includes Trusts) (Malions of collars)					
Construction and nuclear fuel expenditures	•				
Electric property	\$381.9				
Gas property	8,1				
Common property	4.0				
Nuclear fuel	21.8				
Total Capital Requirement	s \$415.8				

Permanent financing in 1978 totaled \$199.9 million, composed of:

Permanent Financing (Millions of dollars)	•
Mortgage bonds	\$ 75.0
Preferred stock	_
Common equity	124.9
Total Permanent Financin	g \$199.9

In addition, Tri-Counties Resources Trust and Tri-Counties Construction Trust provided a total of \$96.5 million through the Trusts' credit agreements with lending institutions. This amount includes \$9.1 million of the \$24.6 million loan outstanding by LILCO to Bokum Resources Corporation. (See Note 6 of Notes to Financial Statements.)

The use of short-term debt was significantly reduced in 1978. No short-term debt was outstanding at the end of each of the last four years. (See Note 5 of the Notes to Financial Statements.) LILCO's capital requirements are currently estimated at approximately \$456 million in 1979. External financing is expected to total \$212 million, and an additional \$127 million is estimated to be provided through the Trusts. An additional \$18 million is expected to be provided in 1979 through the Trusts to increase LILCO's loan to Bokum. For the years 1979 through 1983, inclusive, LILCO's capital requirements are estimated at \$2.1 billion, including \$0.3 billion to repay maturing securities principally in 1981 through 1983, with \$0.7 billion to be provided from external sources and another \$0.5 billion to be provided through the Trusts.

Shareowners' Investment Of the total \$111.3 million of income for common stock. \$32.7 million, or 29.4%, was reinvested in LILCO for shareowners. At the end of 1978, common equity represented 38.6% of total capitalization compared with 35.5% at the end of 1977. These ratios exclude. the Trusts from capitalization. Alding in this increase was the conversion of η. 29,400 shares of Series I **Convertible Preferred** Stock. Over 60% of all the Series I shares have now been converted. The total increase in common equity represented 69.6% of the total increase in capitalization.

In 1978, LILCO holders of common stock invested \$13.4 million of their dividends and additional cash in new common shares through the Company's Automatic Dividend Reinvestment and Optional Cash Payment Plan. Over 21% of LILCO shareowners currently participate in this Plan, investing about 14% of the total common stock dividends and additional cash equivalent to up to 5% of the total dividends paid quarterly. Since its inception in December 1972, shareowners have invested \$41.3 million in LILCO through the Plan. Nonparticipating common shareowners may obtain a copy of the current prospectus describing the terms and conditions of the Plan in full, including the optional cash feature and an

authorization form for participation, by writing to Long Island Lighting Company, Investor Relations Division, 250 Old Country Road, Mineola, New York 11501. Authorization forms from nonparticipating shareowners desiring to invest their May 1, 1979, dividend must be received no later than April 20, 1979.

LILCO participated actively with other companies in 1978 in forming the Committee on Capital Formation through Dividend Reinvestment. The purpose of the Committee is to seek federal legislation that would permit the deferral of payment of personal federal income taxes on dividends reinvested in new issue common shares under such plans as LILCO's. Passage of such legislation would provide an incentive for additional capital formation. This would be particularly beneficial to industries such as utilities that are highly capital intensive. LILCO will continue to assist the Committee's efforts in 1979.

Directors and Officers Three new Directors were elected in 1978. In February, William J. Casey and Winfield E. Fromm were elected Directors to fill two vacancies existing on the Board at that time. In December, William J. Catacosinos was elected a Director to fill the vacancy created by the resignation from the Board of Directors, effective November 30, 1978, of Robert G. Olmsted.

Mr. Olmsted's career with LILCO spanned almost half a century. He played a vital role in the direction of the financial affairs of the Company as it rapidly developed and expanded during Long Island's growth years. His father, George Olmsted, was LILCO's first president after the Company was incorporated in 1910.

In May, Matthew C. Cordaro was elected Vice President for Engineering. Dr. Cordaro, then 34 years of age, had supervised all environmental matters for LILCO since 1971 as Manager of Environmental Engineering.

Errol W. Doebler, former Chairman of the Board of Directors, died on December 16, 1978, at the age of 86. Mr. Doebler began his 47year career with the Company in 1927, as a commercial manager. He was named a Vice President in 1941 and Director of the Company in 1945. In 1953, he rose to President and Chief Executive Officer. Mr. Doebler retained his title of **Chief Executive Officer** when he became Chairman of the Board in 1957. He served as Chairman until 1968, and then as a member of the Board of Directors until his retirement in 1973. As part of his lifelong commitment to community service, Mr. Doebler was also an influential figure in many Long Island organizations.

Insurance

The Company has restructured its Directors' and Officers' liability insurance with the National Union Fire Insurance Company and the Continental Casualty Company. These policies provide the Company with coverage for wrongful acts by Directors and Officers as well as indemnification for the Company and its Directors and Officers. The total annual premium for this coverage, which became effective December 31, 1978, is \$60,220.

The Company has obtained a fiduciary liability policy underwritten by the National Union Fire Insurance Company. This policy provides liability coverage for the Company, its Directors and Officers, and any employee deemed to be a fiduciary or trustee, for any alleged breach of fiduciary liability under the Employee Retirement Income Security Act of 1974. This coverage was renewed effective April 1, 1978, at an annual premium of \$11,400.

No payments have been made under any policy of indemnification insurance issued to the Company for Directors, Officers, or fiduciaries.

Managing Energy in a Changing World



The electric and gas utility industries are in the midst of an unheralded but fundamental revolution. During the four decades between the passage of the holding companies legislation in the early 1930s, and the Arab oil embargo in late 1973, the utility industries led what in retrospect was a rather halcyon existence. In the electric industry, the gradual introduction of economies of scale, new technology, and cheaper fuels made possible substantial decreases in the cost of electricity and substantial improvements in the quality of service to customers. In the gas industry, the introduction of natural gas similarly made available an inexpensive and reliable source of energy. The greatest problems faced by utilities were those of keeping up with the demands of an expanding economy for a secure energy base.

With the arrival of the 1970s, a rather sudden and massive ferment unsettled the energy world. Underlying assumptions were challenged, technology itself became a controversial issue, predictability was replaced by uncertainty, the pace of change quickened, and a quiet but efficient utility industry found itself on the cutting edge of controversy.

Nowhere has this controversy been more apparent than in the licensing and construction of new facilities. By the early 1970s, electric generating plants had become a symbol of progress in consumeroriented technology: they incorporated vast economies of scale, sophisticated environmental controls, and an ability to use cheaper fuels. Despite these advantages, or perhaps because of them, these facilities have become the focal point of public controversy over economic growth, the environment, and the shape of our economy. This controversy, together with the

complexity of the plants themselves, has stretched the lead time for an electric generating plant from about five years to as many as 15 years, or more.

Unrestricted "public participation" by a small but vocal minority in the decision-making process has resulted in mammoth licensing proceedings, stretching over many years and embodying thousands of pages of expert testimony. The proceedings themselves have become a stage for a modern morality play in which social and technical issues are acted out. In this drama, the utility is cast as the representative of the economic "establishment," while the opponents see themselves as harbingers of an energy utopia in which conventional facilities are replaced by "soft technologies," such as wind, solar, and biomass. These proceedings consume large quantities of human and financial resources, and have spawned a variety of ancillary consulting industries. They require very large commitments by the utilities for environmental studies and fundamental design and engineering work. Equally important, they vastly complicate the energy planning process.

Energy on Demand

Electricity and gas are there when we need them, and we tend to take for granted this availability: the flick of a switch or the turn of a knob is deceptively simple. Yet the energy supply which supports our society is produced and delivered by a complex network of facilities, controlled by highly skilled people.

A unique characteristic of electricity also suggests some of the complexity involved in its production and "delivery: it cannot be stored, yet it must be instantly available to all who want it in whatever quantities they demand. Plans for utility construction are based on this need to meet the maximum level of demand for electricity at any point

in time.

In operating an electric system, a principal objective is to use facilities in the most economical manner possible. The newest generating plants are also the most efficient; these are used to provide base load generation. As the level of consumer demand rises, additional units are automatically activated. In recent years, this principle of "economic dispatch" has been greatly extended through Intra- and interstate coordination by area power pools.





Planning to Meet Demand. In the days when utility facilities could be conceived and built within a few years, demand forecasts over longer time periods were not particularly crucial. With lead times extending up to 15 years or more, however, enormous burdens began to fall on energy planners. Moreover, at the same time that the planners were called upon to extend their time periods, the forecasting work itself became infinitely more complex.

The simple extrapolative approach that had produced reasonably accurate forecasts in the past, based largely on historic trends, was suddenly inadequate, as powerful new influences on energy use emerged.

Rapid increases in the cost of electric service following the oil crisis, and curtailment of natural gas service as a result of shortages, slowed the pace of demand growth. Long-established consumption habits were modified, and planners had to calculate for effects of conservation practices and price elasticity, both insignificant factors in preembargo forecasting. Further complicating the forecasting task were such constraints on demand growth as steady improvement of appliance efficiencies, and the gradual implementation by utilities of time-of-use rates reflecting marginal-cost pricing principles.

Load forecasting methodologies capable of incorporating these new elements into short- and longrange energy scenarios were developed by utilities in a remarkably short time. Using sophisticated analytical tools such as econometric models and sensitivity analyses, utility planners were able to project the likely impact of individual variables on peak demand and energy use; by applying simulation techniques, they were further able to generate every conceivable combination of events and construct a probability distribution of the results.

Planners of system facilities developed decision-making models with similar intent, varying factors such as construction schedules, capital costs, fuel costs, and reliability levels to determine the probable consequences of a wide range of future conditions and their likely impact on system integrity. Essentially, they found that many uncertainties could be explicitly identified, then quantified in the form of probabilities.







The Environment. As appropriate skills were developed to suit the new complexity of the planning function, other areas of utility operations were assuming a new importance that demanded similarly effective action. Concern for the environment, exaggerated to some extent through its promotion as a fashionable social cause, emerged during the early 1970s as one of the most highly publicized subjects requiring utilities' attention.

Beginning with the National Environmental Policy Act in 1970, federal and state legislators produced a profusion of environmental regulations, most of which were revised and expanded with astonishing frequency over the next several years. Often, there was little indication of coordination among the various regulatory agencies. In the late 1960s, for example, an awareness of deteriorating air quality, among other things, led to the conversion of some generating units from coal to oil burning. Then, in 1977, federal authorities initiated attempts to convert many of the same units back to coal in view of its far greater domestic abundance than that of oil. Some utilities pointed out, however, that the resumption of coalburning would endanger the very air quality goals which had led to the abandonment of coal as a primary fuel in the first place. Conflicts such as this were one result of the fragmentation and proliferation of agencies holding authority over one or more aspects of utility operations.

In the matter of facility siting, the familiar crv of "not in my backyard" was now framed in the new language of "the environment." Controversy over environmental impacts produced long and costly delays in the regulatory process, as utilities prepared extensive studies to demonstrate environmental compatibility as well as public need. The requirement of an environmental impact statement in many states added a minimum of two years to all construction lead times for fossil-fueled plants, while in the case of nuclear units, the period was extended even further by additional federal regulatory requirements.

Against this atmosphere, utilities approached the task of clarifying the new environmental requirements, placing special emphasis on determining the most efficient and economical methods of compliance. Some companies, including LILCO, recognized that environmental regulations would quite likely become a permanent and substantial operating priority in the years ahead. LILCO moved early to establish an environmental engineering department in 1969, centralizing its organization in order to serve all operating areas. In 1972, the Company was the first utility to

design and install an electrostatic precipitator specifically for use on an oilburning unit.

Installing pollution-control equipment entailed substantial capital investment by the utilities. While they readily acknowledged the desirability of improving air and water quality, they pointed out that the degree of incremental improvement achievable at any point should be carefully weighed against the cost of achieving it. In certain states, utilities' costs to meet environmental standards included the purchase of expensive low sulfur oil from **OPEC** nations. LILCO was able to avoid the full potential economic impact of these soaring oil prices while maintaining air quality through the operation of its Environmental Quality Control System (EQUAC). This advanced air quality monitoring system-the first of its kind in the country-enabled the Company to burn less expensive, high sulfur oil at two generating plants in Suffolk County.



Escalating fuel costs underscored the problem of diminishing domestic supplies of oil and natural gas, and presented utilities with a twofold challenge: to substantially reduce reliance on expensive and politically uncertain foreign oil, and to achieve greater control over fuel availabilities as well as costs. The substitution of nuclear power for oil-fueled electric generation was clearly the best means of accomplishing the first objective over the long term in many areas of the country. Given the extensive lead times for construction of nuclear plants, however,

Fuel Cost and Supply.

utilities sought other means of achieving immediate fuel economies.

Transmission interconnections were used by utilities to considerable advantage. They enhanced system reliability, since emergency power could be supplied during an outage; and they enabled utilities to exchange power under purchase agreements to their mutual benefit. In LILCO's case, economy energy could be purchased from other utilities which produced it at lower cost through the use of hydroelectric or nuclear generation. Four separate interconnections, three of which were completed during

A Commitment to Service

Their Company's service is vital, and the community they serve is their own—to LILCO men and women, these are two good reasons to take pride in their job performance.

More than 5,400 people are working to provide gas and electric service across the 1,230 square miles of LILCO's service territory. A continuing objective of the Company is to make the most efficient use of all personnel, regardless of changing work loads. Many LILCO personnel have been trained in a variety of skills, enabling them to perform both gas and electric functions as needed.

Perhaps the most visible employee effort is service restoration after a major storm. Line crews work 16-hour shifts, often in se-

Management and clerical personnel direct restoration activities, conduct field surveys of system damage, and staff emergency call boards to take customer calls around-the-clock. Every day, under less heroic conditions, LILCO people execute unheralded but vital programs, such as preventive maintenance of LILCO facilities, with equivalent dedication and skill.





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the 1970s, now link LILCO to other power grids. Throughout the State, planning among utilities has been coordinated to achieve greater operating efficiency since the formation of the New York Power Pool in 1970.

To one degree or another, all utility fuel sources were touched by uncertainty during the 1970s. Natural gas curtailments by pipeline suppliers in 1971 led distribution companies such as LILCO to refrain from connecting large new customers. Yet planning by the Company well in advance of curtailments proved adequate to meet the needs of all existing firm gas customers, even during the severe 🚴 winter of 1976-77. Construction of a liquefied natural gas plant by LILCO had been completed just before the first curtailment; other arrangements, such as purchased storage contracts with pipeline suppliers, put the Company in a relatively secure position during the period of nation-

7.094

Fuel procurement activities took on a strategic cast for many utilities, as the companies sought to introduce greater flexibility to their fuel policies. At LILCO, it was decided that the provision of oil for electric generation should be made through multiple supply sources holding varving contract expiration dates.

wide gas shortages.

In view of the uncertainties of nuclear plant licensing and commercial operating dates, nuclear fuel strategy was also reformulated to provide maximum flexibility. During the late 1970s, LILCO was one of a relatively small number of utilities that chose to participate more fully in the fuel supply function. In 1978, the Company entered into an arrangement with Bokum **Resources** Corporation to finance the development of a uranium mine and processing mill, to gain price advantages and greater resource supply security.





The Price of Energy. While the question of future energy needs and environmental compatibility of power facilities has generated considerable debate, a more pervasive influence affecting public attitudes towards utilities has been the rising cost of electric and gas service. For many years, the utility industry was able to reduce the price of electric and gas service through technological developments and the availability of abundant fuel supplies. These factors more than offset levels of inflation prior to 1969, the year when electric service reached its lowest cost, in the nation as a whole and on Long Island.

By the early 1970s, however, the major economic benefits of large-scale technology had been realized, and with the oil embargo pushing fuel prices as much as 400% above previous levels, and the impact of general inflation, utilities' costs began rising rapidly. Substantial increases in labor rates, the rising costs of equipment and construction materials, the increasing investment in pollution-control facilities, and the need for additional capital financing during the lengthy construction of a facility—all were responsible for escalating utility bills. Interest rates began a precipitous rise, compounding

the impact on annual fixed costs of facilities. Other rising expenses over which utilities had little control were the substantial tax payments to government at federal, state, and local levels.

In operating and maintenance areas of their business, where utilities could exercise greater cost control, new efforts were expended to locate opportunities for cost reductions. At the same time, many utilities chose to undertake a thorough and continuing examination of performance standards and employee productivity, introducing the possibility of extensive change in methods and procedures.

At LILCO, particular emphasis was placed on developing greater flexibility in managing the work force and the work load, Field personnel were trained to perform both gas and electric work in a given function, such as underground distribution, and the Company established the practice of shifting personnel among departments to meet the changing work loads. LILCO also developed a : computerized work information system to provide a more accurate measure of performance on a daily basis.



Despite considerable effort and accomplishment by utilities to improve productivity, the pressures pushing costs upward could not be countered sufficiently, and rate increases became unavoidable. Responding to consumer pressure, regulatory commissions in many states granted smaller increases than the amounts needed and requested by the utilities. Because of insufficient and delayed rate relief, facility completions have been prolonged and their costs seriously inflated, causing customer bills to rise even higher.

Shift in Public Attitude.

As the circumstances of energy production and use underwent the profound alterations of the 1970s, the relationship between the utilities and their customers changed rapidly. For many years, customers had regarded their electric and gas service as a necessary but not particularly interesting constant in their lives. Like water and air, energy was there for the taking, at times and in quantities determined by the customer. Prices were minimal, and occasionally they were even reduced. Given these circumstances, the sudden escalation in costs of electricity and the equally abrupt imposition of restrictions on natural gas service were viewed with alarm and anger by some utility customers. To further compound public confusion. vacillation in energy policy-making by the federal government tended to confirm consumer skepticism about the very existence of an energy crisis.

The need to reestablish customer confidence in the service motivation of utilities was clear. Many companies began an expansion of their service activities to include specific, individual customer assistance on methods of implementing conservation measures such as home insulation. In addition to these steps, LILCO regularly conducted consumer education classes on a wide variety of energy-related subjects, including the purchase and use of appliances to achieve maximum energy efficiency.

The Company was an industry leader in the development and application of time-of-use rates, offering lower prices for electricity used during off-peak periods when system demand is low. As the new rates were implemented during the late 1970s, LILCO emphasized the possible long-term benefits: a shift of electric demand from peak to off-peak periods could moderate the need for capital expansion to accommodate demand growth. Similarly, customer use of residential solar energy systems for space and water heating was encouraged by LILCO as these systems became more widely available, since the use of solar energy during peak-demand periods constituted another means of controlling demand growth. Other programs were initiated to investigate the potential of new developments such as electric vehicles. In some cases, such as LILCO's experimental solar water heating projects, customer participation was called for, and the interest and enthusiasm of the response was considered a salutary indication for the future.

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The foundation for a secure energy future on Long Island was established during the 1970s with the construction of LILCO's Shoreham Nuclear Plant. No other form of electric generation is as safe, environmentally acceptable, and economical for Long Island as nuclear power.

Supplementing the electrici-ty base provided by nuclear power, Long Island will make increasing use of solar water wand space heating systems, many of them introduced

experimentally by LILCO during the 1970s. Efficient heat pumps will provide backup electric service as needed, on cloudy days and at night.

Another resource for electric generation converts solid

- waste to steam while recov-ering usable by-products.
- LILCO was an active par-ticipant in the development of America's largest refuseto-energy project, the Hempstead Resources Recovery Plant.







Financial Considerations. At the same time, and for many of the same fundamental reasons, financial aspects of utility management demanded review and restructuring.

The decline in utility earnings levels, interest coverage ratios, and credit ratings was most severe in 1973 and 1974. While these indicators of financial stabil-

since then, the industry's capital requirements in the next several years are expected to expand considerably. Although the utility industry was always highly capital intensive compared to other industries, the capital requirements of today, with large-scale construction of nuclear power plants undertaken to provide lower longterm operating costs and environmental advantages, are even greater. In most manufacturing industries. approximately one dollar of investment is required for every dollar of revenue; in the utility industry, the current ratio is five dollars of investment for every revenue dollar. With this high rate of capitalization, a smaller proportion of utility expansion programs can be financed internally.

Many utilities addressed the need to strengthen their financial position by proposing methods allowing for a higher cash flow, thus reducing the need for external financing. Inclusion of construction-work-in-progress in the rate base was frequently a preferred approach, as it was for LILCO. The practice is considered by the Company to be best for customers in the long run as well. By recovering the costs of investment capital while the plant is still under construction, the utility is able to avoid incurring additional long-term debt and interest charges, which would ultimately be recovered from customer revenues.

By the end of the 1970s, the utilities were emerging from this controversial period. While uncertainty may well persist in many areas of their operations in the years ahead, their ability to identify and respond to the needs of customers, investors, and employees has been greatly strengthened. 1978 Financials

	1978	1977	1976	1975	1974
Revenues					
Electric	\$738,339	\$682,997	\$589,665	\$557,971	\$486,334
Gas	160,632	141,083	134,924	113,556	100,169
Total Revenues	898,971	824,080	724,589	671,527	586,503
Expenses					
Operations-fuel and purchased power	365,307	350,465	292,707	280,455	250,716
Operations-other	104,384	97,289	89,263	80,720	71,825
Maintenance	44,660	40,935	39,476	37,164	31,149
Depreciation	51,192	45,049	42,737	40,715	37,972
Operating taxes	141,160	131,563	122,066	111,306	97,908
Federal income tax—current	7,297	7,860	228	4,737	(712
Federal income tax-deferred and other	24,183	15,311	13,986	5,375	5.044
Total Expenses	738,183	688,472	600,463	560,472	493,902
Operating income	160,788	135,608	124,126	111,055	92,601
Other Income and (Deductions)					
Allowance for funds used	v				
during construction	—	_	50,681	36,345	18,359
Allowance for other funds used	17.004	44.054			
Other income and deductions	47,294	44,004		(014)	
Sederal income and deductions	(1,020)	(142)	200	(814)	121
Federal income tax credit deferred	3,490	4,973	3,121	2,431	1,050
and other	9,471	11,655	5,079	123	_
Total Other Income and (Deductions)	59,237	61,140	59,743	38,085	19,530
Income Before Interest Charges	220,025	196,748	183,869	149,140	112,131
Internet Charges and (Credite)					
Interest charges and (Credits)	01 105	. 80 555	66 964	5A 26A	12 266
Other interest	51,155	5 020	6 426	7 506	42,200
Allowance for borrowed funds used	5,720	5,050	5,450	7,550	0,195
during construction	(18,883)	(21,147)		_	
Interest capitalized by trusts	3,562	_			
Allowance for borrowed funds used	(3.562)	_	_	_	_
Total Interest Charges	78.032	64,438	72,300	61,860	50,459
			. 4,000		
Net Income	141,993	132,310	111,569	87,280	61,672
Preferred stock dividend requirements	30,688	27,717	24,782	20,296	13,951
Income for Common Stock	\$111,305	\$104,593	\$ 86,787	\$ 66,984	\$ 47,721
Average Common Shares			· · · · · ·		
Outstanding—(000)	45,670	40,399	34,437	28,949	23,565
Earned per Common Share	\$ 2.44	\$ 2.59	\$ 2.52	\$ 2.31	\$ 2.03

See Notes to Financial Statements.

Balance Sheet at Dec	ember 31 (In thousands of dollars)
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Assets		1978	1977
Utility Plant	Electric Gas	\$1,506,659 275,046	\$1,414,993 269,012
	Common	71,273	67,296
	Construction work in progress	1,145,445	978,086
	Nuclear fuel in process	3,675	45,844
	Construction and nuclear fuel in trusts	165,503	
	' Less—Accumulated depreciation	3,167,601 486,865	2,775,231 456,019
	Total Net Utility Plant	2,680,736	2,319,212
Other Property and Investments	Nonutility property, principally at cost	2,300	2,231
•	Investments in subsidiary company, at equity	385	1,288
	Other investments and deposits	68,099	453
	Total Other Property and Investments	70,784	3,972
Current Assets	Cash	7,221	8,347
	Temporary cash investments	3,000	_
	Special deposits	2,908	5,654
	Note receivable—construction trust	48,229	—
	Accounts receivable (less allowance for doubtful accounts of \$2,413,000 and \$2,424,000)	92.816	95.254
	Accrued revenue on accounts billed bimonthly	11,045	10.522
	Materials and supplies at average cost	21,896	23,797
	Gas in storage at average cost	18,222	16,131
	Fuel at average cost	. 23,108	27,613
-	Prepayments	1,018	1,144
-	Total Current Assets	229,463	188,462
Deferred Charges	Electric fuel cost adjustment deferred	8,131	14,932
	Other	27,599	19,967
	Total Deferred Charges	35,730	34,899
	Total Assets	\$3,016,713	\$2,546,545

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Capitalization	Long-term debt Unamortized premium and discount on debt	\$1,175,662 89	\$1,100,375 1,628 1,102,003 394,436 220,207 351,229 (27,110) 279,157	
 Ten Ten 	······	1,175,751		
τ ¹ α * * *	Preferred stock Common stock Premium on capital stock Capital stock expense Retained earnings	390,449 257,072 442,353 (28,321) 311,838		
	Total Shareowners' Equity	1,373,391	1,217,919	
	Total Capitalization	2,549,142	2,319,922	
Trust Obligations		189,603	30,000	
Current Liabilities	Current maturities of long-term debt Sinking fund requirement on preferred stock Accounts payable, including payrolls and other accruals Accrued taxes, including federal income tax Accrued interest Customer deposits Dividends payable	37 1,050 129,285 31,403 18,499 8,125 25,984	70,700 26,812 15,915 8,299 22,122	
	Total Current Liabilities	214,383	143,848	
Deferred Credits	Accumulated deferred income tax reductions Other	49,926 7,213	42,835 2,008	
	Total Deferred Credits	57,139	44,843	
Reserves for Claims and Damages		6,446	7,932	
	Total Capitalization and Liabilities	\$3,016,713	\$2,546,545	

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	1978	· 1977	1976	1975	19
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Statement of Retained Earnings				·····	
Balance, January 1	\$279,157	\$242,147	\$209,524	\$187,537	\$174,
Add—Net income for the year Less—Cost of issuance of	141,993	132,310	111,569	87,280	61,6
retired preferred stock Less—Çash dividends declared:	-	1,335		_	,
Preferred stock	30,651 78,661	27,223 66,742	24,459 54.487	20,474 44.819	13,9 34,3
Balance, December 31	\$311,838	\$279,157	\$242,147	\$209,524	\$187,5
Common Stock Par Value \$5 per Share		×			
Shares authorized	80,000,000	60,000,000	60,000,000	40,000,000	40,000,0
Increase in shares outstanding	51,414,352 7,372,899	44,041,453 6,402,068	5,566,047	7,019,944	25,053,3
Increases in \$5 Par Value Increases in Premium on	\$ 36,865	\$ 32,010	\$27,830	\$35,100	\$12,9
capital stock	91,124	88,348	66,251	53,357	12,
Increases in Capital stock expense	1,211	8,713	3,217	5,261	2,6
Bar Value \$100 per Share Cumulativo					
Shares authorized	5,050,000	5.050.000	5,050,000	3,800,000	3,800,0
Shares outstanding	3,064,993	3,024,360	2,464,306	2,549,795	2,570,0
Shares subscribed		70,000	_		
5 % Series B	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10.0
4.25% Series D	7,000	7 000	7 000	7 000	φ 10,0
4.35% Series E		1,000	1,000	7,000	3 10,0 7,0
	20,000	20,000	20,000	20,000	3 10,0 7,0 20,0
4.35% Series F	20,000 5,000	20,000	20,000 5,000	20,000	3 10,0 7,0 20,0 5,0
4.35% Series F 5% % Series H 5% % Series I	20,000 5,000 20,000	20,000 5,000 20,000	20,000 5,000 20,000	20,000 5,000 20,000	3 10,0 7,0 20,0 5,0 20,0
4.35% Series F 5% % Series H 5% % Series I 8 12% Series I	20,000 5,000 20,000 11,499 25,000	20,000 5,000 20,000 14,436 25,000	20,000 5,000 20,000 19,431 25,000	20,000 5,000 20,000 27,980 25,000	3 10,0 7,0 20,0 5,0 20,0 30,0
4.35% Series F 5% % Series H 5% % Series I 8.12% Series J 8.30% Series K	20,000 5,000 20,000 11,499 25,000 30,000	20,000 5,000 20,000 14,436 25,000 30,000	20,000 5,000 20,000 19,431 25,000 30,000	20,000 5,000 20,000 27,980 25,000 30,000	3,10,0 7,0 20,0 5,0 20,0 30,0 25,0 30,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L	20,000 5,000 20,000 11,499 25,000 30,000 35.000	20,000 5,000 20,000 14,436 25,000 30,000 35,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000	20,000 5,000 20,000 27,980 25,000 30,000 35,000	3 10,0 7,0 20,0 20,0 30,0 25,0 30,0 30,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000	20,000 5,000 20,000 27,980 25,000 30,000 35,000 35,000	3,0,0 20,0 20,0 20,0 30,0 25,0 30,0 35,0 35,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000	20,000 5,000 20,000 27,980 25,000 30,000 35,000 35,000 40,000	3, 10,0 7,0 20,0 5,0 20,0 30,0 35,0 35,0 40,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N 7.50% Series Q	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000	7,000 20,000 20,000 27,980 25,000 30,000 35,000 35,000 40,000	3, 10,0 7,0 20,0 5,0 20,0 30,0 35,0 35,0 40,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N 7.50% Series Q 8.50% Series R	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000	7,000 20,000 20,000 27,980 25,000 30,000 35,000 35,000 40,000	3 10,0 7,0 20,0 5,0 20,0 30,0 25,0 30,0 35,0 40,0
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4.35% Series F 5% % Series H 5% % Series H 8.12% Series J 8.30% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N 7.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 \$306,499	20,000 5,000 20,000 14,436 25,000 35,000 35,000 35,000 48,000 60,000** \$309,436	20,000 5,000 20,000 19,431 25,000 35,000 35,000 40,000 \$246,431 7,200,000	7,000 20,000 5,000 27,980 25,000 30,000 35,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 35,0 35,0 40,0 \$257,0
4.35% Series F 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series M 7.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares outstanding Shares subscribed	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 5306,499 7,200,000 3,400,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 35,000 48,000 60,000*** \$309,436	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 27,980 25,000 30,000 35,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 35,0 35,0 40,0 \$257,0
4.35% Series F 5% % Series H 5% % Series H 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N 7.50% Series Q 8.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares outstanding Shares subscribed	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 \$306,499 7,200,000 3,400,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000 \$309,436 7,200,000 3,400,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 27,980 25,000 30,000 35,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 35,0 35,0 40,0 \$257,0 1,200,0
4.35% Series F 5% % Series H 5% % Series H 5% % Series I* 8.12% Series J 8.30% Series K 7.40% Series L 8.40% Series M 13.00% Series N 7.50% Series Q 8.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares outstanding Shares subscribed \$2.47 Series O	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 \$306,499 7,200,000 3,400,000 \$ 50,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000 \$309,436 7,200,000 3,400,000 \$ 50,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 27,980 25,000 30,000 35,000 40,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 30,0 35,0 40,0 \$257,0 1,200,0
4.35% Series F 5% % Series H 5% % Series I 8.12% Series J 8.30% Series J 8.30% Series K 7.40% Series M 13.00% Series M 13.00% Series N 7.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares outstanding Shares subscribed \$2.47 Series O \$2.43 Series P	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 \$306,499 7,200,000 3,400,000 	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000 \$309,436 7,200,000 3,400,000 \$ 50,000 35,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 27,980 25,000 30,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 30,0 35,0 40,0 \$257,0 1,200,0
4.35% Series F 5% % Series H 5% % Series H 5% % Series J 8.12% Series J 8.30% Series J 8.30% Series K 7.40% Series M 13.00% Series N 7.50% Series Q 8.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares subscribed \$2.47 Series O \$2.43 Series P Total Par Value \$25	20,000 5,000 20,000 11,499 25,000 30,000 35,000 35,000 48,000 60,000 \$306,499 7,200,000 3,400,000 \$ 50,000 35,000 85,000	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000 \$309,436 7,200,000 3,400,000 \$ 50,000 35,000 85,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 20,000 27,980 25,000 30,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 35,0 35,0 40,0 \$257,0 1,200,0
4.35% Series F 5% % Series H 5% % Series H 5% % Series J 8.12% Series J 8.30% Series J 8.30% Series K 7.40% Series M 13.00% Series M 13.00% Series N 7.50% Series Q 8.50% Series Q 8.50% Series R Total Par Value \$100 Par Value \$25 per Share, Cumulative: Shares authorized Shares outstanding Shares subscribed \$2.47 Series O \$2.43 Series P Total Par Value \$25 Less—Slnking fund requirements	20,000 5,000 20,000 11,499 25,000 35,000 35,000 35,000 48,000 60,000 \$306,499 7,200,000 \$306,499 7,200,000 \$306,499 \$50,000 35,000 85,000 1,050	20,000 5,000 20,000 14,436 25,000 30,000 35,000 35,000 48,000 60,000 \$309,436 7,200,000 3,400,000 \$50,000 35,000 35,000	20,000 5,000 20,000 19,431 25,000 30,000 35,000 35,000 40,000 	7,000 20,000 5,000 20,000 27,980 25,000 30,000 35,000 40,000 	\$ 10,0 7,0 20,0 5,0 20,0 30,0 25,0 30,0 35,0 35,0 40,0 \$257,0 1,200,0

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**Includes subscribed shares

See Notes to Financial Statements.

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Statement of Changes in Financial Position for Year Ended December 31 (In thousar	inds of dollars)
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	1978	1977	1976	1975	1974
Source of Funds '	વ		•	. ال	
					=
Net income	\$141,993	\$132,310	\$111,569	\$ 87,280	\$ 61,672
Principal poncash charges and (credits) to income:					
Depreciation	51.192	45,049	42.737	40,715	37,972
Deferred and other federal income taxes	14,712	3,656	8,907	5,252	5,044
Allowance for funds used during construction	(66,177)	(65,801)	(50,681)	(36,345)	(18,359)
Other	8,478	7,265	7,123	7,410	4,625
Interest capitalized by trusts	3,562	-	· —	—	
Allowance for borrowed funds used	(3 562)	_	· · ·	_	_
	450.400	400.470	110.055	104.010	00.054
Funds Provided from Operations	150,198	122,479	119,655	104,312	90,954
Long-term debt	75 287	115 000	150 375	170 000	110,000
Preferred stock	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	108,000	38 500	50,000	75.000
Common stock	127.862	120 325	90.558	88 445	25.640
Trust obligations	159.603				
Other	,				
Decrease in working capital (excluding debt)	29.534	763	_	_	_
NYSEG reimbursements, prior periods, re: Jamesport	· _	· · · · · ·	16,254		_
Other sources	2,046	6,181	1,461	2,423	5,653
Total Source of Funds	\$544,530	\$472,748	\$416,803	\$415,180	\$307,247
Use of Funds	*		, ,	-	
Construction expenditures	s292.519	\$359.420	\$314,125	\$281.455	\$244,175
Nuclear fuel expenditures	(42,169)	23,913	14.424	5.642	4.785
Construction and nuclear fuel in trusts	165.503				
Less—Allowance for funds used during construction	66,177	65,801	50,681	36,345	18,359
Total Construction and Nuclear Fuel Expenditures	349,676	317,532	277,868	250,752	230,601
Dividends on preferred stock	30,651	27,223	24,459	20,474	13,951
Dividends on common stock	78,661	66,742	54,487	44,819	34,734
Payment of long-term debt	-	_	25,000	40,625	625
Preferred stock conversions and retirements	.2,937	44,995	8,549	2,026	24
Decrease in short-term debt	-	. — ,		31,800	
Increase in working capital (excluding debt)	 ,	· - ·	14,031	7,979	7,559
Electric fuel cost adjustment deferred	(6,801)	(836)	995	41	10,363
Other investments and deposits	67,646	235			25
Capital stock expense	2,388	8,713	3,217	5,261	2,693
Cost of removal	4,074	1,510	3,220	1,908	1,655
Other uses	15,298	6,634	4,977	9,495	5,017
Total Use of Funds	\$544,530	\$472,748	\$416,803	\$415,180	\$307,247
Increase (Decrease) in Working Capital by Element (Exclud	ding debt)				
Cash	\$ (1,126)	\$ (609)	\$ 1,035	\$(5,843)	\$ 5,035
Temporary cash Investments	3,000	_	·	. —	
Special deposits	(2,746)	(9,293)	13,218	788	(355)
Accounts and notes receivable	45,791	9,509	9,030	4,251	18,629
Accrued revenue	523	733	989	763	1,349
Materials, supplies, gas in storage and fuel	(4,315)	4,412	11,344	7,543	13,809
Prepayments	(126)	(70)	598	(221)	(199)

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(3,057)

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\$ 7,979

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Current maturities on long-term debt

Accounts payable

Accrued taxes

Accrued interest

Customer deposits

Dividends payable

Net Increase (Decrease)

Sinking fund requirement on preferred stock

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Rate of Interest	Series	Due	1978	1977
First Mortgage	Bonds			
3 %	A	1980	\$ 20,000	\$ 20,000
33%	E٠	1982	20,000	20,000
31/2	F	1983	25,000	25,000
31⁄4	G	1984	15,000	15,000
' 33%	Н	1985	15,000	15,000
43/4	I	1986	20,000	20,000
41⁄8	J	1988	20,000	20,000
5 ·	L	1991	25,000	25,000
4.40	'M	1993	40,000	40,000
4%	N	1994	25,000	25,000
4.55	0	1995	25,000	25,000
514	P	1996	40,000	40,000
51/2	Q	1997	35.000	35.000
8.20	R	1999	35.000	35.000
91/8	S.	2000	25,000	25.000
71⁄4	U	2001	40,000	40,000
716	v	2001	50 000	50.000
75%	Ŵ	2002	50,000	50,000
81/8	x	2002	60,000	60,000
10	Ŷ	1981	60,000	60,000
91/4	Z	1982	50,000	50.000
01/	A A	1092	50,000	
974	88	1903	50,000	- 50,000
95%	22	2006	63,000	63 000
054	00	2000	50,000	50,000
956	55	2000	50,000	50,000
9.20	FF	2007	40,000	50,000
Less-Deposite	d with Trustee of the Ge	neral	998,000	958,000
and Refunding li General and Ref	ndenture as additional s junding Bonds	ecurity for	303,000	263,000
Total First Mortga	age Bonds		695,000	695,000
General and Re	funding Bonds			L.
914 % Series Du	ie 1983		80.000	80.000
9% % Series Du	ie 1984		90,000	90,000
9% % Series Du	ie 2006		70,000	70,000
856 % Series Du	ie 2006	*.	50,000	50,000
85 % Series Du	ie 2007		85,000	85,000
9.20% Series Du	ie 2008 [,]	, •	75,000	·
Total General an	d Refunding Bonds		450,000	375,000
Other Long-terr	n Debt			
- 7½%—Authority	/ Financing Notes	2006	30.375	30.375
81/2% Promisson	Notes	1985	324	-
Less—Current M	laturity sory Notes		37	_
Total Other Land	torm Dobt			
			30,662	30,375
IOTAL LONG-TERM	IDEDI		\$1,175,662	\$1,100,375

The aggregate of the Company's long-term debt due in the five years ended December 31, 1983 is: \$20,000,000 (1980), \$60,000,000 (1981), \$70,000,000 (1982) and \$105,000,000 (1983).

Report of Independent Accountants

Notes to Financial Statements

To the Shareowners and Board of Directors of Long Island Lighting Company

In our opinion, the financial statements appearing on pages 29 to 39 present fairly the financial position of Long Island Lighting Company at December 31, 1978 and 1977, and the results of its operations and the changes in its financial position for each of the five years ended December 31, 1978, in conformity with generally accepted accounting principles consistently applied. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures

Price Waterhouse & Co.

as we considered neces-

sary in the circumstances.

Huntington Station, NY January 26, 1979

Note 1. Summary of Significant Accounting Policies

The accounting records of the Company are maintained in accordance with the Uniform Systems of Accounts prescribed by the Public Service Commission of the State of New York (PSC) and the Federal Energy Regulatory Commission (FERC), formerly the Federal Power Commission.

Utility Plant

Additions to and replacements of utility plant are recorded at original cost, which includes material, labor, overheads, and an allowance for the cost of funds used during construction (AFC). The cost of renewals and betterments relating to units of property is added to utility plant. The cost of property replaced, retired or otherwise disposed of is deducted from utility plant and, generally, together with dismantling costs less any salvage, is charged to accumulated depreciation. The cost of repairs and minor renewals is charged to maintenance expense. Mass properties (such as poles, wire and meters) are accounted for on an average unit cost basis by year of installation.

Allowance for Funds Used During Construction (AFC)

The Uniform Systems of Accounts define AFC as the net cost of borrowed funds for construction purposes and a reasonable rate upon the utility's other funds when so used. AFC is computed monthly on that portion of construction work in progress (CWIP) which is not included in the Company's rate base. The average annual AFC rate, without giving effect to compounding or the reduced Shoreham net of tax rate, was 8.8%, 8.9%, 9.25%, 9.38% and 9.72% for the years 1974 through 1978, respectively.

In 1975, with PSC permission, the Company began monthly compounding of AFC. In June 1976, it began computing AFC on its Shoreham Unit at a reduced rate of 7.34% (increased to 7.63% in July 1977), which reflects the income tax effect of the interest portion of AFC. The Company adopted the FERC method for calculating AFC for the year 1978. There was an immaterial difference between the PSC and FERC results for the year 1977. The AFC rate for 1978, without giving effect to semiannual compounding, was 9.72%. The 1978 Shoreham net of tax rate was 7.93%.

Based upon a five-year average of the Company's capitalization and upon the most current costs of preferred stock and long-term debt (without adjustment

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for income taxes, except with respect to the Shoreham Unit) in the respective periods, the portion of AFC attributable to funds provided by common stock equity for the years 1974 through 1976, was equivalent to 9%, 14%, and 17% of Income for Common Stock.

In compliance with a FERC order effective January 1, 1977, the Company has allocated the portion of AFC relating to borrowed funds to the Interest Charges section of the Statement of Income. Periods prior to 1977 have not been reclassified. The Company believes that such reclassification would be inappropriate since the allocation between the borrowed and other components for prior periods would not be comparable to the components of AFC determined subsequent to December 31, 1976, by using the FERC formula.

Depreciation

The provisions for deprèciation result from the application of straight-line rates to the original cost, by groups, of depreciable properties in service. The rates are determined by annual age-life studies of depreciable properties. Depreciation accruals were equivalent to 3% of average depreciable plant cost for each of the years 1974 through 1978.

Revenues

Revenues are recorded when billed. Billings are rendered on a monthly or bimonthly cycle basis. The Company accrues estimated revenues for customers billed bimonthly in the month in which they normally are not billed.

The Company's tariffs for electric service include a fuel adjustment clause under which electric rates charged to most customers are adjusted to reflect changes in the average cost of fuels and of certain purchased power costs. The Company's tariffs for gas service contain a comparable clause.

Deferred Electric Fuel Cost Adjustment

The Electric Fuel Cost Adjustment represents the difference between actual fuel costs and the fuel costs allowed in the Company's base tariff rates. The Company, to achieve a proper matching of costs and revenues, defers this difference along with the related income tax effects to those future periods in which it will be billed to customers. The Company believes that the PSC will continue to permit the recovery of deferred fuel costs.

Federal Income Taxes

An accelerated depreciation method, together with depreciation lives which are shorter than those referred to under Depreciation, is used for income tax purposes. Interest, pensions, taxes, research and development costs, etc., which are charged to plant or accumulated depreciation for financial statement purposes, are deducted currently where permitted by the tax laws. AFC is not subject to income tax. Property taxes are deducted on a lien date basis. in contrast to the fiscal year basis used for financial statements. For these and similar reasons, taxable income is less than financial statement income,

The Company's general policy is to reflect as income tax expense the amount of income taxes currently payable; however, in certain cases provision is made for income tax effects of the differences between net income before income taxes and taxable income, as disclosed in Note 7.

The major items which are part of the deferred tax provision are as follows:

□ Income tax benefits resulting from reduced depreciation lives permitted by the Revenue Act of 1971.

□ Income tax benefits relating to deferred fuel cost. □ Starting in 1975, the additional benefits resulting from the investment tax credit increase from 4% to 10% are being deferred and amortized over the average book life of the related properties. The balance of deferred investment tax credit at December 31, 1978 and 1977 is \$28,341,000 and \$18,933,000, respectively.

One-half of the investment tax credits received under the Revenue Act of 1971 and, effective June 1976, the imputed income tax benefits resulting from the interest component of Shoreham AFC have been allocated to Other Income and Deductions, Effective February 1978, the portion of this credit generated by the construction at Shoreham has been transferred to Other Deferred Credits.

The Company established an Employee Stock Ownership Plan (TRASOP) which allows for additional investment tax credit to be claimed for tax purposes for the benefit of employees.

Research and

Development Costs Research and development costs of approximately \$3,400,000, \$1,800,000, \$700,000, \$1,200,000, and \$1,300,000 related to construction projects, for the years 1978 through 1974, respectively, were capitalized. Other research and development costs for the same years (approximately \$4,800,000, \$4,300,000, \$3,400,000, \$2,500,000, and \$2,200,000, respectively) were charged to expense. The Company's research and development programs are subject to PSC review.

Capitalization—Premiums, Discounts and Expenses Premiums or discounts and expenses related to the issuance of long-term debt are amortized over the lives of the issues.

Reserves for Claims and Damages

Losses arising from claims against the Company, from extraordinary storm losses, and from certain equipment damage are partially selfinsured. Provisions to the reserves are based upon experience, risk of loss, and/or specific orders of the PSC.

Note 2. Retirement Plans

Retirement plans consist of an insured group annuity plan and a supplemental trusteed equity annuity plan. The plans cover most employees. The costs related to the plans were \$10,732,000, \$9,712,000, \$8,370,000, \$7,556,000 and \$7,359,000 for the years 1978 through 1974, respectively. All pension costs are borne by the Company. The Company's policy is to fund the costs accrued. The actuarially computed value of the vested benefits at January 1, 1978 (the date of the latest actuarial valuation) exceeds the funds accumulated by approximately \$29,000,000, most of which was attributable to prior service. The total unfunded prior service cost at the date of the latest actuarial valuation was about \$27,000,000, which amount is being amortized principally over a 30-year period.

Note 3. Capital Stock

Of the 80,000,000 shares of authorized common stock. 994.799 shares are re-"served for sale to employees, 3,705,414 shares are committed to the Automatic Dividend Reinvestment Plan, and 567,027 shares are reserved for conversion of the Series I **Convertible Preferred** Stock at \$20.28 per share. The Series I Convertible Preferred Stock is not considered, under generally accepted accounting principles, to have a dilutive effect on earnings per share.

In December 1977, the Company refunded its 13% Series N Preferred Stock with the issuance of 7.50% Series Q Preferred Stock. In accordance with a PSC order, the cost of issuance of Series N was charged to **Retained Earnings and the** cost of issuance of Series Q and the \$8,000,000 call premium of Series N was charged to Capital Stock Expense and is being amortized and recovered in the Company's rates over seven years, the term of the Series Q issue.

Redemption of Series L, M, O, Q, and R Preferred Stock is provided for through varying sinking fund provisions, certain of which commence in 1979. The aggregate amount of preferred stock required to be redeemed in each of the years 1979 through 1983 is \$1,050,000, \$7,850,000, \$7,850,000, \$11,600,000, and \$11,600,000.

Note 4. Trust Obligations

The Company entered into arrangements with Tri-Counties Resources Trust (Resources Trust), in September 1977, and Tri-**Counties Construction Trust** (Construction Trust), in August 1978, providing for the Trusts to finance, respectively, the acquisition of the Company's nuclear fuel and its 18% share of construction and nuclear fuel . costs for Nine Mile Point Unit 2. The Resources Trust and the Construction Trust have revolving/credit arrangements providing for borrowings of up to \$75,000,000 and \$300,000,000, respectively. The Trusts may, with available funds not immediately needed for such financing. make certain investments. including investments in the Company's promissory notes. The Trusts' total obligation of \$189,603,000 at December 31, 1978, is comprised of \$165,503,000 for financing construction and nuclear fuel expenditures and \$24,100,000 utilized by the Company for general corporate purposes.

The Company is obligated to arrange to purchase nuclear fuel owned by the Resources Trust, or heat from such fuel, just prior to loading the fuel in the Company's reactors or upon termination of the Trust. Similarly, the Company is obligated to arrange to reimburse the Construction Trust for nuclear fuel and construction just prior to Nine Mile Point Unit 2 going into operation. The Resources Trust and the Construction Trust interest is calculated, respectively, at 110% and 105% of the prevailing prime rate (based upon the respective Trusts' borrowing arrangements). The Trusts' interest costs of borrowings utilized to finance construction and nuclear fuel is reflected in the Company's Construction and Nuclear Fuel in Trusts accounts.

interest rate (excluding commitment fees) for average borrowings of \$69,062,000 and \$32,577,000 outstanding during the year 1978 and the period September 21 through December 31, 1977, was 10.6% and 8.4%, respectively. Of the total outstanding borrowings, \$39,303,000 and \$32,577,000 related to general corporate purposes for the respective periods.

The Trusts' average annual

Note 5. Short-term Loans and Compensating Balances

The Company has authority from FERC to issue up to a total of \$200,000,000 in notes to banks and commercial paper. The Company has established bank

lines of credit totaling \$125,000,000 at December 31, 1978. Bank loans, most of which were obtained at 108% of the lending banks' prevailing prime interest rate, generally mature within 90 days. The Company, under informal arrangements, maintains compensating balances, which are not legally restricted, averaging 10% of the lines of credit or pays fees in lieu thereof. Net of average "float," compensating balances at December 31, 1978, amounted to approximately \$3,400,000. No bank loans were outstanding at either year-end.

Commercial paper is issued at various discount rates and usually matures within 30 to 45 days. No commercial paper was outstanding at either yearend. During 1978 and 1977, the maximum aggregate. amount of short-term borrowings at any one monthend was \$95,000,000 at August 31, 1978 and \$113,550,000 at July 31, 1977, and the daily averages of short-term borrowings were \$33,531,000 and \$51,652,000, respectively. The approximate weighted average interest rates (excluding the effects of compensating balances and lines of credit fees) on short-term borrowings were 7.6% and 5.8%. respectively.

Note 6. Commitments and Contingencies

The Company's expenditures for construction and nuclear fuel for the years 1979 through 1983 as estimated at December 31, 1978, total approximately \$2.1 billion and assume timely and adequate rate relief and financing.

Substantial commitments have been made for the Company's construction program, including commitments for the nuclear generating stations at Shoreham and Nine Mile Point Unit 2 which are under construction and for Jamesport and New Haven, respectively, for which regulatory approvals are pending. The Company has a 50% interest in Jamesport and New Haven, an 18% interest in Nine Mile Point 2, and is responsible for financing its respective share of each of the units.

The Company has, at December 31, 1978, expenditures for CWIP of \$979,966,000 for Shoreham, \$41,853,000 representing its 50% interest in Jamesport, \$101,653,000 representing its 18% interest in Nine Mile Point 2 and \$27,059,000 representing its 50% interest in New Haven and expenditures for nuclear fuel of \$67,689,000 relating to these projects. In addition to the \$27,059,000 referred to above, the Company has recorded in Other investments and deposits \$28,131,000 which together with the related nuclear fuel brings its total interest in New Haven to \$57,544,000 which is included in Accounts Payable on the balance sheet.

In 1978, the Company entered into additional agreements with Bokum **Resources Corporation (a Development Stage Com**pany) for the purchase of uranium concentrates. These agreements provide for loans to Bokum of up to \$51,100,000, (\$24,595,000 outstanding at December 31, 1978) and advanced payments of \$20,000,000, \$15,350,000 of which has been paid by the Company and the balance by New York State Electric and Gas Corporation. The loan bears interest at 10.5% and is secured by, among other rights, an assignment of leases and a mortgage on certain of Bokum's assets. The terms of the financing agreement provide for repayment of LILCO's loans by 1986. The Company has recorded its loans to Bokum in Other investments and deposits.

The Company has also entered into substantial longrange commitments for fuel and gas supply. (See pages 7-8 pertaining to nuclear fuel commitments.) ٠ĭ

There are currently pending in the Federal courts, before the U.S. Equal Employment Opportunity Commission and the New York State Division of Human Rights, complaints by employees alleging that the Company has discriminated against them on the basis of race. The Company believes it has meritorious defenses to these complaints, but it cannot predict the ultimate outcome of these matters.

Note 7. Federal Income Taxes

The Federal income tax amounts included in the Statement of Income differ from the amounts which result from applying the statutory Federal income tax rate to Net Income before income tax. The reasons are as shown below:

(In thousands of dollars)	1978	l	1977		1976		1975		1974	
•	I Amount I	% of Pre-tax ncome	F Amount li	% of Pre-tax ncome	Amount	% of Pre-tax ncome	l Amount l	% of Pre-tax ncome	Amountli	% of Pre-tax ncome
Federal income tax, per Statement of Income Current	\$ 7,297	\$	7,860		\$ 228		\$ 4,737		\$ (712)	
Included in other income and deductions (current)	(3,498)		(4,973)		(3,727)		(2,431)		(1,050)	
	3,799		2,887		(3,499)		2,306		(1,762)	
Deferred and other (See Note 1) Asset depreciation range system Fuel cost adjustments Investment tay credits	692 (3,604)	·	662 (1,309)		2,784 (1,074)	*	2,417 331		1,914 4,975	,
Tax Reduction Act of 1975 Other items, net	6,163		6,328 (2.025)		5,909 1,288		3,790 (1,286)		(1.845)	
	14,712		3,656		8,907		5,252	·	5,044	
Total Net income	18,511 141,993	1;	6,543 32,310		5,408 111,569		7,558 87,280		3,282 61,672	
Income Before Taxes	\$160,504	\$1	38,853		\$116,977		\$94,838		\$64,954	
Statutory Federal income tax Reductions in Federal income tax resulting from:	\$ 77,042	48.0%\$	66,649	48.0%	6\$56,149	48.0%	6\$45,522	48.0%	6\$31,178	48.0%
Excess of tax depreciation over book depreciation	(11,170)	(7.0) (10,967)	(7.9)	(7,775)	(6.7)	(8,052)	(8.5)	(8,336)	(12.8)
stitute taxable income	(31,765)	(19.8) (31,585)	(22.7)	(24,327)	(20.8)	(17,446)	(18.4)	(8,812)	(13.6)
but deducted currently	(10,142)	(6.3) (10,143)	(7.3)	(6,670)	(5.7)	(4,245)	(4.5)	(4,065)	(6.3)
ed on a lien date basis Investment tax credits Property tax amortization Other items, net	(2,266) (7,563) 4,375	(1.4) (4.7) (* 	(1,911) 10,257) 4,757	(1.4) (7.4) <u>3.4</u>	(3,775) (7,984) 	(3.2) (6.8) (0.2)	(2,803) (4,198) (1,900) 680	(2.9) (4.4) (2.0) 0.7	(1,432) (2,216) (1,900) (1,135)	(2.2) (3.4) (2.9) (1.7)
Total Federal Income Tax Expense	\$ 18,511	11.5%\$	6,543	4.7%	6S •5,408	4.6%	6\$ 7,558	8.0%	6\$ 3,282	5.1%

At December 31, 1978, the Company had an investment tax credit carryforward of approximately \$34,000,000 for financial statement purposes. In accordance with the Company's accounting policy, approximately \$22,000,000 of the carryforward will be deferred when utilized. These credits expire in 1985.

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Note 8. Replacement Costs (Unaudited)

In compliance with the reporting requirements of the Securities and Exchange Commission (SEC), the Company will disclose in its 1978 annual report to the SEC, on Form 10-K, its estimates of (1) the current cost of replacing (new) its productive capacity (plant) at December 31, 1978 and 1977, (2) the accumulated depreciation on such amounts at December 31, 1978 and 1977, and (3) the amount of such depreciation expense for the years ended December 31, 1978 and 1977. The impact of inflation has resulted in replacement costs of the Company's productive .capacity being significantly greater than historical costs of such capacity as reported in the financial statements and as currently recognized by the PSC in establishing rates.

Note 9. Segments of Business

The Company is a public utility operating company engaged in the generation, distribution, and sale of electric energy and the purchase, distribution, and sale of natural gas. The reportable items for electric and gas departments are:

		1978			1977	
(In thousands of dollars)	Electric	Gas	Total Company	Electric	Gas	Total Company
Operating Information (Year ended December 31): Revenue Expenses (excluding income tax)	738,339 573,589	\$160,632 133,114	\$ 898,971 706,703	\$ 682,997 544,837	\$141,083 120,464	\$ 824,080 665,301
Operating income (before income tax) \$ AFC and other Interest charges Income taxes—operating Income taxes—	64,750	\$ 27,518	\$ 192,268 46,268 78,032 31,480	\$ 138,160	\$ 20,619 :	\$ 158,779 44,512 64,438 23,171
Net income per accompanying Statement of Income			\$ 141,993			\$ 132,310
Other Information (Year ended December 31): Depreciation expense \$ Capital expenditures for construction and nuclear fuel	5 45,217 407,032	\$ 5,975 8,821	\$ 51,192 415,853	\$ 39,451 374,367	\$ 5,598 8,966	\$ 45,049 383,333
Investment Information (At December 31): Identifiable assets (a) \$ Nonutility plant Other investments (b) Assets utilized for overall Company operations	52,492,055 52,726	\$234,111 385	\$2,726,166 2,300 68,484 219,763	\$2,139,902	\$228,497 : 1,288	\$2,368,399 2,231 1,741 174,174
Total Assets			\$3,016,713			\$2,546,545

(a) Includes net utility plant and deferred charges (excluding common), materials and supplies, accrued revenues, gas in storage and fuel.

(b) Consisting of, in 1978, \$24,595,000 Bokum Resources Corporation, \$28,131,000 New Haven Units, \$385,000 subsidiary company, \$14,956,000 Tri-Counties Resources Trust, and \$417,000 other investments; and in 1977, \$1,288,000 subsidiary company, and \$453,000 other investments.

Note 10. Quarterly Financial Information (Unaudited)

(In thousands of dollars)	Operating Revenues	Operating Income -	Net Income	Income for Common Stock	Earned per Common Share
First Quarter		đ			
1978 1977	\$247,890 224,101	\$ 48,919 39,968	\$ 45,546 38,010	\$ 37,880 31,113	\$ 0.86 0.82
Second Quarter	····				
1978	203,259	34,339	29,539	21,854	0.49
1977	178,100	25,352	22,932	16,060	0.42
Thìrd Quarter					
1978	238,472	49,256	43,540	35,868	0.80
1977	225,124	42,341	42,196	35,342	0.84
Fourth Quarter					а 1
1978	209,350	28,274	23,368 /	15,703	0.32
1977	196,755	27,947	29,172	22,078	0.51

Electric Operating Income (In thousands of dollars)

	1978	1977	1976	1975	1974.	1973	1968
Revenues							
Residential	\$348,307	\$326,035	\$284,774	\$266,077	\$232,431	[•] \$165,681	\$ 93,037
Commercial and industrial	337,521	315,952	270,513	256,762	223,204	149,004	80,983
Street and highway lighting	12,743	12,817	12,619	12,472	10,869	10,025	7,987
Other public authorities	13,615	13,647	11,005	11,988 -	10,680	5,815	3,076
Otherutilities	921	1,287	543	725	731	283	938
Other	4,885	3,578	2,747	2,228	709	512	920
System revenue	717,992	673,316	582,201	550,252	478,624	331.320	186,941
Power pools	20,347	9,681	7,464	7,719	7,710	7,324	6,418
Total Revenues ·	738,339	682,997	589,665	557,971	486,334	338,644	193,359
Expenses	-						
Operations—fuel and purchased power	294,911	290,576	238,185	236,329	219,406	90,371	33,266
Operations-other	78,328	72,860	66,101	59,182	52,841	48,852	29,135
Maintenance	37,086	32,665	32,501	30,164	24,803	23,500	16,912
Depreclation	45,217	39,451	37,399	35,267	32,604	30,936	21,096
Operating taxes	118,047	109,285	100,102	91,326	79,925	69,725	37,635
Federal income tax—current	1,110	4,830	· (4,398)	5,655	(3,098)	5,021	11,628
Federal income tax-deferred and other	24,249	15,399	13,752	3,695	5,195	2,435	121
Total Expenses	598,948	565,066	·483,642	461,618	411,676	270,840	149,793
Operating Income	\$139,391	\$117,931	\$106,023	\$ 96,353	\$ 74,658	\$ 67,804	\$ 43,566

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Gas Operating Income (In thousands of dollars)

	1978	1977	1976	1975	1974	1973	1968
Revenues				······································			
Residential	\$ 21,098	\$ 18,672	\$ 17,734	\$ 16,672	\$ 14,988	\$ 14,293	\$ 12,389
Residential heating*	88,168	75,626	74,225	61,592	52,308	48,297	36,299
Commercial	19,109	19,868	16,244	13,771	13,512	11,986	8,666
Commercial heating* -	30,486	25,374	25.225	20,012	17,208	15,812	10,326
Other	286	80	18	46	27	20	6
System revenue	159,147	139,620	133,446	112,093	98,043	90,408	67,686
Other utilities	1,485	1,463	1,478	1,463	2,126	3,533	(1)
Total Revenues	160,632	141,083	134,924	113,556	100,169	93,941	67,685
Expenses	-						
Operations-fuel	70,396	59,889	- 54,522	44,126	31,310	28,643	20,336
Operations-other	26,056	24,429	23,162	21,538	18,984	18,330	13,885
Maintenance	7,574	8,270	6,975	7,000	6,346	6,281	4,313
Depreciation	· 5,975	5,598	5,338	5,448	5,368	5,247	4,281
Operating taxes	23,113	22,278	21,964	19,980	17,983	17,179	10,229
Federal income tax—current	6,187	3,030	4,626	(918)	°2,386	2,304	2,159
Federal income tax deferred and other	(66)	(88)	234	1,680	(151)	(411)	_
Total Expenses	139,235	123,406	116,821	98,854	82,226	77,573	55,203
Operating income	\$ 21,397	\$ 17,677	\$ 18,103	\$ 14,702	\$ 17,943	\$ 16,368	\$ 12,482

*In the heating classifications, the revenues shown cover all gas used, including nonheating use.

Common Stock Data

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305	S104.593	\$ 86 787	\$ 66 094	C 47 701	0 45 450	
670	40,399	34,437	28,949	23,565	\$ 45,150 22,370	\$ 33,781 18,153
2.44 1.68¼ 1.12	\$ 2.59 \$ 1.61 ¹ / ₄ \$ 18.70	\$ 2.52 \$ 1.54½ \$ 17.93	\$ 2.31 \$ 1.49 \$ 17.19	\$ 2.03 \$ 1.46 \$ 17.81	\$ 2.02 \$ 1.45 \$ 18.27	\$ 1.86 \$ 1.22 \$ 14.74
	670 2.44 .68¼ 2.12 267	2.44 \$ 2.59 .68% \$ 1.61% .12 \$ 18.70 267 130,018	570 40,399 34,437 2.44 \$ 2.59 \$ 2.52 .68¼ \$ 1.61¼ \$ 1.54½ 1.12 \$ 18.70 \$ 17.93 267 130,018 123,057	570 40,399 34,437 28,949 2.44 \$ 2.59 \$ 2.52 \$ 2.31 .68½ \$ 1.61¼ \$ 1.54½ \$ 1.49 .12 \$ 18.70 \$ 17.93 \$ 17.19 267 130,018 123,057 116,008	670 40,399 34,437 28,949 23,565 684 \$ 2.59 \$ 2.52 \$ 2.31 \$ 2.03 .68¼ \$ 1.61¼ \$ 1.54½ \$ 1.49 \$ 1.46 .12 \$ 18.70 \$ 17.93 \$ 17.19 \$ 17.81 267 130,018 123,057 116,008 102,251	670 40,399 34,437 28,949 23,565 22,370 684 \$ 2.59 \$ 2.52 \$ 2.31 \$ 2.03 \$ 2.02 .68¼ \$ 1.61¼ \$ 1.54½ \$ 1.49 \$ 1.46 \$ 1.45 .12 \$ 18.70 \$ 17.93 \$ 17.19 \$ 17.81 \$ 18.27 267 130,018 123,057 116,008 102,251 93,340

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Operating Ratios

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-	1978	1977	1976	1975	1974	1973	1968
Percent of Total Revenues							
Electric	82.1%	82.9%	81.4%	83.1%	82.9%	78.3%	74.1%
Gas	17.9	17.1	18.6	16.9	17.1	21.7	25.9
Percent of Electric Revenue							
Operations expense—fuel							
and purchased power *	39.9%	42.5%	40.4%	42.4%	، 45.1%	26.7%	17.2%
Operations expense—other	10.6	10.7	11.2	10.6	10.9	14.4	15.1
Maintenance expense	5.0	4.8	5.5	5.4	5.1	7.0	8.7
Total Operations and Maintenance Expense	55.5%	58.0%	57.1%	58.4%	61.1%	48.1%	41.0%
Operating Income	18.9%	17.2%	18.0%	17.3%	15.4%	20.1%	22.5%
Percent of Gas Revenue							
Operations expense—fuel	43.8%	42.5%	40.4%	38.9%	31.3%	30.5%	30.0%
Operations expense—other	16.2	17.3	17.2	18.9	18.9	19.5	20.5
Maintenance expense	4.7	5.9	5.2	6.2	6.3	6.7	6.4
Total Operations and Maintenance Expense	64.7%	65.7%	62.8%	64.0%	56.5%	56.7%	56.9%
Operating Income	· 13.3%	12.5%	13.4%	12.9%	17.9%	17.4%	18.4%
Percent of Total Operating Income Before Income Taxes						<u> </u>	
Electric	85.7%	87.0%	83.4%	87.2%	79.2%	80.5%	79.1%
Gas	14,3	13.0	16.6	12.8	20.8	19.5	20.9

Operations and Maintenance Expense Details (In thousands of dollars)

-							
	1978	1977	1976	1975	1974	1973	1968
Total payroll and employee benefits Less—Charged to construction and other	\$139,334 47,367	\$126,013 39,873	\$118,379 37,558	\$107,400 32,888	\$100,008 31,335	\$ 96,306 31,399	\$ 65,031 20,868
Charged to operations	91,967	86,140	80,821	74,512	68,673	64,907	44,163
Fuels—electric operations Fuels—gas operations Purchased power costs Electric fuel cost adjustment deferred	244,546 70,396 43,564 6,801	258,988 59,889 30,752 836	216,264 54,522 22,916 (995)	228,151 44,126 8,219 (41)	224,105 31,310 5,664 (10,363)	91,537 28,643 3,203 (4,369)	32,749 20,336 517 —
Total Fuel and Purchased Power	365,307	350,465	292,707	280,455	250,716	119,014	53,602
All other	57,077	52,084	47,918	43,372	34,301	32,056	20,082
Total Operations and Maintenance	\$514,351	\$488,689	\$421,446	\$398,339	\$353,690	\$215,977	\$117,847
Employees at December 31	5,442	5,381	5,444	5,446	5,426	5,477	5,495

Electric Operations

	1978	1977	1976	1975	1974	1973	1968
Energy—millions of KWh Net generation Power purchased and (sold)—net	12,739 980	12,710 889	12,450 868	12,854 159	12,795 (89)	13,438 (286)	9,904 (730)
Total system requirements Company use and unaccounted for	13,719 (1,282)	13,599 (1,225)	13,318 (1,326)	13,013 (1,301)	12,706 (1,285)	13,152 (1,094)	9,174 (904)
System sales Power pool sales	12,437 790	12,374 346	11,992 250	11,712 290	11,421 314	12,058 449	8,270 788
Total Sales	13,227	12,720	• 12,242	12,002	11,735	12,507	• 9,058
Peak Demand—net MW Station coincident demand Purchased or (sold)	2,899 98	2,994 113	2,566 153	2,597 335	2,553 246	2,607 322	2,117 (241)
System Peak Demand	2,997	3,107	2,719	2,932	2,799	2,929	1,876
Capability at Time of Peak—net MW LILCO stations Firm purchase or (sale)	3,842 126	3,709 121	3,727 136	3,727 89	3,457	, 3,199 9	2,382 (250)
Total Capability	3,968	3,830	3,863	3,816	3,457	3,208	2,132
Fuel Consumed for Electric Operations Coal—thousands of tons Oil—thousands of barrels Gas—thousands of mcf Total—billions of Btu Cents per million Btu Mills per kWh of net generation Heat rate. Btu per pat tWh	21,017 75 131,096 186.5¢ 19.20	20,669 1,980 130,904 197.9¢ 20.38 10.299	20,287 1,195 127,244 170.0z 10,221	21,142 1,227 131,135 174.02 17.75	20,773 3,444 131,414 170.5 2 10,271	21,695 6,279 140,075 65.3¢ 6.81	279 13,412 10,062 102,472 32.0¢ 3.31

Gas Operations

•	1978	1977	1976	1975	1974	1973	1968
Energy—thousands of mcf (1,000 Btu) Natural gas Manufactured gas and change in storage	44,611 19	44,103 · (11)	46,034 (77)	42,552 105	47,176 —	49,766 (69)	41,666 18
Total natural and manufactured gas Gas sold	44,630	44,092	. 45,957	42,657	47,176 (349)	49,697 (2,651)	41,684
Total system requirements . Company use and unaccounted for	44,630 (2,596)	44,092 (1,377)	45,957 (2,809)	42,657 (2,143)	46,827 (2,270)	47,046 (1,345)	41,684 (3,309)
System sales	42,034	42,715	43,148	40,514	44,557	45,701	38,375
Sales to other utilities					349	2,651	
Total Sales	42,034	42,715	43,148	40,514	44,906	48,352	38,375
Maximum Day Sendout—mcf (1,000 Btu)	303,844	340,684	325,836	273,100	301,500	326,600	281,100
Capability at Time of Peak—mcf per day Natural gas Manufactured, LP or LNG gas	303,485 142,300	326,500 148,300	326,500 148,300	328,900 148,300	314,700 153,300	304,800 180,300	265,600 78,400
Total Capability	445,785	474,800	474,800	477,200	468,000	485,100	344,000
Natural Gas Purchased Electric operations—thousands of mcf Gas operations—thousands of mcf Total Natural Gas Purchased	73 43,961	1,978 44,638	1,195 45,690	1,227 42,535	3,444 46,817 50,261	6,279 49,355 55,634	10,062 40,784
Degree Days (52-year average 5,098)	5,432	5,178	5,373	4,739	4,921	4,618	5,230

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Electric Sales and Customers	······································					· · · · · · · · · · · · · · · · · · ·	•
	1978	1977	1976	1 <u>9</u> 75	1974	1973	1968
Sales—millions of kWh							
Residential	5,559	5,620	5,486	5,334	5,185	5,540	3,714
Commercial and industrial	6,259	6,120	5,905	5,757	5,621	- 5,925	4,062
Street and highway lighting	188	189	190	182	187	182	147
Other public authorities	399	397	386	405	394	385	257
Other utilities	32	48	25	34	34	26	90
System sales	12,437	12,374	11,992	11,712	11,421	12,058	8,270
Power pool sales	790	- 346	250	290	314	449	788
Total Sales	13,227	12,720	12,242	12,002	11,735	12,507	9,058
Customers-monthly average	•			1			
Residential	798.288	791.808	784.359	776,178	766.612	754.396	686.381
Commercial and industrial	81,071	80.205	78.535	77.317	76,108	74.504	65.342
Others	4,014	3,881	3,882	4,027	2,790	2,707	2,960
Customers-monthly average	883,373	875,894	866,776	857,522	845,510	831.607	754.683
Total at Year-end	885,591	877,022	869,126	859,527	848,236	836,371	759,466
Residential		· · ·					
kWh per customer	6.964	7.098	6.994	6.873	6.763	7.344	5.412
Revenue per kWh	6.27e	5.80¢	5.19¢	4.99≠	4.48¢	2.99¢	2.51
Commercial and industrial					•		•
kWh per customer	77.204	76.309	75.197	74,455	73.849	79.528	62,170
Revenue per kWh	5.39e	5.164	4.584	4.464	3.97¢	2.52	1.994

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Gas Sales and Customers

	1978	1977	1976	1975	1974	1973	1968
Sales—thousands of mcf (1,000 Btu)							
Residential	3,386	3,396	3,390	3,368	3,359	3,305	3,256
Residential heating*	24,085	23,887	24,357	22,544	23,023	23,306	20,050
Commercial	5,790	6,762	6,376	6,282	9,431	10,192	8,205
Commercial heating*	, 8,773	8,670	. 9,025	8,320	8,744	8,898	6,864
System sales	42,034	42,715	43,148	40,514	44,557	45,701	38,375
Other utilities	. —		·	_	349	2,651	
Total Sales	42,034	42,715	43,148	40,514	44,906	48,352	38,375
Customers-monthly average	•						
Residential	219.062	219.930	220.769	221.602	222,413	224.352	236.872
Residential heating	137.486	137.580	137.724	137.461	136.110	133.098	110.607
Commercial	13,151	13.344	13.573	13.776	14.022	14.164	14.016
Commercial heating	17,324	17,469	17,499	17,587	17,780	17,910	14,420
Customers-monthly average	387,023	388,323	389,565	390,426	390,325	389,524	375.915
Total at Year-end	386,091	386,830	388,147	389,122	389,260	388,387	376,009
Residential							
mcf per customer	` 77.1	76.3	77.4	72.2	73.6	74.4	67.1
Revenue per mcf	\$ 3.98	\$ 3.46	\$ 3.31	\$ 3.02	\$ 2.55	\$ 2.35	\$ 2.09
Commercial		-					
mcf per customer	477.9	500.8	495.7	465.6	571.5	595.2	529.9
Revenue per mcf	\$ 3.41	\$ 2.93	\$ 2.69	\$ 2.31	\$ 1.69	\$ 1.46	\$ 1.26

"In the heating classifications, the sales shown cover all gas used, including nonheating use,

Balance Sheet (In thousands of dollars)	I					h., ,	
· · ·	1978	1977	1976	1975	1974	· 1973	1968
Assets Utility Plant Less—Accumulated depreciation	\$3,167,601 486,865	\$2,775,231 456,019	\$2,398,900 413,305	\$2,097,019 377,720	\$1,825,666 349,935	\$1,585,492 318,805	\$1,030,931 207,890
Total Utility Plant Other Property and Investments Current Assets Deferred Charges:	2,680,736 70,784 229,463	2,319,212 3,972 188,462	1,985,595 3,803 . 183,780	1,719,299 3,892 147,566	1,475,731 1,193 140,285	1,266,687 1,290 102,017	823,041 1,029 56,951
Other	27,599	19,967	18,775	17,091	7,548	4,942	1,921
Total Assets	\$3,016,713	\$2,546,545	\$2,207,721	\$1,902,621	\$1,639,489	\$1,379,305	\$ 882,942
Capitalization and Liabilities							ت ۲
Long-term debt Unamortized premium and discount on debt	\$1,175,662 89	\$1,100,375 1,628	\$1,015,375 2,602	\$865,000 2,475	\$735,000 2,614	\$650,625 2,754	\$430,250 1,665
Preferred stock Common stock and premium Capital stock expense	390,449 699,425 (28,321)	394,436 571,436 (27,110)	331,431 451,078 (18,397)	304,980 356,997 (15,180)	257,006 268,540 (9,919)	182,030 242,968 (7,226)	92,196 162,665 (4,994)
Retained earnings	311,838	279,157	242,147	209,524	187,537	174,550	110,223
Total Capitalization	2,549,142	2,319,922	2,024,236	1,723,796	1,440,778	1,245,701	792,005
Trust Obligations	189,603	30,000	_	-		<u> </u>	
Current Labilities	214,383	143,848	138,403	141,220	174,343	116,334	79,072
Deferred Credits: Accumulated deferred income tax reductions Other	49,926 7,213	42,835 2,008	35,264 2,640	27,519 3,171	19,891 .799	13,444 593	8,640 270
'Total Deferred Credits	57,139	44,843	37,904	30,690	20,690	14,037	8,910
Reserves for Claims and Damages	6,446	7,932	7,178	6,915	3,678	3,233	2,955
Total Capitalization and Llabilities	\$3,016,713	\$2,546,545	\$2,207,721	\$1,902,621	\$1,639,489	\$1,379,305	\$ 882,942
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Electric			. *			,	
Production (includes construction trust)	\$321,181	\$279,207	\$249,045	\$215,512	\$169,043	\$86,045	\$19,12
Transmission	31,865	39,788	27,466	. · 25,770 .	. 29,234	14,608	8,83
Distribution:			-		*		
New business facilities	9,537	10,871	9,907	9,497	11,195	11,457	12,78
Other facilities	16,566	15,400	15,753	17,923	23,712	23,463	17,21
General	2,716	1,502	2,016	936	1,810	1,389	45
Total Electric	381,865	346,768	304,187	269,638	234,994	136,962	58,41
Gas	·						-
Production and storage	483	- 525	486	ć 279	75	· 430	18
Transmission and distribution:			,			-	
New business facilities	1,559	1,083	303	530	^ 1,787	2,079	5,40
Other facilities	5,196	5,507	5,101	6,118	4,652	5,452	7,94
General	906	1,133	938	. 264	500	941	· 19
Total Gas	8,144	8,248	6,828	7,191	7,014	8,902	13,7
Common	•	-				,	
Operations centers				11	, 97	649	44
Other	3,999	4,404	3,110	4,615	2,070	4,232	2,58
Total Common	3,999	4,404	3,110	4,626	2,167	4,881	3,0
Total Construction Expenditures	\$394,008	\$359,420	\$314,125	\$281,455	\$244,175	\$150,745	\$ 75,1
Retirements of Utility Plant	\$ 23,420	\$ 7,002	\$ 10,387	\$ 17,400	\$ 8,787	\$ 10,607	\$ 10,0
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Directors William J: Cas Counsel to Roge William J. Catacosi Applied Digital Data ctron cted D

Edward C: Duffy Relired Vice Chairman of the B Long Island Lighting Company Winfield E. Fromm Group Vice Presiden Instruments and Syst Cutler Hammer, Inc.

Office

Charles R. Pierce Chairman of the Bo and Chief Executiv e Offic Nilfred O: Uhi Charles J. Davis Senior Vice President Engineering and Project Management

Management James W. Dye, Jr. Senior Vice President Operations: Transmissio Distribution and Purcha Frank C. Mackay Senior Vice President Commercial Operations Thomas H: O'Brien Senior Vice President Finance

Corporate Information

Executive Office 250 Old Country Ro Mineola, NY 11501 Transfer Agent; Common St Manufacturers Hanover Trust Company, 5, 4 New York Plaza New York NY 10015 Prefeired Stock 7 Citibank, N.A. 111 Wall Street, Box 330 New York, NY 10043 **Registrar** Common and Preferred Bradford Trust Company 2 Broadway New York, NY 10004

Nathaniel M? Giffen Chairman of the Boa and Chief Executive Sulfolk County Feder Savings and Loans

Lionel M. Goldberg Vice President John D: Maxwell Vice Chairman and Di Kollmorgen Corp. Vice President and Di Powers Chemco. Inc. Manufacturing system Robert G. Olmsted Island Capital C

Joseph G. Acker Vice President Transmission/Distribut Service Operations **Grant Brown** Vice Preside Employee F Matthew C: Cordaro Ira L. Freilicher Vice President Public Allairs John R: Gummersall, Vice President Operations and Construct John J. Russell Vice President

Andrew W. Wofford Project Managemer

Shareowners' Agent Automatic Dividend Reinvestment Plan Dividend Reinv 111 Wall Street, Box 3301, New York NY, 10043 %

Annual Meeting The Annual Meeting of Shareow ers will be held at the Company s Hicksville Operations Center, Hicksville NY, on April 17, 1979: 2,00p.m. In connection with this meeting, proxies will be solicited by the management: A notice of the meeting; a proxy statement and a proxy will be mailed to shareowners in March.

Charles R. Pierce Chairman of the Boar Chiel Executive Offic Long Island Lighting Eben W: Pyne Senior Vice Presiden Wilfred O. Uhl President

Phyllis S: Vineyard Director ulfolk C oluntary Nonprofit

Michael Czumak? Edward W. Eacker Raymond J. Forrer John J. Keamey, Jr Kathleen M. Brown

Edward M. Barrett General Counselies Edward J. Walsh, Jr. General Attorney Francis M. Walsh

orm 10-K Annual Report he Company will fumish as soon savailable, without charge a opy of the Company's Annual teport? Form 10-K, with exhibits, s filed with the Securities and xcharge Commission, upon ritter request to Mr. Spencer E-lughes, Jr., Manager, Investor delations, Long Island Lighting Company, 250 Old Country Road Aineola: NY 11501, The Company inficipates that the Form 10-K will available after April 9, 1979

Long Island Lighting Company 250 Old Country Road Mineola, NY 11501

Bulk Rate U.S. Postage Paid Hicksville, NY Permit No. 254