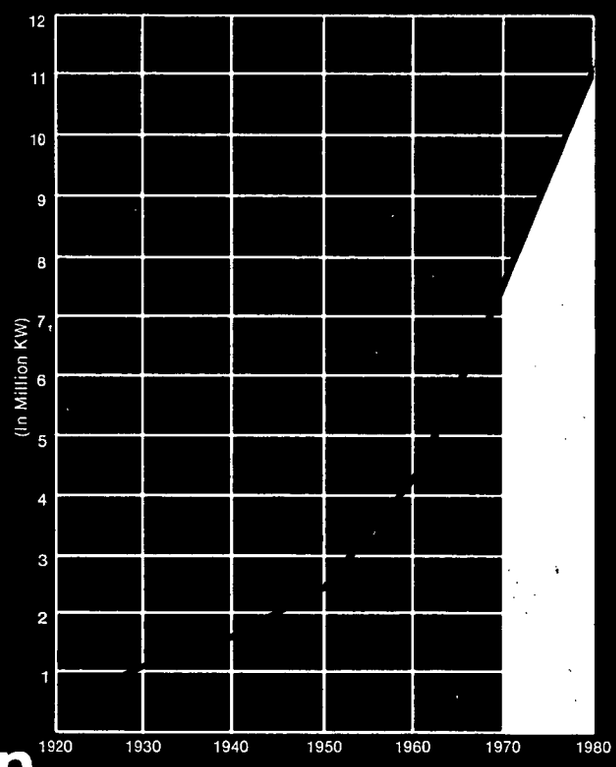

Con Edison 1969 Annual Report

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Highlights of 1969

	Year Ended December 31st	
	1969	1968
Revenues	**$1,028 million**	$ 982 million
Net income for common stock	**$ 93.1 million**	$ 95.7 million
Earnings per common share	**$ 2.47**	$ 2.57
Dividends per common share	**$ 1.80**	$ 1.80
Common stock outstanding	**39,161,774 shares**	37,290,409 shares
Book value per common share	**$30.90**	$30.41
Revenues and sales volume	**(in millions)**	(in millions)
Electric—30.3 Billion kwh (up 5.4%)	**$ 862**	$ 823
Gas —61.6 Billion cu. ft. (up 6.7%)	**110**	105
Steam —34.7 Billion pounds (up 6.0%)	**52**	50
Other	**4**	4
Taxes, other than federal income		
Local	**$ 190**	$ 177
State	**38**	35
Federal	**9**	8
Total	**$ 237**	$ 220
Utility plant, less accumulated depreciation	**$3,793 million**	$3,584 million
Construction expenditures	**$ 305 million**	$ 246 million
Employes	**23,428**	24,272

The Cover: We're growing—and how—as shown by this peak load chart for years past and future. Our peak loads will grow as much in the next 10 years (3,500,000 kw) as in the first 58 years of this century.

2
To the Stockholders
Earnings, dividends, applications for rate increases, improved sales, power supply problems and solutions, concern for the environment—these are the main parts of the Chairman's letter to stockholders.

4
Operations, Sales and Area Growth
Electric, gas and steam sales records—that's the 1969 sales story. Plus a few words on why we try to sell more electricity when we had trouble meeting peak loads some days last summer.

8
Power Supply
The summer of 1970 could be as tight as 1969. But five years from now we will have one of the most modern electric systems in America, with ample reserves. Also: where the 1970 construction dollars will go.

10
The Environment
Action reports on our concern for air, water, noise and beauty—all necessary concerns for a big, modern utility in the decade of the 70's. Even a new "in-house" critic of Company design policy.

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A supplement containing additional financial and operating data may be obtained by writing to the Treasurer's Office.

To the Stockholders:

For the first time ever in a single year, our gross revenues in 1969 exceeded $1 billion.

Electric revenues were up 4.7%, gas revenues 4.6% and steam revenues 4.9%. Average annual electrical use by Con Edison residential customers increased 214 kilowatt hours, tying 1968 for the largest increase in any one year. We had the most successful gas sales year in Company history, highlighted by a "Gas Rebellion" campaign that converted nearly 3,500 homes from oil to gas heat.

Nonetheless, earnings per share were down 10 cents because of large increases in state and local taxes, higher wages following the December 1968 wage settlement, higher interest rates and other effects of inflation. Increased tax rates alone were equivalent to 21 cents per share before Federal Income Taxes, or 10 cents per share after taxes.

In 1969 we paid dividends on our Common Stock at the same $1.80 per share level as in each of the previous four years.

Requests for Rate Increases

To combat erosion of earnings we undertook many economy measures including substantial reductions in personnel. In addition, we applied for electric rate increases averaging 15.3% and steam rate increases averaging 13.0%.

These rate increases, if approved, would increase gross annual revenues from the electric and steam systems by approximately $120 million, and produce a rate of return of 7% to 7¼% on our electric properties and 7½% on our steam properties. In 1969 our electric rate of return was approximately 5.5%, and our steam rate of return approximately 6%.

The New York State Public Service Commission commenced hearings on our application for electric rate increases November 18, 1969. It had not begun hearings on the application for steam rate increases by press time. Any rate relief granted would not be retroactive and, in the case of electric rates, the Commission has suspended any rate increase until August 15 unless the Commission acts earlier.

Power Supply

We were able to meet the demands on our electric system during the summer of 1969, but it was touch and go several hot days when air conditioning demand reached all-time peaks. We came through because of mutual assistance pacts with neighboring utilities, the cooperation of customers who reduced power use, and the heroic efforts of our work force in dealing with emergency situations. When "Big Allis," the one-million-kw generator at the Ravenswood plant developed a fault in the stator, industry experience indicated the repairs would require up to four weeks. Working around the clock our crews did the job in just 18 days.

We were in this difficult situation last summer for the same reason that many other electric utilities were in a similar situation: delays in completion of new plants. In our case, the critical delays were the one-million-kw Indian Point No. 2 nuclear plant and the two-million-kw Cornwall Pumped Storage Project.

Construction Delays

Indian Point No. 2 was purchased in late 1965, and under terms of a turnkey contract with Westinghouse was scheduled for completion June 1, 1969. We are now told by Westinghouse the plant cannot be on the line before the end of 1970.

Cornwall was proposed in 1962 for completion in 1967. Although Cornwall is in fact an example of good conservation, a number of conservationist organizations oppose it strenuously. Recently the Federal Power Commission Examiner, after an exhaustive study and analysis of evidence on the potential environmental and ecological effects of the plant, has reaffirmed that the Cornwall project conforms to sound conservation principles and rendered a decision approving construction of the plant. The earliest Cornwall could now be on the line is probably 1978.

Because of these delays, the summer of 1970 could strain our generating resources as much as the summer of 1969.

Revised Program

Also because of these delays we have been required to revise our construction program significantly. For example, we are adding 1.8 million kw of gas turbine capacity to have on the line as rapidly as possible. These units are designed for operation only at the hours of peak demand for electricity (presently about 150 hours per year). They are not

a substitute for base load generating plants, either nuclear or fossil.

While we are still putting our faith in nuclear plants as base load generation for the long term, we have been required by the nuclear delays to include two additional conventional units rated 800,000 kw capacity each, at the Astoria plant in Queens. They will be fueled by very low sulfur oil and, when available, by natural gas. These and other changes in our 10-year advance construction program have been reviewed and generally approved by the Bureau of Power of the Federal Power Commission and the New York Public Service Commission.

Despite these near-term power supply difficulties, within five years Con Edison will have one of the most modern generating systems in the United States, with ample reserve capacity.

A special section of this report discusses in some detail our strong efforts to deal effectively with air and water pollution and other environmental problems. We seek in every reasonable way to protect the environment.

Other Highlights

New sales policies in 1969 helped to produce record new sales. We have reorganized our gas operations to place them in sharper managerial focus. And we have taken steps to construct a liquefied natural gas facility which will produce and store liquefied natural gas for peaking purposes.

Another 1969 highlight was a further increase in minority employment and the extension of our job training program. Some 15.8% of our total work force is now composed of Black Americans, Spanish Americans and other minority groups—nearly double the 8.1% in 1966.

Most importantly of all for our Company's future, we completed the formation of our new executive team and the decentralization of our customer-oriented operations into six divisions. With the full cooperation of the many able and dedicated men and women who are Con Edison, we face the future with high confidence.

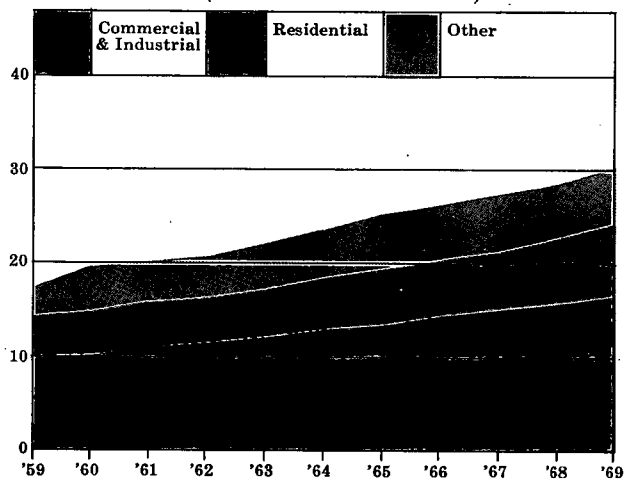
Sincerely yours,

Charles F. Luce

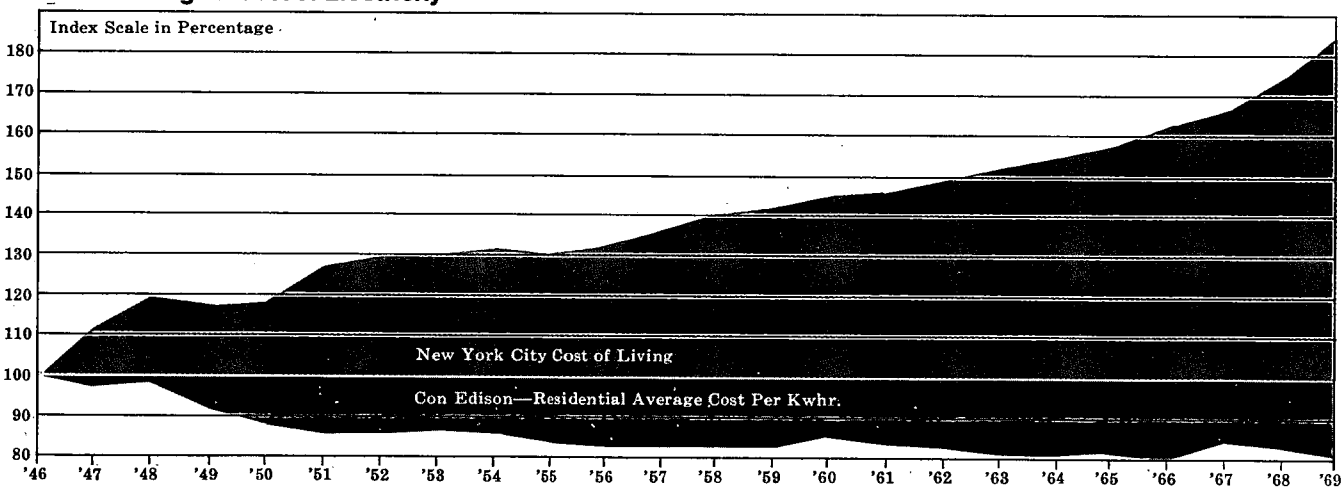
Charles F. Luce

Operation, Sales and Area Growth

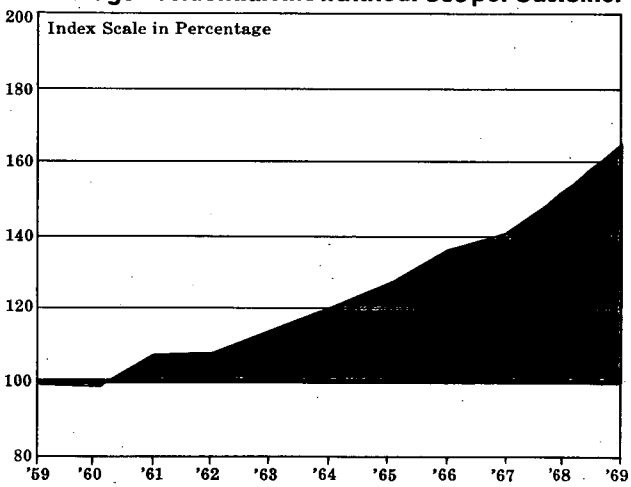
Electric Sales (billions of kilowatthours)



Cost of Living vs. Cost of Electricity



Average Residential Kilowatthour Use per Customer



Prize winning campaign:
To stop a thief, light a light.

Intensive sales efforts combined with normal load growth enabled us to sell more electricity, more gas and more steam in 1969 than ever before. Electric sales were up 1.5 billion kilowatt hours (5.4%), gas sales were up 3.8 billion cubic feet (6.7%), and steam sales were up 2.0 billion pounds (6.0%).

Why should we have a sales program for electricity when we had difficulty meeting peak loads on several days?

The answer is: *to balance load.*

Peaks and Valleys

Power use fluctuates enormously between day and night and between summer and winter. On the hottest summer day in 1969 peak demand on our system was 7,266,000 kw; that night it was only 3,411,000 kw, less than half as much, or a difference of 3,855,000 kw. Heaviest demand on a winter day in 1969 was 5,789,000 kw; that night demand fell to 2,288,000 kw, less than 40% as much, or a difference of 3,500,000 kw. The winter peak was only 80% of the summer peak.

Our sales strategy, therefore, is to encourage the use of electricity during the winter (electric heat) and at night (chiefly lighting).

Increasing off-peak consumption does not require additional investment in new plant facilities. Instead, it enables us to make better use of existing facilities, and to produce additional revenues at relatively small incremental cost for fuel and labor.

Gas—a Cleaner Fuel

We have a different reason for encouraging gas sales. Load balancing is not a problem in the case of gas because off-peak gas can be burned economically in our power stations to produce electricity. We advertise gas heating not only to increase gas earnings, but also because gas is a cleaner fuel than oil. One of the important benefits of our gas sales is that every oil furnace we convert to gas helps reduce New York City's air pollution problem. Oil still has more than 50% of the home heating market in our service territory—but we are gaining.

Last year, our "Gas Rebellion" program converted 3,440 one- and two-family houses from oil to gas. That's 2½ times as many as in 1968, and more than in any previous year! We converted 928 apart-

ment buildings to gas, half again as many as in 1968; our previous best year was 916 in 1960. Meantime, in new home construction in those areas where we have gas mains, Con Edison gas continued to outsell oil 99 to 1.

Electric Gains

As for electric heat, the total of 2,059 new dwelling units in 1969 isn't as big as we'd like, but the number is important for several reasons. It is twice as many new dwelling units with electric heat as in 1968, and far more than in any previous year. It represents 9% of new housing starts in 1969; the highest percentage of new starts in any previous year was 5% in 1968. We converted 740 dwelling units to electricity, three times as many as in 1968.

On the average, our residential customers increased their use of electricity by 214 kwhr per year to 2,950 kwhr, up 7.8% over 1968. That was nearly as much as our 8.5% increase in average use in 1968, and far better than the previous five-year average of 5.7%. In absolute numbers, it was identical to the 214 kwhr increase in 1968.

A prize-winning lighting campaign, "To Stop a Thief, Light A Light," contributed significantly to these gains. Some 23,000 private homes in our area were rewired in 1969—more than in any one year since our Adequate Wiring Program started in 1954. A low-cost customer financing plan introduced in 1968 for appliances and wiring no doubt contributed to our 1969 rewiring record.

City Growth

Our city continues to grow and modernize, assuring greater sales in the years ahead. More new office space, 16 million square feet, came into being in New York City in 1969 than in any previous year. An additional 45 million square feet of new office space is scheduled for completion by 1972. In the years since World War II more new office space has been added in New York City than in all the other cities of America combined.

The Port of New York Authority is constructing the world's biggest office building, the World Trade Center, including twin 110-story towers, with 11 million square feet and employment for 50,000 people. Land excavated for the World Trade Center is being used as land fill for part of the 115-acre Battery Park City, a "city within a city" to be built nearby. That project ultimately will house 55,000 people and provide employment for 35,000 more.

New York's face is being lifted all over town, not just Manhattan. Plans have been announced for a $500 million, 15-year development in the downtown Brooklyn business district. The heart of Jamaica, Queens, is scheduled for redevelopment into an impressive office, commercial and educational center. In the Bronx, some units are already completed in the 15,500-family Co-op City high-rise apartment project that dwarfs all existing urban residential developments. And, when completed, the Hunts Point Market will be the largest food trading center in the world.

Good Guys

Con Edison employees in their daily tasks have many opportunities to be good guys. The pictures at the right, all from The Daily News, show some examples.

Upper left: Con Edison's Harry Moore watches as his partner, Bill Leonard, hands wedding ring to a relieved bridegroom. A young bride removing her coat had knocked the ring through the grating into a Con Edison transformer vault.

Upper right: Jerry Morgan, Con Edison troubleshooter, hooks up emergency power line to the Brooklyn apartment of a young polio victim. Flooding had threatened to cut off power supplying the girl's portable respirator and iron lung.

Center left: Bob Nagler, utility mechanic with the Emergency Bureau, hands cat to its happy owner after a tree rescue mission. The cat appropriately was named—Nuisance!

Bottom: All those people are applauding Bob Nagler as he rescues Nuisance.

We get a lot of applause by mail, too, for our Good Samaritans who do all sorts of deeds from pausing to help fix a flat tire to stopping an armed thief—as well as for "thoughtfulness," "politeness," "efficiency," "patience," "courtesy," "pride in work" and "gentlemanliness" in the course of their regular jobs.

Applause for Con Edison crews to the rescue, be it a cat, a wedding ring or a polio victim

Power Supply

The summer of 1969 will be remembered as one when power supply was tight on the Con Edison system and other systems on the Atlantic Coast. Unfortunately, 1970 could be as tight.

By 1971, barring delivery delays, we will have 1.8 million kw of new gas turbine capacity and we should be out of the woods. Five years from now, when our conventional plant inside New York City at Astoria has been enlarged, and we also have substantial nuclear capacity on the line, we will have one of the most modern utility systems in America. Most of our old, smaller electric plants then will have been retired and no longer will be required even for emergencies.

Advance Planning

It wasn't lack of advance planning that caused our problems in 1969; the problem was execution. As far back as 1962, Con Edison engineers had predicted 1969's peak loads with remarkable accuracy. Permission had been sought to build the projects necessary to supply the 1969 peak loads, with ample reserve capacity. The Westinghouse Electric Corporation, which had contracted with us on a turnkey basis to build for us Indian Point No. 2, a nuclear plant with an initial rating of 873,000 kw, and to have it ready for commercial operations by June 1, 1969, found it could not meet the contract completion date. And numerous protesting conservation groups kept the two-million-kw Cornwall project tied up in litigation.

In an attempt to avoid the same problems of execution in the future, we have offered our 10-year advance construction program for official review by the Federal, state and local agencies concerned with power supply and protection of the environment. By year's end the staff of the Federal Power Commission and the New York Public Service Commission had given their general approval to this program.

Expenditure Forecast

Over the next five years, 1970-1974, we expect to spend about $2 billion for additions and improvements to our electric, gas and steam systems, of which a substantial amount is represented by firm commitments at December 31, 1969. This represents an increase of about $500 million over the five-year forecast 1969-1973. Most of the increase results from proposed expenditures for jet turbines and oil-fired generating capacity needed to fill the gaps in generating capacity caused by delay in completion of nuclear plants. Part of the increase results from revised estimates of price escalation.

In 1970, we will spend about $430 million for electric construction, plus $40 million for gas and steam and other facilities. Of the electric expenditures, about $253 million will be for generating plants, $143 million for distribution and transmission, and $34 million for substations.

In the category of generating facilities, jet turbines will take the biggest slice, $107 million. Nuclear projects will require about $90 million; most of this is for work on Indian Point nuclear units No. 2 and No. 3. Another $30 million will go toward our share of the two conventional oil-fired plants on the Hudson River, Bowline near Haverstraw, and Roseton near Newburgh, which we are building jointly with other utilities.

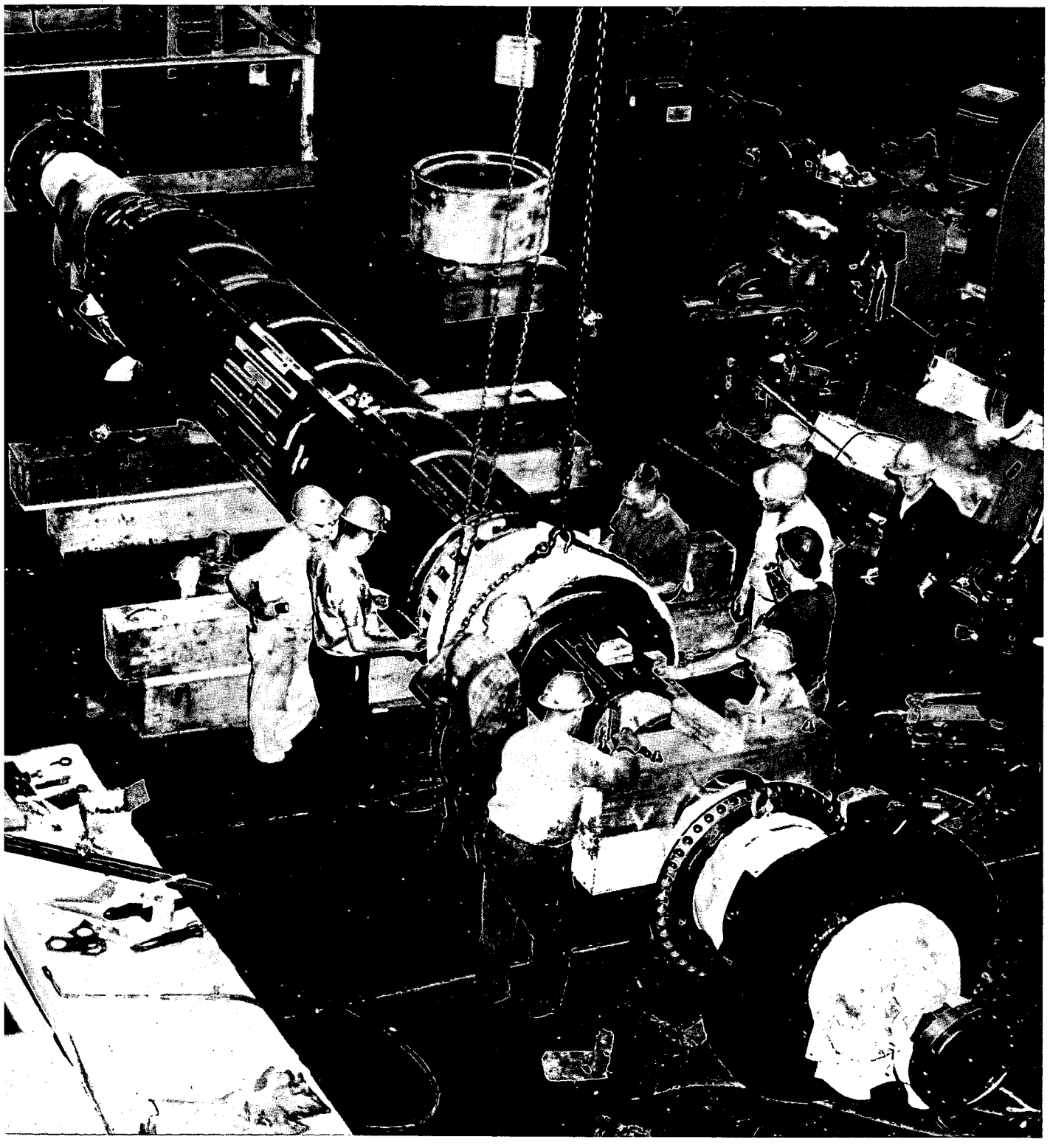
Progress on Interties

We can report important progress on our big interconnections with neighboring utility systems. Each of these ties will strengthen the reliability of the interconnected systems, and enable each of them to buy and sell larger amounts of economy energy.

At year's end, design was complete, materials were on order and right of way was being acquired for two of the lines which will be completed in early 1971. One is the tie between our 345,000-volt system and the 500,000-volt Pennsylvania-New Jersey-Maryland (PJM) System. The other is the 345,000-volt Southern Tier line connecting us at Binghamton, N.Y., with power generating sources in western New York and Pennsylvania.

Design work was nearing completion on the other two interconnections, the 345,000-volt cable under the Hudson River and a 345,000-volt line in Northern New Jersey, both linking Con Edison with Public Service Electric and Gas Company. These two ties, when completed in mid-1972, will be used not only for reliability and economy exchanges of power, but also will be part of our transmission system for delivering power from Bowline and Roseton to New York City.

Coping with big repairs like this
is part of the job of meeting the demands on our system



The Environment

Why should a utility annual report devote an entire page to a picture of a fishing boat? Actually, that isn't a fishing boat on the opposite page, although a fishing boat would serve equally well to symbolize Con Edison's concern for all aspects of the environment. It happens to be a New York University research boat collecting a sample of Hudson River biota. That's our Indian Point nuclear station in the background.

The action is part of a Hudson River Ecology Study which the N.Y.U. Institute of Environmental Medicine is doing for Con Edison in the vicinity of Indian Point. It is one of seven major environmental water studies our Company had underway in 1969, four of them completed. Five are concerned with the ecology of the Hudson River near Indian Point, a sixth with the Hudson fishery in the vicinity of the proposed Cornwall Pumped Storage Project, and the seventh with a thermal and fishery study of the East River at Astoria. An eighth study dealing with environmental conditions in Long Island Sound in the general area of Fort Slocum (David's Island) is in the planning stage.

Valuable Data

From these studies we are obtaining technical information with which we can better protect the environment as we meet the power demands of New York City and Westchester. For example, hydraulic and mathematical model studies of the Hudson River completed in 1969 led to a new design for a submerged discharge structure for cooling water from the three nuclear units at Indian Point. This will minimize the thermal effects of these plants.

These studies are also valuable for collecting basic research data and testing judgments. For example, results of the Cornwall area fisheries study, released in December 1969, confirm that a pumped storage project there would not have any significant adverse effect on fish life. That study was done under the control of a Policy Committee consisting of representatives of the New York State Conservation Department, New Jersey Division of Fish and Game, U.S. Bureau of Commercial Fisheries and the U.S. Bureau of Sport Fisheries and Wildlife.

Cleaner Air

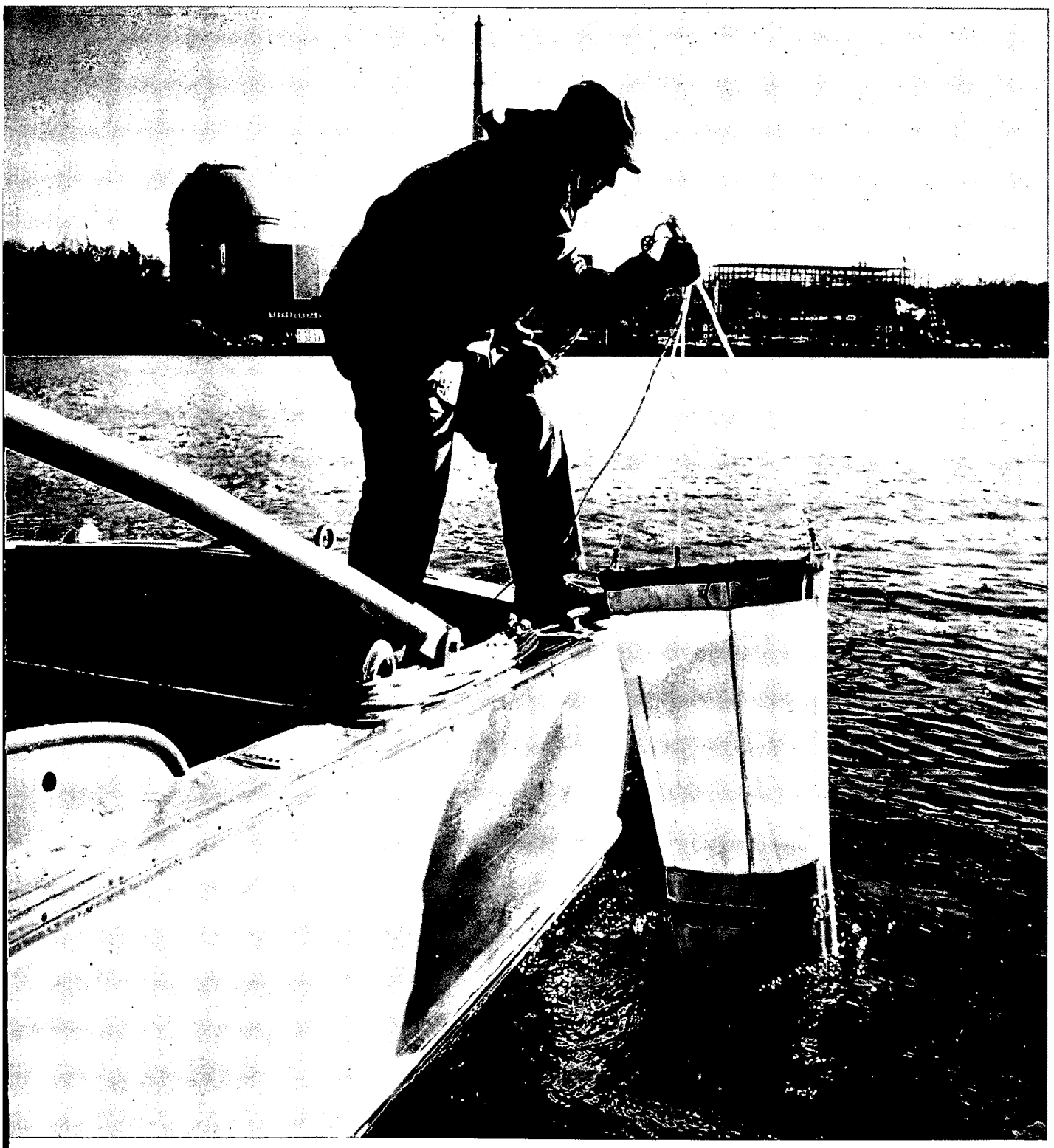
In the case of air pollution control, New York University's Department of Meteorology and Oceanography, Geophysical Sciences Laboratory, completed in 1969 a study of the plume rise and plume concentration of Con Edison's smokestacks inside New York City. The results, varying widely with wind speed and other meteorological conditions, have been made available to the city to help in the over-all fight for cleaner air. Con Edison's new Bureau of Environmental Engineering, established in 1969, has itself undertaken a study of gas turbine effluents. This is an especially important study in light of the heavy reliance we have been forced to place on gas turbine generators. And although Con Edison has cut by roughly one-half its emissions of sulfur dioxide and particulate matter, the Bureau continues to search for new methods to further reduce stack emissions.

Noise and Appearance

Noise also concerns Con Edison because of the nuisance and health effects on the community and the health effect on Company employees. So we study noise levels within our plants and at property lines, with a view toward cutting decibels and writing ever-better design specifications for new equipment and modification of old. Our studies have led to such improvements as changing the shape, material and dimensions of manhole covers, building noise barriers for transformers, and mounting generators on separate floating floors. We also make noise levels of equipment an important factor in choosing among manufacturers of otherwise comparable equipment. We are working directly with manufacturers to develop quieter circuit breakers and pavement breakers. Where noise might disturb our neighbors, we avoid scheduling work at night or Sundays if at all possible. Near the end of 1969 we established a special Company task force on noise control.

We are paying renewed attention to the appearance of our facilities. In 1969 we contracted with an architectural firm for work now underway to improve the appearance of our Astoria, Ravenswood and Arthur Kill stations. We retained a consulting landscape architect to supervise the right-

Scientist at work: taking a sample of Hudson River biota in vicinity of Indian Point



of-way clearing for our high voltage interconnection with the PJM system. At year's end we were in preliminary discussions with another firm of landscape architects for a Master Site Plan for Indian Point, and with an industrial design firm for an electric yard color study. Finally, and very importantly, we added to our staff an experienced architect to serve as Design Coordinator, a sort of in-house critic of Company design policy. His responsibilities to management include developing a basic design continuity for all project proposals, both new and renewal, and to oversee the integration of the Company's engineering, economic and environmental responsibilities into new design expressions. He will add a design dimension to our engineering economics that reflects concern for the total environment.

Job Training

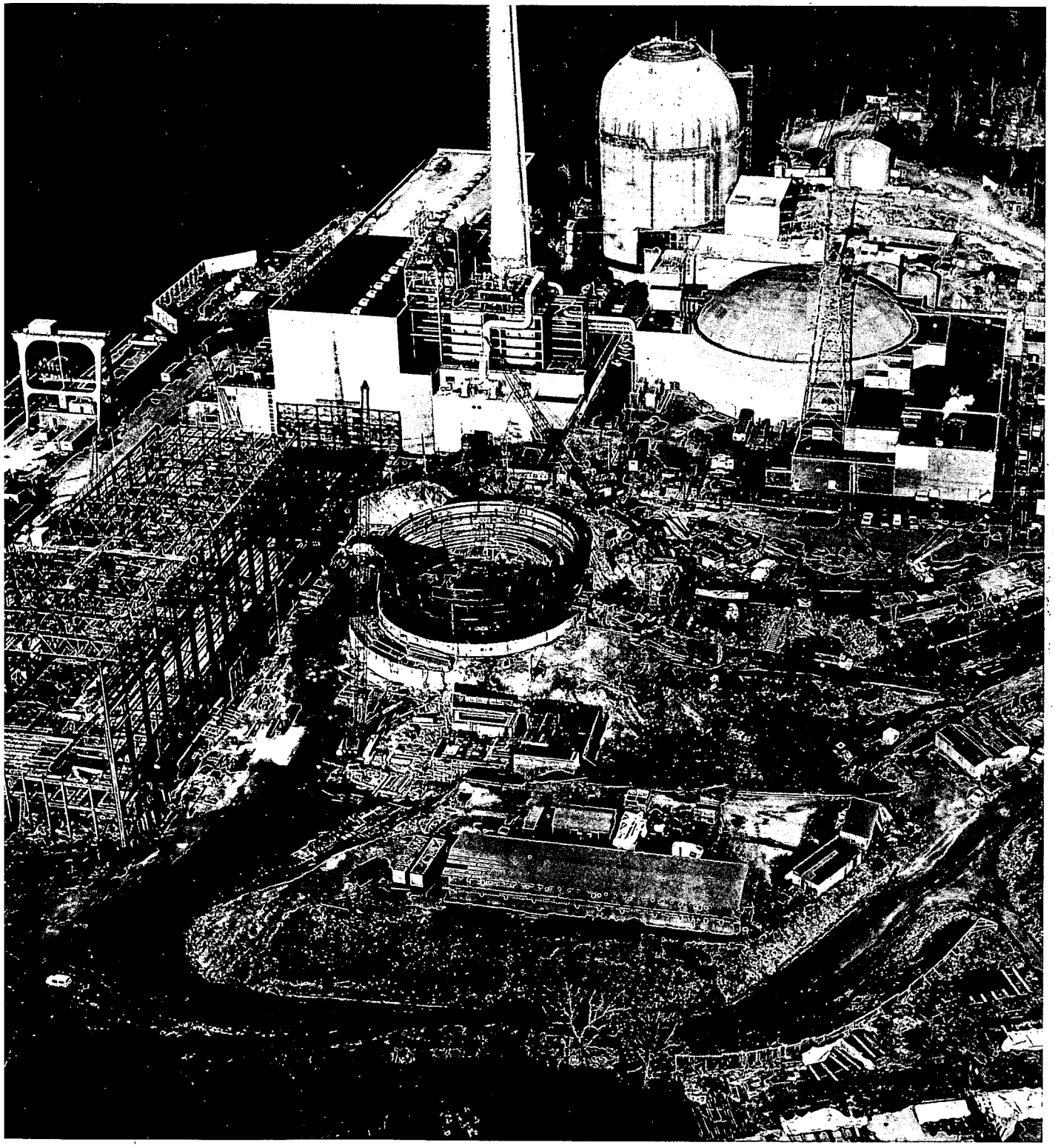
"They're first rate employees" is the word top management gets back from foremen and supervisors concerning graduates of Con Edison's "hard core" job training program.

In early 1969 we finished training the first 300 so-called "hard core" employees—certified as such by various government agencies—under an "MA-3" training program partially funded by the U.S. Department of Labor. The results were so favorable that in the fall we started training another 400 under a slightly revised "MA-4" training contract.

These youngsters generally were lacking in formal education, so an important part of their 26-week training period consisted of 180 hours in Con Edison classrooms, brushing up on basic math and basic English. As a result of these courses, several of our trainees have obtained their High School Equivalency diplomas, and all are more promotable.

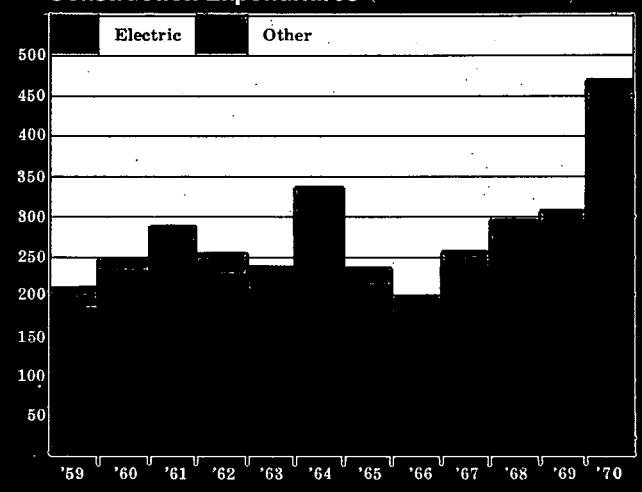
In the top photo at left a group of "MA-4" students hit the books under supervision of a Con Edison instructor. In center photo the whole family turns out to congratulate an "MA-3" graduate. At lower left a group of New York State legislators visit a training session.

Indian Point nuclear complex
during construction in December, 1969

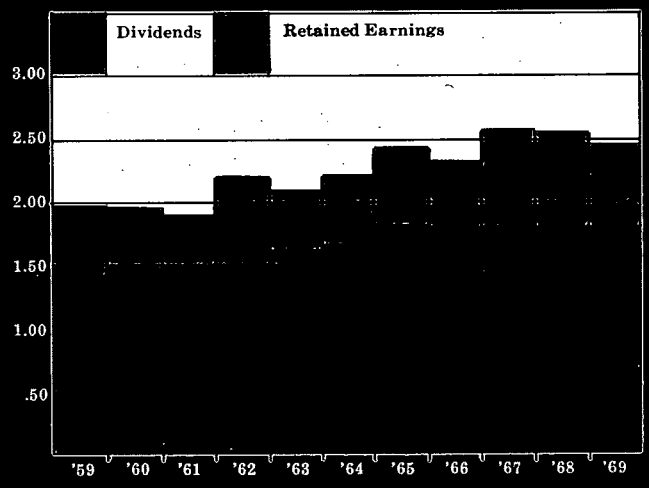
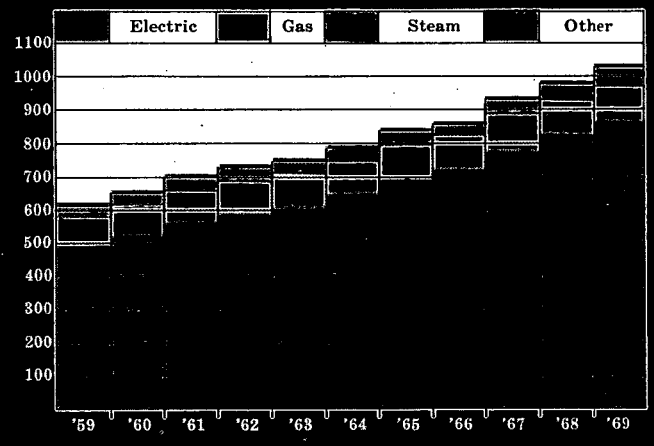


Financial Review

Construction Expenditures (millions of dollars)



Common Stock Record (dollars per share)



Operating Revenues (millions of dollars)