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Niagara Mohawk Power Corporation / Annual Report

790425 0420

# Highlights of 1978

	1978	1977	% Change
Total operating revenues	\$1,280,248,000	\$1,225,832,000	4
Income available for common stockholders \$	112,502,000	\$ 98,127,000	15
Earnings per common share	\$1.89	\$1.74	9
Dividends per common share	\$1.36½	\$1.31½	4
Common shares outstanding (average)	59,661,000	56,279,000	6
Utility plant (gross)	\$3,905,374,000	\$3,647,274,000	7
Gross additions to utility plant	\$ 316,280,000	\$ 289,931,000	9
Kilowatt-hour sales to customers	32,382,000,000	31,367,000,000	3
Electric customers at end of year	1,336,000	1,326,000	1
Electric peak load (kilowatts)	5,485,000	5,405,000	1
Natural gas sales to customers (cubic feet)	95,333,000,000	90,827,000,000	5
Gas customers at end of year	413,000	413,000	—
Maximum day gas sendout (cubic feet)	637,556,000	660,974,000	(4)

# Contents

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# Cover

Service representative Howard Blair, Jr. of Potsdam hastens out on night troubleshooting call, a typical assignment for him and the 400 other service reps who stand ready to respond to any consumer energy emergency in our area. A northern New York native who joined the Company 15 years ago, Howard takes personal satisfaction in working "out front" and helping our consumers on a person-to-person basis—in being counted on.

## DIVIDENDS PER COMMON SHARE

## EARNINGS PER COMMON SHARE (RESTATE)

## TOTAL OPERATING REVENUES

Dollars	Dollars	Millions of dollars
1978 \$1.36½	1.89	1,280
1977 \$1.31½	1.74	1,226
1976 \$1.22	1.57	1,077
1975 \$1.21	1.52	972
1974 \$1.19	1.48	831

# Our service area

Niagara Mohawk is one of the nation's leading investor-owned utilities, with the largest service area in New York State. Electricity from our massive system, extending from Lake Erie to New England's borders, to Canada and Pennsylvania, serves the electric needs of 1,336,000 customers. Our natural gas system serves 413,000 customers in central, eastern and northern New York, nearly all within our electric service area. Two Canadian subsidiaries, St. Lawrence Power Company and Canadian Niagara Power Company, Ltd., provide electric service to parts of southern Ontario. Our corporate headquarters is 300 Erie Boulevard W., Syracuse, N.Y. 13202.



- Electric Service Area
- Natural Gas Service Area
- Electric and Gas Service Area

Printed in U.S.A.

## Annual Meeting

The annual meeting of stockholders will be held on May 1, 1979 at the Company's principal office in Syracuse. A formal notice of meeting, proxy statement and proxy form will be sent to holders of common stock in early April.

## Transfer Agents

**Preferred Stock and Preference Stock:**  
Marine Midland Bank—New York  
2 Broadway, New York, N.Y. 10004

**Common Stock:**  
Morgan Guaranty Trust  
Company of New York  
30 W. Broadway, New York, N.Y. 10015

**Disbursing Agent**  
*Preferred, Preference and Common Stocks:*  
Niagara Mohawk Power Corporation  
300 Erie Boulevard West  
Syracuse, N.Y. 13202

**Stock Exchanges**  
*Common and Certain Preferred Series:*  
Listed on New York Stock Exchange

**Common Stock:**  
Also traded on Amsterdam (Netherlands), Boston, Cincinnati, Detroit, Midwest, Pacific Coast and PBW stock exchanges.

## Ticker Symbol: NMK

## Form 10-K Report

A copy of the Company's Form 10-K report filed annually with the Securities and Exchange Commission is available after March 31, 1979 by writing the Vice President and Treasurer at 300 Erie Boulevard West, Syracuse, N.Y. 13202.

The information in this report is not given in connection with the sale of, or offer to buy, any security.

## To our stockholders

Niagara Mohawk's earnings showed a noticeable gain over those of 1977—up 15¢ per common share to \$1.89 in 1978.

This improvement resulted principally from electric and natural gas rate increases, totaling \$35 million annually, effective July 8. Also influential were reduced maintenance costs and the continuance of tightened cost controls. These earnings reflect the fact that 1978 kilowatt-hour sales to our customers were 3% above those of 1977, while gas sales were up 5%.



John G. Haehl, Jr.

Because earning projections remained substantially below levels approved by the Public Service Commission in its July 1978 decision, we requested the Commission to reconsider the electric portion of the case and to approve a \$37 million, 31½% increase. This adjustment would have helped us achieve the revenue levels already approved by the Commission. Unfortunately, that was not to be. On February 8, 1979, the Commission considered our request at an open meeting. It is the Company's understanding that the Commission agreed to allow Niagara Mohawk a rate increase of approximately \$17 million, less than half our request. A formal opinion is expected by early March.

Based on our cost and revenue projections for the early 1980s, *but consistent with federal wage and price guidelines*, we are now proceeding with plans to file for electric and gas rate increases in spring 1979. Under most circumstances, nearly a one-year lead time must be allowed for the evaluation of our filing before new rates may be placed into effect. We must aggressively seek such rate adjustments to maintain earnings.

Most dramatic of all the cost increases affecting our business is the spiraling cost of constructing new electric generating facilities to meet long-term energy requirements in our service area. For example, the cost, including financing, of a nuclear-electric generating unit, about \$247 per kilowatt in 1969, has increased more than fivefold to approximately \$1,300 per kilowatt in 1978. Coal-fired plant construction costs have also multiplied drastically. The PSC has recently denied the combined effort of New York State utilities to activate Empire State Power Resources, Inc. (ESPRI) as an electric construction and generation company. This disappointing action precludes the financing cost savings ESPRI offered. In addition, ESPRI was expected to provide a single engineering, construction and management organization at cost savings over the now separate groups of each utility.

Discussed in some detail on page 6, the slowdown in upstate New York's economy and the impact of higher energy costs have resulted in the rescheduling of major power installations. At present, our planners estimate our 15-year electric growth at an average 2.4% annually, with even less growth through 1981, as against a 4.4% annual growth projection made in 1973. Despite the resulting decline in our construction program, we still estimate the need for \$635 million in capital expenditures over the next three years. The completion of a sixth generating unit at our Oswego Steam Station in 1980 will help assure our customers that we can meet their needs.

The five-year-old, costly saga of efforts by the Town of Massena to expropriate our electric distribution facilities dragged on as 1978 ended. Last fall, the New York State Court of Appeals ruled that Massena [representing only 0.2% of our electric sales] could condemn our properties under New York State Law and enter the electric distribution business. Months later, Niagara Mohawk continues to serve Massena while a condemnation commission begins its work and the

Town contends for temporary possession without any long-range assurance or confidence of success.

Elsewhere in our system, municipal takeover proposals are suggested from time to time. Recently, however, the diminished availability of low-cost, untaxed hydro power from the New York State Power Authority has discouraged all but the most zealous supporters of government ownership.

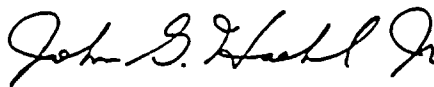
The once bleak outlook for natural gas supply brightened in 1978. Because of conservation, increased wellhead production and the advent of liquefied natural gas, we now have gas available to serve markets closed for years due to a lack of an assured supply. More widespread use of gas in homes, businesses and industries, stimulated by revised federal policies, will help reduce dependence upon expensive foreign oil. Use of natural gas instead of oil also carries environmental benefits. We have filed with the PSC tariff modifications to permit unrestricted sale and use of natural gas.

Early in 1979, we reported with gratification that our Nine Mile Point Nuclear Station achieved status in 1978 as the "Number One" boiling water reactor unit in the world. Designed and engineered by our own in-house technical talent, the nearly 10-year-old, 610,000-kilowatt unit operated 95% of the calendar year 1978. This surpasses the performance of any similar nuclear reactor in the world. More importantly, this outstanding nuclear performance saved upstate New York consumers many millions of dollars in energy costs. It offset the equivalent use of 7.3 million barrels of oil. More details on this "nuclear success story" are presented on page 8.

Construction financing requirements were met in 1978 by sale of \$40 million of 8.375% preferred stock, and \$50 million of 9½% mortgage bonds, both private placements, and a negotiated offering of 3.5 million shares of common stock. At year end, our short-term debt was only \$24 million. Permanent financing requirements for 1979 are not anticipated to exceed \$150 million, including receipts from common stock sales via the Dividend Reinvestment and Stock Purchase Plan and the Employee Savings Fund Plan.

We were especially pleased in December 1978 to raise the quarterly dividend on our common stock to 36¢ per share, thereby raising the indicated annual dividend to \$1.44 from the previous \$1.34. This adjustment, the fourth increase for our common dividend in six years, is in keeping with our pledge to provide our stockholders a fair return on their constantly growing investment.

As we enter this final year of the 1970s—a challenging, often traumatic decade for all in the electric and gas utility industry—each of us in management at Niagara Mohawk expresses gratitude to our stockholders and employees for their support and confidence.



John G. Haehl, Jr.  
President & Chief Executive Officer

February 21, 1979

# Financial review

In 1978, earnings were \$1.89 per share, up 15¢ over 1977 when fewer shares were outstanding. Total revenues were \$1,280 million in 1978, an increase of \$54 million or 4.4%. Contributing to the rise in revenues were increased sales, modestly higher rates and additional revenues from purchased gas adjustments. The tables on page 4 indicate changes in electric and gas revenues and sales.

## Electric

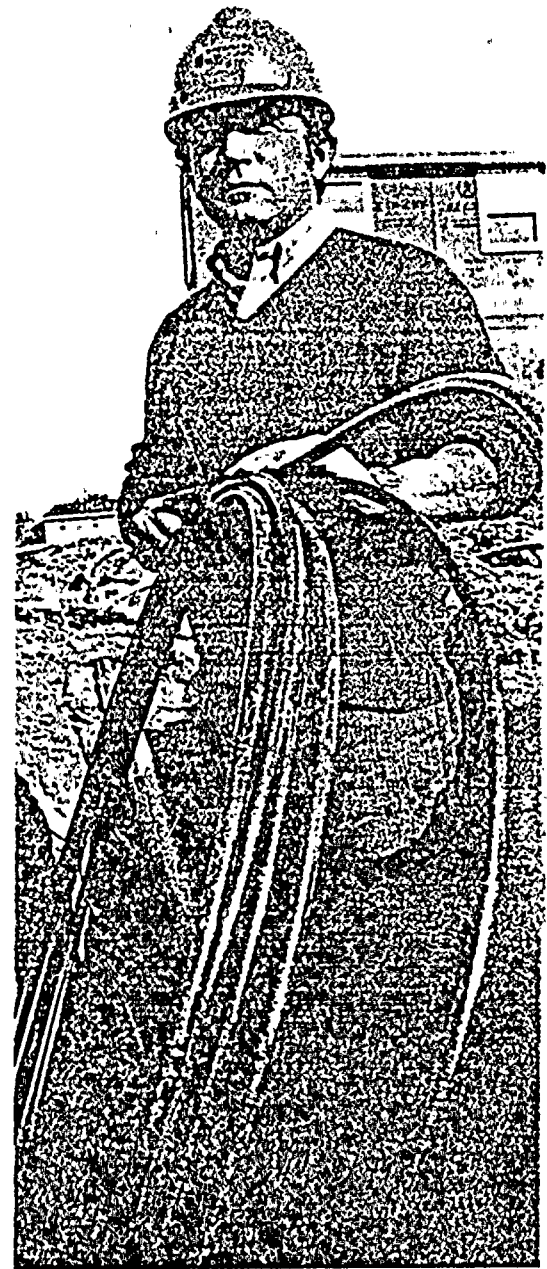
Niagara Mohawk's electric revenues increased \$33 million in 1978, reaching \$1,020 million following an increase of \$125 million the previous year. These revenues benefited from periodic rate adjustments including a \$28 million annual adjustment effective July 8, 1978. In a welcome reversal of trends, fuel and purchased power costs passed on to our customers through the Company's adjustment clause were lower in 1978, the re-

sult of a reduction in fuel costs. Electric sales to our customers increased 3.1%, surpassing the 2.8% rise in 1977.

Following the July 1978 rate increase, Niagara Mohawk filed an appeal with the PSC stating that the new rates would fall far short of generating the Commission-approved revenue levels. The Company emphasized that an additional \$37 million (3.5%) increase in rates would be essential to realize the approved earnings levels. The Company further pointed out that sales forecasts in the original rate case were based on projections made in 1976, more than 1½ years before the PSC decision, while actual sales in 1977 and 1978 proved to be much lower than anticipated. Unfortunately, Commission consideration of our request at a recent open meeting indicates agreement to grant less than half the Company's requested increase. A formal decision was anticipated by early March 1979.

About 10,000 customers were added to Niagara Mohawk's electric lines in 1978, bringing the total to 1,336,000 at the year end. Average price per kilowatt-hour paid by residential consumers rose from 3.85¢ to 3.93¢, up only 2% compared to the increase in the Consumer Price Index of 7.7%. It is worth noting that this is about the same unit cost as in 1936—more than 40 years ago. On December 18, 1978, the Company recorded a new electric peak load of 5,485,000 kilowatts, some 80,000 kw over the 1977 peak.

Total cost of fuel for electric generation leveled off in 1978 after a \$70 million increase in 1977. Our fuel costs were adversely affected in 1977 by the need to take Nine Mile Point Nuclear Station out of service for normal refueling and maintenance. However, in 1978 outstanding performance by the nuclear station served to stabilize fuel costs by reducing consumption



Gas mechanic Harvey Tennant has seen more than a few changes take place in the natural gas business since he joined the Company back in 1959. Installing plastic service laterals at a new Syracuse area housing development, Harvey is one of 700 who serve in Niagara Mohawk's gas operations. These professionals are always ready to meet the rugged and demanding tasks of maintaining safe, dependable gas service.

## ELECTRIC SALES

Millions of kw-hrs.

1978	32,382
1977	31,367
1976	31,402
1975	30,315
1974	29,011

## GAS SALES

Millions of cubic feet

1978	1,280
1977	1,226
1976	1,180
1975	1,134
1974	1,088

of more expensive fossil fuels. About one-third of Niagara Mohawk's electric sales is met by energy purchased from other electric systems. The unit cost of such "purchased power" has increased in each of the past two years.

### Natural gas

Natural gas revenues climbed \$22 million in 1978 and \$24 million in 1977 due largely to price increases allowed by the Federal Energy Regulatory Commission to Consolidated Gas Supply Corporation, our sole supplier. A Niagara

Mohawk rate adjustment of 3.3% (\$8 million annually) effective July 8, 1978 also contributed to the revenue increase.

In addition, gas sales registered a significant turnaround in 1978, increasing 5% to 95.3 billion cubic feet. This followed a 9.3% drop the previous year. The year-to-year reversal reflects the colder weather in 1978 following mandated energy curtailments during the first half of 1977. Gas customers numbered 413,000 at the end of both years. Average revenue per thousand

cubic feet (mcf) of gas for residential customers was 12¢ or 4.2% more in 1978 than in 1977.

### Other factors

Higher labor costs were the primary reason for the increase of \$10 million in "other operation expenses" in 1978 and \$14 million in 1977. Maintenance expenses for 1978 were \$4 million below those incurred in 1977 when \$18 million more in maintenance work was required at our steam generating stations and on our electric distribution system than in 1976.

ELECTRIC		Increase (decrease) from prior period In millions of dollars		Class of Service			
Revenues	1978	1977		% of total electric revenues	% increase from 1977 Electric revenues	Kilowatt-hours	
Increase in base rates .....	\$12.0	\$ 54.2		Residential .....	31	5	3
Fuel and purchased power cost increases .....	(2.6)	78.9		Commercial .....	33	2	4
Sales to ultimate consumers .....	19.6	13.8		Industrial .....	25	2	3
Sales to other electric systems .....	0.8	(24.0)		Municipal service .....	2	3	—
Miscellaneous operating revenues ..	2.8	1.8		<i>Total to ultimate consumers</i> .	91	3	3
	<u>\$32.6</u>	<u>\$124.7</u>		Other electric systems .....	6	1	5
				Miscellaneous .....	3	12	—
					100%	3	3

GAS		Increase (decrease) from prior period In millions of dollars		Class of service			
Revenues	1978	1977		% of total gas revenues	% increase from 1977 Gas revenues	Cubic feet	
Increase in base rates .....	\$ 2.2	\$ 8.2		Residential .....	61	5	1
Purchased gas cost increases .	9.8	27.9		Commercial .....	23	18	14
Gas sales .....	9.9	(12.2)		Industrial .....	13	11	5
	<u>\$21.9</u>	<u>\$23.9</u>		<i>Total to ultimate consumers</i> .	97	9	5
				Other gas systems .....	2	23	13
				Miscellaneous .....	1	13	—
					100%	9	5

### THE 1978 REVENUE DOLLAR AND WHERE IT WENT

In thousands of dollars	Change from 1977			In thousands of dollars	Change from 1977	
\$478,266	5%	37¢ Residential customers	Fuel for production of electricity	24¢	\$311,000	—
394,656	5	31¢ Commercial customers	Wages, salaries, employee benefits	14¢	177,459	6%
291,071	3	23¢ Industrial customers	Income and other taxes	14¢	173,076	4
116,255	5	9¢ All others	Gas purchased	12¢	158,229	11
			Interest and other costs—net	11¢	140,283	(3)
			Dividends to stockholders	9¢	109,921	10
			Electricity purchased	8¢	99,536	7
			Depreciation	6¢	80,683	5
			Retained in business	2¢	30,061	25





Federal and Canadian income taxes (net) rose \$2 million in 1978, attributable to increased earnings. In 1978 the Company changed its assumption regarding the deductibility for tax purposes of nuclear fuel disposal costs as described in Notes 1 and 9 to the Consolidated Financial Statements.

Real estate, revenue and other taxes were up by \$4 million in 1978 and \$17 million in 1977 because of property additions, higher tax rates and improved revenues.

The increase in allowance for funds used during construction—\$11 million in 1978 and \$13 million in 1977—resulted from additional construction work in progress and nuclear fuel in process.

A rise in the cost of capital and the issuance of additional securities to finance construction resulted in increases in dividend requirements on preferred stock, average number of shares of common stock outstanding and interest charges for both 1978 and 1977.

### Dividends

A higher quarterly dividend of 36¢ per share, payable December 31, 1978 to holders of common stock of record November 27, was declared in October. The previous 33½¢ dividend had been in effect since a 2½¢ increase in May 1977. It was the fourth dividend hike in the past six years.

The table below shows dividends per share of our common stock and quoted prices:

1978	Dividend paid per share	Price range	
		High	Low
1st quarter	\$ .33½	\$15¾	\$14½
2nd quarter	.33½	15	13¾
3rd quarter	.33½	15½	13¾
4th quarter	.36	14¾	13¾
	<u>\$1.36½</u>		
1977			
1st quarter	\$ .31	15¾	14
2nd quarter	.33½	16¾	14¾
3rd quarter	.33½	17¼	15
4th quarter	.33½	16¾	15
	<u>\$1.31½</u>		

### Financing

In December, Niagara Mohawk sold \$31.5 million of 9½% 25-year first mortgage bonds through private placement, with an additional \$18.5 million sold in February 1979. Last July, \$34 million of 7.75% series \$25 par value preference stock (1,360,000 shares) was sold to redeem \$30 million, 11.75% series \$100 par value preferred stock (300,000 shares) on August 31. The redemption price was \$111.75 per share, plus dividends accrued to the redemption date. In January 1978, we issued \$40 million (1,600,000 shares) of 8¾% series \$25 par value preferred stock.

In June, 3.5 million shares of common stock were sold publicly at \$14.25 per share. Throughout the year some 1.6 million shares were sold through our Dividend Reinvestment and Stock Purchase Plan and Employee Savings Fund Plan. Except for the preference stock sale in July, these transactions were made to finance our construction program.

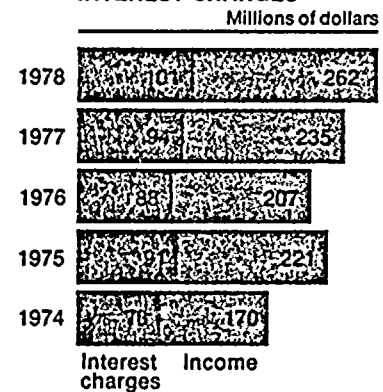
### Management study

Niagara Mohawk is in the third year of a PSC-ordered study of management and operations by an independent consulting firm, Arthur Young & Company.

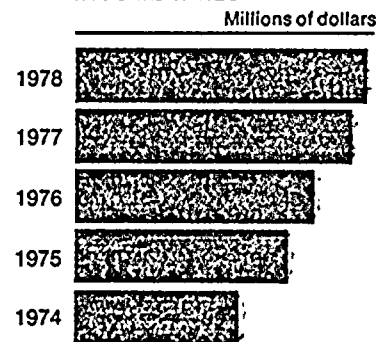
Phase Two of this study calls for implementation of mutually agreed upon recommendations presented by Arthur Young in Phase One. In some cases, Niagara Mohawk had initiated improvements which were later folded into the Phase One recommendations. Some of the recommendations will require considerable time to implement.

We are continually making other major reorganization efforts, such as the merger of the Information Systems Department into the Management Systems and Services Department. Improvements have also been made in the scheduling of maintenance work, budget reporting and project management.

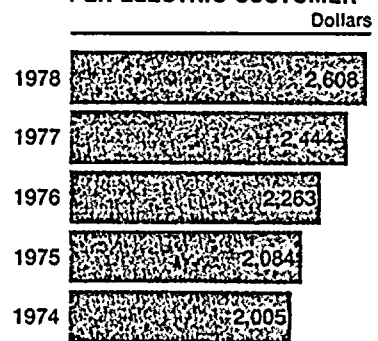
### INCOME (BEFORE INTEREST AND INCOME TAXES) AND INTEREST CHARGES



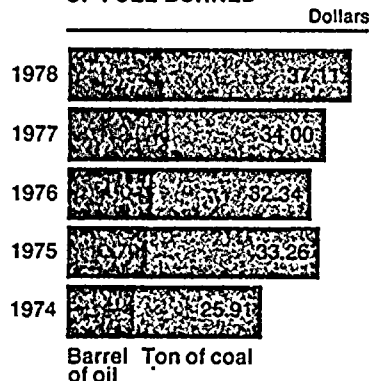
### TOTAL TAXES, INCLUDING INCOME TAXES



### AVERAGE GROSS ELECTRIC UTILITY PLANT PER ELECTRIC CUSTOMER



### AVERAGE COST OF FUEL BURNED



## A forward look at the '80s

Before the OPEC oil embargo and the onset of persistently high inflation and other economic ills, long-term growth in electric energy use was expected to average 4.4% per year in our service territory.

By the mid-1970s, new projections began to indicate a reduction in customer demand for electricity, the result of weakening economic trends, rising prices for primary energy and customer conservation. Niagara Mohawk and most other U.S. utilities have been affected, with present estimates in our service territory pointing to an average yearly growth of only about 2.4%.

From an energy supplier's standpoint, this change in outlook has added another facet to the already complex process of planning large, base-load generating units and related transmission facilities. One result has been the deferral of the

scheduled completion dates for major new generating units.

Despite the slowdown in growth, Niagara Mohawk must continue planning additional energy facilities for future needs. Substantial power projects—with long lead times—will be essential, even though current forecasts are below original estimates. Sufficient supplies of reliable electric energy *must* be available when needed to meet the expected growth in demand in our service territory.

### Construction programs

The next power producer to go on line in our system will be the \$300 million jointly owned (see page 7) 850,000-kilowatt Oswego Steam Station Unit No. 6 when it begins commercial operation in 1980. While Oswego area labor difficulties caused a three-month lag in its construction last summer, the unit

is about 75% complete. The main components, including boiler, turbine and generator assemblies, are all in place or being installed. We are also proceeding with plans to deliver oil by rail to a storage facility near the station in addition to the regular seasonally limited barge shipments via the St. Lawrence River to Lake Ontario.

Construction of this oil-fired addition began in late 1972, more than a year before the OPEC oil embargo. As a vital component of our diversified generation mix it will reinforce our ability to meet upstate New York's future needs for dependable electric service.

At the annual meeting last May, in light of revised load forecasts, Niagara Mohawk announced the rescheduling of two 850,000-kilowatt coal-fired units to be built near Lake Erie, south of Dunkirk, N.Y. These have been deferred until at least the late 1980s with about six years required for their construction. Thus far, the cost of environmental and engineering studies and public hearings on this project amount to \$15 million. Extensive data have been submitted the New York State Board of Electric Generation Siting and the Environment and a decision is expected in early 1979.

October 1984 is the new scheduled commercial date for Nine Mile Point Nuclear Unit No. 2 on Lake Ontario, jointly owned by Niagara Mohawk and four other New York State investor-owned utilities. Setbacks in construction, including new, unforeseen regulatory requirements and a summer-long work stoppage arising from Oswego area labor problems, are partly responsible for the new completion date. Delays in engineering, fabrication and delivery of main components also contributed to the postponement. Construction started in 1975 on the 1,080,000-kilowatt unit, which is now about 25% complete.

Richard E. Weegar, a 30-year veteran, is a chief operator in the upper Raquette River area. He looks out over the Adirondack foothills from the 24,000-kilowatt Stark Hydroelectric Station, one of our 81 hydro stations. Hydro power is more economical today than ever compared with oil or coal-fired generation. Dick follows in the steps of his father, who served Niagara Mohawk and predecessor utility companies for nearly 40 years.





Despite our best efforts to keep Unit No. 2's cost down, latest projections indicate a new total of \$1.35 billion, excluding financing costs, with Niagara Mohawk's share at \$553.5 million. In addition to spiraling inflation, increases stem from new requirements, largely involving reactor and piping systems, imposed by the U.S. Nuclear Regulatory Commission on all nuclear power projects. We are making every effort to contain or reduce costs over which we have some control such as ongoing design reviews, innovative construction techniques, work sampling and productivity analysis programs. These measures have already saved some \$68 million in the cost of the nuclear unit and will be pursued throughout the remainder of the project.

#### Uranium supply

Our uranium subsidiary, N M Uranium, Inc., owns half of a mining facility in southern Texas with United States Steel Corp., as operator, owning the other half. Production capacity was expanded in 1978 to 1,000,000 pounds per year. NMU's share of the output will be used to help assure supplies for our Nine Mile Point Nuclear Units No. 1 and 2. Initially, however, sales of production are expected in order to recover more quickly a portion of our investment, and thus reduce associated costs of financing (see Note 4 on page 17).

#### Shared generation

Arrangements negotiated by Niagara Mohawk and five other New York State utilities to share ownership of large upstate generating stations received final approval from the PSC in 1978. The stations are Oswego Unit No. 6, Nine Mile Point Nuclear Unit No. 2, and the 1,150,000-kilowatt Sterling Nuclear Station proposed near Lake Ontario in the neighboring service area of Rochester Gas & Electric Corp.

Niagara Mohawk has transferred 24% of ownership of Unit No. 6 to Rochester Gas and Electric, and the agreement calls for its output to be shared on the same basis.

Shares owned by participants in Nine Mile Point Nuclear Unit No. 2 include Niagara Mohawk 41%, Long Island Lighting Co. 18%, New York State Electric & Gas Corp. 18%, Rochester Gas and Electric 14%, and Central Hudson Gas & Electric Corp. 9%.

Shares of the projected Sterling unit will be Rochester Gas and Electric 28%, Niagara Mohawk 22%, Central Hudson 17%, and Orange and Rockland Utilities, Inc. 33%.

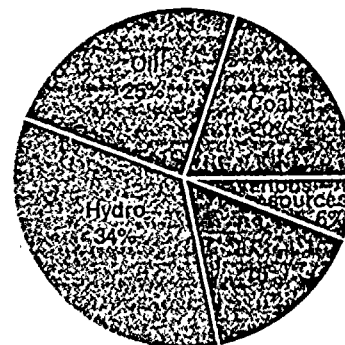
#### Hydro expansion

We also are moving to expand waterpower capabilities at sites long held by the Company to produce an additional 205,000 kilowatts for the Niagara Mohawk power grid by the early 1990s. Unexpected regulatory developments—particularly environmental regulations—are slowing our progress. Early in 1978 we filed with the Federal Energy Regulatory Commission for approval to replace the nearly 65-year-old, 2000-kilowatt, Granby Hydro Station on the Oswego River with a new 10,000-kilowatt plant, our first project in this hydro expansion.

Before the sudden upturn in oil and coal costs in the 1970s, new hydro power developments were not economically feasible. However, it is now possible to develop formerly uneconomic hydro sites at costs competitive with fossil-fuel generation. More than 70% of this new hydro capacity will be on the Hudson, with the remainder on seven other rivers in northern and central New York.

Key electric transmission lines, to keep pace with customer energy requirements in certain areas and to reinforce the dependability of power supply, were also completed in 1978.

ELECTRICITY GENERATED AND PURCHASED BY TYPE OF FUEL



# Decade of nuclear success

In 1979, we will observe the 10th anniversary of operation of our Nine Mile Point Nuclear Station Unit No. 1 on Lake Ontario.

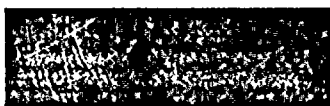
One of the first nuclear power plants to go on line in the U.S. and the first in upstate N.Y., this 610,000-kilowatt power producer has achieved an enviable record for safety, reliability and economy. It is also one of the first such units designed and engineered by a utility with its own engineering staff. Most nuclear plants operating in the U.S. today were designed by consulting engineering firms.

From commercial startup in December 1969 through 1978, Nine Mile No. 1 generated 29.4 billion kilowatt-hours. Producing this amount of power from fossil fuels would have required 48 million barrels of oil or 12 million tons of coal, resulting in substantially higher costs to consumers.

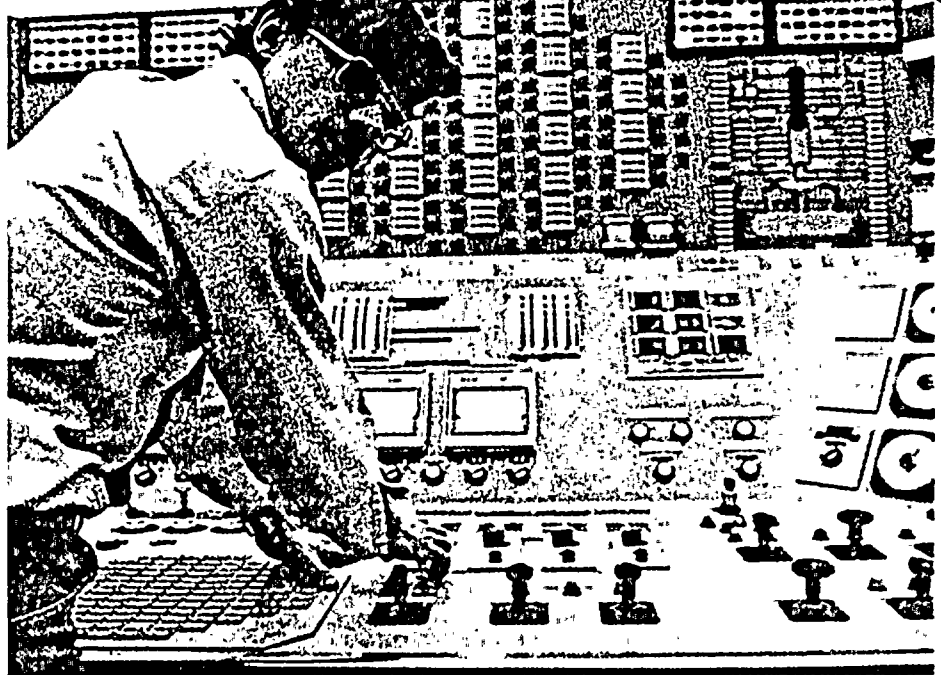
## World record

In 1978, the unit was on line and producing electricity more than 95% of the time, *the highest percentage of all boiling water reactors in the world.* It also achieved a thermal capacity factor (ratio of actual output to the maximum output from continuous plant operation at rated power) of 86%, a 1978 U.S. record for boiling water reactors. In 1978 alone, generating equivalent energy at an oil-fueled station would have required about 7.3 million barrels of oil at an added cost of about \$70 million.

**TOTAL GENERATING COSTS:  
FOSSIL FUEL VS NUCLEAR**  
Cents per kw-hr.



Includes fuel, nuclear decommissioning costs and other fixed charges, operation and maintenance for period Jan.-Dec. 1978



Stephen J. Domago, chief shift operator at Nine Mile Point Nuclear Unit No. 1, began his nuclear career in the U.S. Navy in 1965 and served with the submarine service prior to joining Niagara Mohawk in 1972. Manning control panels at Nine Mile Point, Steve earned his Reactor Operator's License six years ago from the Nuclear Regulatory Commission. Like the 37 other operators who have helped the unit achieve record performance levels, Steve attends periodic training programs in reactor physics and plant operations under NRC auspices.

One of the reasons for these accomplishments was our development of operating philosophies to cut back approximately 50% of the "down time" normally needed to refuel the reactor with uranium. Originally, the unit was designed for refueling yearly, but under new operating procedures, refueling is now required only once every 1½ to 2 years.

## Nuclear information

In recent years, misinformation, confusion and unwarranted mistrust about nuclear-electric energy have become increasingly widespread. To counter anti-nuclear efforts and to help foster improved public awareness of the many advantages nuclear energy offers con-

sumers, we have intensified information activities in the communities we serve. In the past year, through our volunteer Speakers Bureau presentations, with a special team of trained speakers, we have reached an audience of thousands.

Additionally, our Company representatives meet frequently with government leaders, and a broad selection of material on nuclear technology is distributed to schools, various community groups and the news media. Our public Energy Information Center at Nine Mile Point attracts thousands of visitors each year. They see an interesting and educational program including varied exhibits on nuclear power.

# New energy sources—constant search

Our pursuit of alternate energy sources and new methods of preserving the environment is expanding in both scope and diversity. As 1979 began, we were engaged in 51 separate research and development programs. We have been authorized by the Public Service Commission to spend some \$65.3 million as recoverable operating expense on research over the next five years, with most programs linked to conserving energy and preserving or improving our air, land and water quality.

## Fuel cells

In a joint research project we have been pursuing for years, fuel cells are showing increasing promise as viable energy producers. Fuel cells are a space-age development on which we are working jointly with United Technologies Corp. and eight electric utilities. We expect to place a 9,600-kilowatt unit on line in our system in 1988, while a 4,800-kilowatt demonstrator is currently scheduled for startup in 1980 by Consolidated Edison Company of New York, Inc., another participant, at a Manhattan generating site.

## Wind power

Last year also saw the experimental application of a "Darrieus" type windmill to the operation of an electric generator—our third wind study in upstate New York and our fourth overall on a national level. Resembling a giant eggbeater, the prototype is mounted on a silo to determine the possible use of this type of device to produce supplemental kilowatts on a working farm. Clarkson College, Potsdam, is managing the effort, with joint participation by Niagara Mohawk and seven other private industries.

## Solar

Niagara Mohawk is also involved in solar research at the State University of New York Alumni House and Conference Center at the Albany campus. This project com-

bines modern heat pumps, monitors and computing equipment with the latest in solar technology. During the Center's first year of operation, energy from the sun helped substantially to meet heating needs and reduce electric demand; although payback on the solar/heat pump system's initial investment will take many years.

## Environmental research

A research venture offering long-range environmental gains involves the proposed installation of a pilot "scrubber" on the stack at our Huntley Steam Station on the Niagara River. Targeted for startup in 1981, this pioneering project's dual objective is to allow large power stations to burn lower-cost Eastern coal while producing comparatively less pollution. Better control of sulfur dioxide emissions is a nationwide priority for all electric utilities.

## Olympic village

The Company is project manager of a forward looking energy study planned in connection with the 1980 Winter Olympic Games at Lake Placid. This research venture holds significant promise for the entire electric utility industry. Under study will be five identical buildings to house more than 1,000 Olympic athletes and officials. Each of the dormitory-type structures will be equipped with a different thermal energy storage system for comparative space heating tests under similar conditions. Our aim is to collect data for eventual application to utility supply systems in future years.

The test site will eventually become the Ray Brook Correctional Facility. It is being built by Congressional authorization to serve initially as the Olympic Village (see back cover). The program will get under way in February 1980 when Winter Games contestants begin occupying the dormitories, and it will continue full scale through

1982. After the Olympics, the village will be converted to a minimum security institution operated by the U.S. Bureau of Prisons.

The experiment, estimated to cost more than \$2 million, is jointly sponsored by the U.S. Department of Energy, N.Y. State Public Service Commission, N.Y. State Energy Research and Development Authority and the nationwide Electric Power Research Institute.

The equipment behind Dr. Roosevelt A. Fernandes, associate senior research specialist and program manager, R&D Department, is part of a 4,800-kilowatt fuel cell prototype under laboratory test. Roosevelt, who earned his Ph.D. in electrical engineering at Vanderbilt University, holds patents for various electric controls he invented. He joined our research staff in 1973 and directs "in-house" projects and joint studies, including this pioneering fuel cell venture.



## Service to our consumers



Archie Martin, left, consumer relations representative, interviews retired couple in kitchen of their home as he makes computations in our energy audit program for customers. Such informal sessions are helping our consumers cut back on energy costs and upgrading energy efficiency across our service territory. Archie, who joined the Company in 1965, expects to receive his B.S. degree in electrical engineering from the State University of Buffalo in 1979. He has attended evening classes for the past eight years.

### Gas supply

The improved natural gas supply outlook enabled us to remove some restrictions on new sales and to seek additional gas markets in 1978. The Company has filed an application with the PSC to completely reopen our gas markets.

Increased quantities of gas, including liquefied natural gas from Algeria, have become available from Consolidated Gas Supply Corp., our wholesale source. Conservation efforts by our customers have also contributed to the more favorable supply outlook.

In 1978, 3,582 permits were issued to qualified applicants for gas service in residential, commercial and industrial categories. Those applying must meet certain insulation and energy-conservation standards. Commercial and industrial applicants requesting more than 25,000 mcf yearly require approval by Consolidated Gas and the Public Service Commission.

The improved supply situation also helped stimulate some economic expansion in our service territory, creating 560 new jobs and placing area industries in a more competitive position, compared with industries in other states. Although gas costs are certain to go up, in part because of recent federal legislation, gas will still remain competitive with other fuels in terms of costs, convenience, and environmental benefits.

In October 1978, we filed with the Public Service Commission for approval to change to "therm" measurement billing for gas service. Conversion to a heat-content basis from the customary cubic-foot volume billing is desirable as the Company begins to receive a

mixture of U.S.-produced and Algerian-imported gas from our supplier. The imported gas contains about 10% more heat energy per cubic foot than the domestic variety, requiring that bills be calculated on the number of therms used instead of cubic feet consumed.

### Consumer Advisory Council

As we approach the 1980s, one of our most effective contacts with our customers is our Consumer Advisory Council on Energy Affairs, a "grass roots" concept initiated in 1977. This all-volunteer group, with 26 members from across our service territory, represents a cross-section of consumer interests. Organized to advise us on consumer/utility matters, its primary objective is to provide a means of two-way communications regarding any of our operations, procedures and policies.

Meeting each month, the Council offers us valuable advice and insight on consumer relations and public information activities, particularly those affecting consumers directly. The group consists of retired persons and representatives of industry, small business, labor unions, consumers and the clergy. Among the first such groups to be formed in the U.S. by a utility, in only two years the Council's suggestions have produced tangible results in helping us to better understand our customers' requirements and respond to their needs. Guest speakers at Council meetings have included the Chairman of the Public Service Commission, leaders of anti-utility and anti-nuclear organizations, as well as top Company management—all to give Council members a balance of in-

formation on issues and controversies.

### Energy audits

Under the State's newly enacted Home Insulation and Energy Conservation Act, Company representatives are conducting energy-efficiency audits of customer homes throughout our service area. Our consumers themselves are also participating in the audits on a self-help basis by completing questionnaires.

In addition to the audits, we provide lists of local contractors who will undertake energy-conservation measures such as insulation, weatherstripping, storm windows and doors and the like. At the same time, consumers are advised how to obtain low-interest loans for financing the work. Loans, ranging from \$200 to \$3,000 for improvements on one-, two-, and three-family homes, have repayment options extending up to seven years.

### Other consumer programs

To serve consumers better on an individual, more personal basis and help them solve their own special energy problems, a number of innovative programs and activities are under way. These include a winter referral program for hardship cases, strengthening interrelationships with various social service agencies and maintaining lists of customers requiring electrically operated life-support medical equipment. Also included are a convenient budget payment plan, third-party notification plan for customers who may need help, 24-hour follow-ups where disconnections occur and testing home energy-conservation devices for safety and efficiency.

### MONTHLY RESIDENTIAL ELECTRIC COST—500 KW-HRS.

Niagara Mohawk \$21.01

N.Y. State average (not including N.M.) \$32.23

National average \$22.68

Includes fuel and PASNY Credit adjustments as applicable.

\*NMPC Rate Dept. 12/31/78

\*\*Edison Electric Institute Survey 10/1/78

# Our "backbone"—employees, stockholders

## Employees

Our overall work force numbered 9,300 at the end of 1978 and 1977, about the same as 20 years ago, when we had approximately 300,000 fewer customers.

Yearly wage increases of 6.9% and 7.1%, effective June 1, 1978 and 1979, respectively, were part of a two-year contract signed with 12 locals making up System Council U-11 of the International Brotherhood of Electrical Workers (AFL-CIO). The agreement also included improvements in certain employee benefits such as retirement, vacations, life insurance, and changes in health and accident insurance. Some 7,400 represented employees are covered by the contract.

Employee orientation, management development, technical instruction and consumer services training are provided by our Training Department, centralized in

Helping our telephone contact personnel brush up on their customer relations skills, briefing new employees on how the Company functions, instructing newly promoted supervisors on management techniques—such varied teaching assignments are all part of Ann Branigan's day as training specialist. Ann began her career with the Company as a steno-clerk in 1969. Upon expanding her qualifications through studies at Syracuse area colleges, she shifted to instruction when the Training Department was formed in 1974.



1976 and now performing more functions than ever. During 1978, new formal training programs were introduced at our fossil-fueled generating stations and in our gas operations. We continue to emphasize training in all operations to further upgrade the quality of our service as well as employee performance and productivity.

Company contributions to the Employee Savings Fund Plan amounted to \$2,994,000 during 1978. Some 6,500 or 74% of all eligible employees are subscribers, allocating from 2% to 6% of their wages (matched 50% by the Company) toward the purchase of Niagara Mohawk common stock or U.S. Government securities. The Plan holds 5,062,000 shares or 8% of the outstanding common stock. Employees may also make additional, unmatched contributions of up to 4% of their wages.

In 1978, we renewed insurance providing coverage for Niagara Mohawk and subsidiaries against obligations incurred as a result of indemnification of officers and directors. The coverage also insures the officers and directors for liability against which they may not be indemnified by the Company or its subsidiaries. This insurance obviously does not protect against a dishonest act or breach of trust. The insurance, authorized by the Business Corporation Law of New York, was purchased from National Union Fire Insurance Co. for a term from January 1, 1979 to January 1, 1982 at an annual premium of \$65,000.

We sadly note the death on February 7, 1979 of Edmund H. Fallon, distinguished member of our Board of Directors since June 1965. Mr. Fallon was retired executive vice president and chief executive officer of Agway, Inc. and a leader in national and state agricultural affairs.

## Stockholders

Our stockholders now number about 216,000 with 204,000 holding common shares and 12,000 owning preferred and preference stock. As shown by the chart below, many stockholders own less than 100 shares.

Size of holding (Shares)	Total stockholders	Total shares held
1 to 99	61,100	2,081,282
100 to 999	136,500	30,842,736
1,000 or more	6,400	29,256,259
	204,000	62,180,277

## Dividend Reinvestment Plan

Another year of growth was noted for our Dividend Reinvestment and Stock Purchase Plan. The Plan purchases newly issued stock directly from the Company without incurring brokerage commissions or service charges. These purchases are made from the reinvestment of dividends and optional cash payments from participants.

Some of the funds the Company requires to meet its financing needs are provided by the Plan. In 1978, about 25,000 participants, representing 12% of all common stockholders, invested \$10,139,000 in new common shares.

Starting January 1, 1979, the Company assumed the responsibility for administration of the Plan. At the same time, preferred and preference stockholders became eligible to participate and optional cash contributions were increased to \$5,000 quarterly. Initiated in 1973, this Plan was previously administered by the Morgan Guaranty Trust Company of New York. We will be glad to provide application forms and literature describing the Plan on request. Correspondence should now be addressed to:

NMPC Dividend Reinvestment Plan  
P.O. Box 131  
Syracuse, N.Y. 13201



# Consolidated Statement of Income and Retained Earnings

NIAGARA MOHAWK POWER CORPORATION AND SUBSIDIARIES

	<i>In thousands of dollars</i>				
For the year ended December 31,	1978	1977	1976	1975	1974
<b>Operating revenues:</b>					
Electric .....	\$1,020,313	\$ 987,760	\$ 863,012	\$795,917	\$671,246
Gas .....	259,935	238,072	214,218	176,289	159,564
	<b>1,280,248</b>	<b>1,225,832</b>	<b>1,077,230</b>	<b>972,206</b>	<b>830,810</b>
<b>Operating expenses:</b>					
<b>Operation:</b>					
Fuel for electric generation .....	311,000	311,185	241,040	223,095	136,983
Electricity purchased .....	99,536	93,019	99,297	86,533	122,476
Gas purchased .....	158,229	142,071	124,811	94,960	86,900
Other operation expenses .....	181,995	166,297	152,759	136,470	127,100
Maintenance .....	80,759	84,536	66,171	58,724	59,753
Depreciation (Note 2) .....	80,683	77,113	77,629	69,228	63,055
Federal and Canadian income taxes (Note 9) .....	31,123	22,124	17,896	14,630	(4,050)
Other taxes .....	152,550	148,989	131,817	113,997	102,248
	<b>1,095,875</b>	<b>1,045,334</b>	<b>911,420</b>	<b>797,637</b>	<b>694,465</b>
<b>Operating income</b> .....	<b>184,373</b>	<b>180,498</b>	<b>165,810</b>	<b>174,569</b>	<b>136,345</b>
<b>Other income (net):</b>					
Allowance for other funds (total funds 1976 and prior) used during construction (Note 1) ...	28,971	21,660	20,711	29,376	27,373
Income tax refunds (Note 9) .....	—	—	8,986	—	—
Income tax and other items (net) (Note 9) .....	13,235	3,645	1,251	2,153	528
	<b>42,206</b>	<b>25,305</b>	<b>30,948</b>	<b>31,529</b>	<b>27,901</b>
<b>Income before interest charges</b> .....	<b>226,579</b>	<b>205,803</b>	<b>196,758</b>	<b>206,098</b>	<b>164,246</b>
<b>Interest charges:</b>					
Interest on long-term debt .....	99,874	91,563	87,270	84,018	66,080
Other interest .....	1,573	2,892	1,039	7,285	11,659
Allowance for borrowed funds used during construction (Note 1) .....	(16,030)	(12,484)	—	—	—
	<b>85,417</b>	<b>81,971</b>	<b>88,309</b>	<b>91,303</b>	<b>77,739</b>
<b>Income before cumulative effect of accounting change</b> .....	<b>141,162</b>	<b>123,832</b>	<b>108,449</b>	<b>114,795</b>	<b>86,507</b>
<b>Cumulative effect of accounting change (Note 3)</b> .....	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>9,406</b>
<b>Net income (Note 3)</b> .....	<b>141,162</b>	<b>123,832</b>	<b>108,449</b>	<b>114,795</b>	<b>95,913</b>
Dividends on preferred stock .....	28,660	25,705	23,546	19,430	15,082
<b>Balance available for common stock</b> .....	<b>112,502</b>	<b>98,127</b>	<b>84,903</b>	<b>95,365</b>	<b>80,831</b>
Dividends on common stock .....	81,261	74,033	65,642	56,590	49,444
Retained earnings for the year .....	31,241	24,094	19,261	38,775	31,387
Miscellaneous charges (Note 7) .....	(1,180)	—	—	—	—
Retained earnings at beginning of year .....	337,834	313,740	294,479	255,704	224,317
<b>Retained earnings at end of year</b> .....	<b>\$ 367,895</b>	<b>\$ 337,834</b>	<b>\$ 313,740</b>	<b>\$294,479</b>	<b>\$255,704</b>

<b>Average number of shares of common stock outstanding (in thousands)</b> .....	59,661	56,279	52,731	47,089	42,032
<b>Per average share of common stock:</b>					
Balance available for common stock before cumulative effect of accounting change .....	\$ 1.89	\$ 1.74	\$ 1.61	\$ 2.03	\$ 1.70
Cumulative effect of accounting change (Note 3) ..	—	—	—	—	\$ .22
Balance available for common stock (Note 3) ....	\$ 1.89	\$ 1.74	\$ 1.61	\$ 2.03	\$ 1.92
Dividends paid .....	\$ 1.36½	\$ 1.31½	\$ 1.24	\$ 1.21	\$ 1.18

( ) Denotes deduction.

# Consolidated Balance Sheet

NIAGARA MOHAWK POWER CORPORATION AND SUBSIDIARIES

At December 31,	<i>In thousands of dollars</i>	
	1978	1977
<b>ASSETS</b>		
Utility plant, at original cost (Note 4 and Page 21) .....	\$3,905,374	\$3,647,274
Less accumulated depreciation and amortization (Note 2) .....	1,021,417	935,212
	<b>2,883,957</b>	<b>2,712,062</b>
Other property and investments .....	14,535	15,584
<b>Current assets:</b>		
Cash, including time deposits of \$5,595 and \$1,275, respectively .....	10,786	6,579
Accounts receivable (less allowance for doubtful accounts of \$2,000 and \$1,500, respectively) .....	127,219	121,855
Income tax refund claims (Note 9) .....	—	8,391
<b>Materials and supplies, at average cost:</b>		
Coal and oil for production of electricity .....	70,232	79,942
Other .....	29,736	26,367
Prepayments .....	4,383	5,152
	<b>242,356</b>	<b>248,286</b>
<b>Deferred debits:</b>		
Unamortized debt expense .....	13,848	14,375
Deferred recoverable energy costs (Note 3) .....	27,966	24,951
Other .....	6,450	3,796
	<b>48,264</b>	<b>43,122</b>
	<b>\$3,189,112</b>	<b>\$3,019,054</b>

## LIABILITIES

### Capitalization (Note 7):

#### Common stockholders' equity:

Common stock—\$1 par value; authorized 85,000,000 (65,000,000 in 1977) shares; issued 62,180,277 shares and 57,122,641 shares, respectively .....	\$ 62,180	\$ 57,123
Premium on capital stock .....	646,878	581,473
Capital stock expense .....	(10,977)	(8,194)
Retained earnings (Page 13) .....	367,895	337,834
	<b>1,065,976</b>	<b>968,236</b>
Preferred stock (Page 22) .....	408,600	366,400
Long-term debt (Page 21) .....	1,414,997	1,394,387
<b>Total capitalization</b> .....	<b>2,889,573</b>	<b>2,729,023</b>

#### Current liabilities:

Short-term debt (Note 5) .....	24,000	39,200
Long-term debt due within one year (Page 21) .....	10,450	10,250
Sinking fund requirements on preferred stock (Page 22) .....	1,800	1,800
Accounts payable .....	86,854	79,031
Customers' deposits .....	4,902	4,734
Accrued taxes .....	22,184	18,680
Accrued interest .....	28,605	27,760
Accrued vacation pay .....	13,228	11,757
Other .....	8,385	6,320
	<b>200,408</b>	<b>199,532</b>

#### Deferred credits:

Income tax refunds (Note 9) .....	21,606	19,721
Other .....	10,945	9,106
	<b>32,551</b>	<b>28,827</b>

Accumulated deferred Federal income taxes (Note 9) .....	66,580	61,672
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Commitments (Note 11) .....	—	—
	<b>\$3,189,112</b>	<b>\$3,019,054</b>

( ) Denotes deduction.

# Consolidated Statement of Changes in Financial Position

NIAGARA MOHAWK POWER CORPORATION AND SUBSIDIARIES

	For the year ended December 31,		In thousands of dollars				Total
	1978	1977	1976	1975	1974		
<b>Financial resources were provided by:</b>							
<b>Operations:</b>							
Income before cumulative effect of accounting change .....	\$141,162	\$123,832	\$108,449	\$ 114,795	\$ 86,507	\$ 574,745	
Charges (credits) to income not requiring (not providing) working capital—							
Depreciation .....	80,683	77,113	77,629	69,228	63,055	367,708	
Allowance for funds used during construction .....	(45,001)	(34,144)	(20,711)	(29,376)	(27,373)	(156,605)	
Amortization of nuclear fuel .....	27,107	21,458	22,555	11,481	10,665	93,266	
Provision for deferred Federal income taxes (net) .....	7,955	13,333	14,628	11,800	(280)	47,436	
	211,906	201,592	202,550	177,928	132,574	926,550	
Cumulative effect of accounting change ....	—	—	—	—	9,406	9,406	
<b>Outside financing:</b>							
Sale of common stock .....	70,462	21,522	70,105	72,557	29,964	264,610	
Sale of preferred stock .....	74,000	—	30,000	70,000	—	174,000	
Sale of mortgage bonds .....	31,500	125,000	—	100,000	125,000	381,500	
Sale of promissory note (net) .....	—	2,338	5,671	10,839	27,752	46,600	
Issuance of long-term notes payable .....	—	15,000	18,000	—	—	33,000	
Increase (decrease) in short-term debt .....	(15,200)	(1,550)	(8,114)	(117,786)	129,300	(13,350)	
	160,762	162,310	115,662	135,610	312,016	886,360	
<b>Other sources:</b>							
Sale of utility plant (Note 6) .....	34,955	—	—	53,366	—	88,321	
Deferred recoverable energy costs .....	(3,015)	4,654	8,785	(591)	(37,799)	(27,966)	
Income tax refunds .....	1,885	300	(8,686)	1,241	26,866	21,606	
(Increase) decrease in working capital other than short-term debt .....	22,006	1,667	30,465	(122,388)	(12,727)	(80,977)	
Miscellaneous (net) .....	(5,049)	52	4,203	7,592	6,031	12,829	
	50,782	6,673	34,767	(60,780)	(17,629)	13,813	
<b>Total resources provided .....</b>	<b>\$423,450</b>	<b>\$370,575</b>	<b>\$352,979</b>	<b>\$ 252,758</b>	<b>\$436,367</b>	<b>\$1,836,129</b>	
<b>Financial resources were used for:</b>							
Construction additions .....	\$277,758	\$264,913	\$195,676	\$ 194,155	\$283,844	\$1,216,346	
Nuclear fuel .....	38,522	25,018	87,026	11,959	11,503	174,028	
Allowance for funds used during construction .....	(45,001)	(34,144)	(20,711)	(29,376)	(27,373)	(156,605)	
Net additions .....	271,279	255,787	261,991	176,738	267,974	1,233,769	
Reduction of long-term debt .....	10,450	13,250	—	—	103,867	127,567	
Reduction of preferred stock (Note 7) .....	31,800	1,800	1,800	—	—	35,400	
Dividends .....	109,921	99,738	89,188	76,020	64,526	439,393	
<b>Total resources used .....</b>	<b>\$423,450</b>	<b>\$370,575</b>	<b>\$352,979</b>	<b>\$ 252,758</b>	<b>\$436,367</b>	<b>\$1,836,129</b>	
<b>(Increase) decrease in working capital other than short-term debt:</b>							
Cash .....	\$ (4,207)	\$ 475	\$ 13,620	\$ (3,067)	\$ (4,431)	\$ 2,390	
Accounts receivable .....	(5,364)	(5,250)	(11,041)	(16,310)	(19,505)	(57,470)	
Receivable from plant sharing .....	—	—	12,402	(12,402)	—	—	
Income tax refund claims .....	8,391	(1,353)	(300)	15,639	(16,977)	5,400	
Coal and oil for production of electricity ....	9,710	(13,017)	(15,433)	(626)	(33,483)	(52,849)	
Other materials and supplies .....	(3,369)	(1,490)	1,193	1,213	(10,124)	(12,577)	
Long-term debt due within one year .....	200	10,250	—	(103,867)	55,867	(37,550)	
Accounts payable .....	7,823	1,001	18,982	(855)	9,644	36,595	
Accrued taxes and interest .....	4,349	9,317	6,205	2,435	4,609	26,915	
Other (net) .....	4,473	1,734	4,837	(4,548)	1,673	8,169	
	\$ 22,006	\$ 1,667	\$ 30,465	\$ (122,388)	\$ (12,727)	\$ (80,977)	

# Notes to Consolidated Financial Statements

## NOTE 1. Summary of Significant Accounting Policies

The Company is subject to regulation by the New York State Public Service Commission (PSC) and the Federal Energy Regulatory Commission (FERC) with respect to its rates for service and the maintenance of its accounting records. The Company's accounting policies conform to generally accepted accounting principles, as applied to regulated public utilities, and are in accordance with the accounting requirements and ratemaking practices of the regulatory authorities.

**Utility Plant:** The cost of additions to utility plant and of replacements of retirement units of property is capitalized. Cost includes direct material, labor, overhead and an allowance for funds used during construction (AFC). The cost of current repairs and maintenance is charged to expense. Whenever utility plant is retired, its original cost, together with the cost of removal, less salvage, is charged to accumulated depreciation.

**Allowance for Funds Used During Construction:** The Company capitalizes AFC in amounts equivalent to the cost of funds devoted to plant under construction (8% for the period January 1, 1974 through June 30, 1976 and 9% effective July 1, 1976). As a result of rate proceedings, effective December 1, 1976 for its Oswego Steam Station Unit #6 and Nine Mile Point Nuclear Station Unit #2 and July 1, 1978 for capitalized costs associated with its investment in N M Uranium, Inc. (see Note 4), the Company began computing AFC at a rate which is reduced to reflect the income tax effect of the borrowed funds component of AFC.

Effective January 1, 1977, FERC revised its accounting procedures for determining the AFC rate and required segregation of AFC into its two component parts, borrowed funds and other funds. The revision had no effect on income in 1977. The Company, since January 1, 1977, has reflected the borrowed funds component in the Interest Charges section of the income statement. The Company has not reclassified AFC into its borrowed and other funds components for periods prior to January 1, 1977.

**Depreciation and Nuclear Generating Plant Decommissioning Costs:** For accounting purposes, depreciation is computed on the straight-line basis using the estimated useful lives by classes of depreciable property. For Federal income tax purposes, the Company computes depreciation using accelerated methods and shorter allowable depreciable lives.

As a result of a recent PSC proceeding, estimated decommissioning costs (costs to take the plant out of service in the future) of the Company's Nine Mile Point Nuclear Station Unit #1 began to be recovered in rates and charged to operations in July 1978 through revised depreciation charges. The change in the annual nuclear plant depreciation rate, from 4.00% to 4.33%, reflects an increase in the estimated service life of the plant from 25 to 30 years and the establishment of an allowance for decommissioning costs, to be recognized at the annual rate of 1% of the plant's cost. Prior to July 1978, decommissioning costs were not charged to current operations and were not recognized in rates charged to customers. Because of uncertainties, there is no assurance that the additional revenues provided by the decommissioning allowance will ultimately aggregate a sufficient amount to decommis-

sion the plant. The Company believes that decommissioning costs, if higher than currently provided, will ultimately be recovered in the rate process, although no such assurance can be given.

**Amortization of Nuclear Fuel:** The cost of nuclear fuel, plus estimated disposal cost, is charged to operating expenses on the basis of the quantity of heat produced for the generation of electric energy. These costs are charged to customers through base rates or through the fuel adjustment clause. The Company has assumed that spent nuclear fuel will be disposed of by reprocessing and that uranium recovered through such reprocessing will have value. However, recent events and proposed Federal action could result in the abandonment of reprocessing plans since there is no reprocessing facility presently in operation and it has been proposed that reprocessing be deferred indefinitely. The Company believes that under either its reprocessing assumption or an alternative permanent storage assumption similar to that proposed by the Department of Energy, costs would be approximately equal. The Company believes that nuclear fuel disposal costs, which may be higher than presently estimated, will continue to be recovered in the rate process, although no such assurance can be given.

Prior to 1978, estimated nuclear fuel disposal costs were deducted currently for Federal income tax purposes. Due to the uncertainties concerning disposal cost alternatives and attendant cost estimation criteria, in 1978 the Company has assumed that nuclear fuel disposal costs are not currently deductible for Federal income tax purposes. Prior years' tax liabilities were not materially affected by such change in assumption. In December 1978, the PSC granted the Company permission to provide deferred taxes on the accounting-tax timing differences of current and prior period nuclear fuel disposal costs.

**Revenues:** Revenues are based on cycle billings rendered to certain customers monthly and others bi-monthly. The Company does not accrue revenues at the end of any fiscal period for energy sold but not billed at that date. The Company's tariffs include electric and gas adjustment clauses under which energy and purchased gas costs, respectively, above or below the levels allowed in approved rate schedules are billed or credited to customers. Effective January 1, 1974, the Company adopted the policy of charging operations for energy cost increases in the period of recovery (see Note 3). Effective September 1, 1975, the Company began deferring similar purchased gas costs as directed by the PSC, which change did not have a material effect on income.

**Federal Income Taxes:** The general policy, in accordance with PSC requirements, is to flow through the tax effect of timing differences between book and taxable income; that is, record only income taxes currently payable. However, deferred taxes are provided on benefits realized from the class life system of depreciation permitted under the Revenue Act of 1971 (shorter depreciable lives, repair allowance and cost of removal), on energy and purchased gas costs, on nuclear fuel disposal costs and on certain other items, as approved by the PSC (see Note 9). No deferred taxes are provided for other depreciation differences (including accelerated methods of depreciation), except under necessity certificates in prior years, or for other items (such as taxes, a portion of AFC,

pensions and certain other employee benefits) which are deducted currently for tax purposes but capitalized for accounting purposes.

Effective January 1, 1975, the benefits resulting from an increase in the investment tax credit from 4% to 10% and from the change in the limitation on the amount of credit which may be claimed in any year has been deferred. One-half of the 4% investment tax credits realized have been allocated to Other Income (Net) for the year 1978, consistent with PSC directives. For the major projects specified in the AFC section above, the imputed tax benefit of the borrowed funds component of AFC has been credited to Other Income (Net).

As directed by the PSC, the Company has deferred a portion of the increase in Federal income taxes for the year 1978 associated with the tax gain on the sale of a portion of its interest in the Roseton Steam Station. The PSC has authorized the Company to recover increased taxes through its electric adjustment clause over a one-year period commencing July 1978.

**Pension Plans:** The cost of pension plans is based upon current costs, amortization of unfunded past service benefits over periods ranging from 15 to 40 years and amortization over 15 years of unfunded past service benefits arising from plan amendments.

#### NOTE 2. Depreciation

The percentage relationship between the total provision for depreciation and average depreciable property was 2.7% in 1978 and 1977 and 2.8% in 1976, 1975 and 1974. The Company makes depreciation studies on a continuing basis and adjusts the rates of its various classes of depreciable property, subject to PSC approval, when considered appropriate. Effective December 1, 1976, consistent with a PSC rate decision, electric depreciation provisions were modified resulting in a reduction in depreciation expense of \$4,300,000 for the year 1977. As a result of the rate decision which became effective July 1, 1978, the electric depreciation provision for 1978 was increased approximately \$1,100,000.

#### NOTE 3. Deferred Recoverable Energy Costs

Effective January 1, 1974, as permitted by a PSC policy statement, the Company changed its accounting for increased energy costs above or below the levels allowed in rate schedules to defer those costs until the time they are billed to customers, thus achieving a better matching of revenue and expense. This accounting change, net of deferred income taxes of \$3,170,000, resulted in an increase in net income for 1974 of \$34,629,000 (\$.82 per share), of which \$25,223,000 (\$.60 per share) was credited to income before cumulative effect of accounting change and \$9,406,000 (\$.22 per share), net of deferred income taxes of \$400,000, represented the cumulative effect to January 1, 1974 of the accounting change. While the results of operations for all years since 1974 have been reported on the basis of the new method, the results of operations on a pro forma basis for 1974 would have been as follows:

	Per average share of common stock	Balance available for common stock
As reported	\$1.92	\$80,831
Pro forma amounts reflecting the consistent application of the change to energy deferral accounting	\$1.70	\$71,425

Effective March 1, 1975 and July 1, 1978, the PSC authorized the Company to make changes in its electric adjustment clause. As a result, approximately \$31,000,000 and \$8,800,000, respectively, of deferred energy costs would not have been recovered under the normal operation of the electric adjustment clause, but the Company was permitted to amortize and bill such amounts to customers, through the electric adjustment clause, over 36 months from the effective date of each change.

#### NOTE 4. N M Uranium, Inc.

During 1976, through a wholly-owned subsidiary, N M Uranium, Inc. (NMU), the Company purchased a 50 percent undivided interest in uranium deposits and associated mining equipment for approximately \$52,500,000 consisting of \$34,500,000 in cash and \$18,000,000 in 7¼% notes payable guaranteed by the Company (see page 21). Although acquisition of this interest was made primarily to provide a more assured future supply of nuclear fuel for the Nine Mile Point Nuclear Station Units #1 and 2, the Company expects to sell a portion of the output to reduce net assets and associated carrying charges. The net assets, including costs incurred since acquisition, of the subsidiary totaling \$87,564,000, have been included in Utility Plant in the consolidated financial statements.

On September 8, 1978, the PSC issued an order approving the Company's investment in NMU, its guaranty of the NMU notes and permitting, with prior approval, such subsequent advances as may be necessary to finance the uranium project. Further, effective July 1, 1978, all benefits associated with NMU accounting-tax timing differences have been deferred.

The approval was subject to the condition that rates the PSC will approve in the future will reflect the cost of NMU uranium at the lower of cost or the market price. Subject to PSC approval, the comparison of cost or market will be on an aggregate basis over the life of the project. While management believes that such aggregate costs will be less than the aggregate market price of the uranium produced over the life of the project, no such assurance can be given.

#### NOTE 5. Short-Term Debt and Compensating Balances

The Board of Directors has authorized the Company to obtain short-term unsecured loans of up to \$250,000,000, including the issuance of commercial paper up to a maximum of \$125,000,000. Unused lines of credit and unused amounts under the Credit Agreement generally are held available to support commercial paper outstanding at any time.

At December 31, 1978, the Company had available \$174,500,000 of bank credit arrangements consisting of a \$55,000,000 contractual commitment with several banks under a Credit Agreement, lines of credit of \$69,500,000 and a Bankers Acceptance Facility Agreement of \$50,000,000. All of these arrangements are renewable on an annual basis.

The Credit Agreement and most of the lines of credit require the Company to maintain compensating balances which are averaged over time. Net of "float," approximately \$2,700,000 of cash at December 31, 1978, represented compensating balances. The Company has elected to pay fees in lieu of maintaining compensating balances on its other lines. The Bankers Acceptance Facility Agreement provides for the payment of fees only upon the issuance of each acceptance. Acceptances are used to finance the fuel oil inventory at one of the Company's generating stations.

The following table summarizes additional information applicable to short-term debt:

	<i>In thousands of dollars</i>	
	1978	1977
<i>At December 31:</i>		
<b>Short-term debt:</b>		
Notes payable .....	\$21,000	\$ —
Commercial paper .....	3,000	24,200
Bankers Acceptances .....	—	15,000
	<b>\$24,000</b>	<b>\$39,200</b>
Weighted average interest rate ...	10.59%*	6.82%*
<i>For year ended December 31:</i>		
Daily average outstanding .....	\$10,744	\$40,344
Daily weighted average interest rate .....	8.17%*	5.81%*
Maximum amount outstanding .	\$39,200	\$85,650

\*Excluding compensating balances and fees.

#### NOTE 6. Jointly-Owned Generating Facilities

The following table reflects the Company's share of jointly-owned generating facilities at December 31, 1978. The Company is required to provide financing for the units in process of construction and for any additions to the Roseton units. The Company's share of expenses associated with the Roseton units are included in the appropriate operating expenses in the consolidated statement of income.

Unit	<i>In thousands of dollars</i>			
	Percentage ownership	Utility plant	Accumulated depreciation	Construction work in progress
Roseton Steam Station				
Units #1 and 2 (a)	30	\$100,861	\$11,396	\$ 2,145
Oswego Steam Station				
Unit #6 (b)	76	—	—	175,693
Nine Mile Point Nuclear				
Station Unit #2 (b)	41	—	—	224,135
Sterling Nuclear				
Station (c)	22	—	—	14,680

- (a) The Company sold to Central Hudson Gas and Electric Corporation 1/4 of its original 40% ownership for book value of approximately \$30,400,000 in December 1978. Central Hudson is obligated from time to time to acquire additional portions of the Company's interest.
- (b) During 1975, the Company sold a 24% interest in the ownership of Unit #6 and a 59% interest in the ownership of Unit #2 for book value of approximately \$53,366,000 and, in 1978, sold certain additional property associated with these units, for book value of approximately \$4,600,000.
- (c) During 1975, the Company purchased a 22% interest in the ownership of Rochester Gas & Electric Corporation's Sterling Nuclear Station for an initial investment of approximately \$4,337,000.

#### NOTE 7. Capital Stock

On May 7, 1976, by an amendment to the Certificate of Incorporation, each authorized but unissued share of preferred stock and preference stock was changed into four shares with a par value of \$25 each. In 1978, the authorized shares of common stock were increased. Premium on capital stock increased \$65,405,000 in 1978 and \$20,150,000 in 1977 from the sale of 5,057,636 and 1,371,311 shares of common stock, respectively. As a result of the foregoing and the 1978 issuance of 1,600,000 shares of \$25 par value preferred stock,

8.375% series, and 1,360,000 shares of \$25 par value preference stock, 7.75% series, capital stock expense increased \$615,000 in 1978 and \$115,000 in 1977.

In August 1978, \$30,000,000 (300,000 shares) of 11.75% series preferred stock was redeemed. In accordance with a PSC directive, the \$3,525,000 call premium on the redemption was charged to capital stock expense and is being amortized over the life of the 7.75% preference series. Expenses of issuing the 11.75% preferred stock of \$1,180,000 were charged to retained earnings.

#### NOTE 8. Pension Plans

The Company and its subsidiaries have non-contributory pension plans covering substantially all their employees. The total pension cost was \$25,694,000 for 1978, \$22,489,000 for 1977, \$20,762,000 for 1976, \$18,825,000 for 1975, and \$15,589,000 for 1974 (of which \$5,754,000 for 1978, \$4,668,000 for 1977, \$3,878,000 for 1976, \$3,344,000 for 1975, and \$3,755,000 for 1974, was included in construction costs).

The Company's policy is to fund pension costs accrued. Preliminary studies indicate that the estimated amount of vested benefits at December 31, 1978 exceeded the net assets of the plans by approximately \$100,000,000.

#### NOTE 9. Federal and Canadian Income Taxes

*Income Tax Refunds:* Operations for the year 1974 include a credit of \$4,700,000 attributable to the carryback benefit of a net operating tax loss.

The Company received refunds in 1974 and 1975 totaling \$21,400,000, including interest, as a result of the retroactive adoption of "guideline" lives in computing tax depreciation for the years 1966 through 1968. In an Opinion and Order on a Company's rate proceeding, dated November 16, 1976, the PSC directed that \$12,400,000 of the amounts received for the years 1966 through 1968 be treated as a reduction in rate base. The PSC, however, reserved the right to treat such amount differently in future rate proceedings contingent on the then prevailing circumstances. The Company appealed this treatment to various Courts and on June 19, 1978, the Supreme Court of the United States dismissed, for want of jurisdiction, the Appeal filed by the Company, thus terminating the litigation. The portion of the refunds and interest for the years 1966 through 1968, previously included in Deferred Credits totaling approximately \$9,000,000 (\$.17 per share), that was no longer subject to a future contingency, was credited to Other Income (Net) in 1976.

In 1978, the Company received a refund of \$9,200,000 including interest net of tax, resulting from the settlement of all audit issues for the year 1969, including the adoption of the "guideline" method of depreciation. The PSC is currently considering the proper accounting and ratemaking treatment of the 1969 refund.

The total tax refunds and interest recorded in Deferred Credits at December 31, 1978 approximated \$21,600,000.

*Net Operating Loss:* During 1977, 1976 and 1975, the Company utilized \$300,000, \$20,100,000 and \$22,600,000, respectively, of net operating tax loss carryforwards.

*Investment Tax Credits:* The Company has deferred the net benefit of investment tax credits approximating \$6,900,000 (\$.12 per share), \$6,100,000 (\$.11 per share), \$4,800,000 (\$.09 per share) and \$12,500,000 (\$.27 per share) for the years ended December 31, 1978, 1977, 1976 and 1975, respectively.



in accordance with the general policy as stated in Note 1.

The investment tax credit carryforward previously considered available as of December 31, 1977 was applied as a result of a change in assumption concerning the current deductibility of nuclear fuel disposal costs (see Note 1). The Company has no investment tax credit carryforward at December 31, 1978.

**Income Tax Assessment:** In October 1972, the Company paid a net assessment of \$16,800,000 for the years 1957 through 1962 relating to the deductions taken for the loss of the Company's water rights at Niagara Falls terminated in connection with the redevelopment of Niagara power by the Power Authority of the State of New York. The Company has instituted suit for recovery of this amount.

Summary Analysis:	In thousands of dollars				
	1978	1977	1976	1975	1974
<b>Components of Federal and Canadian income taxes</b>					
Current tax expense:					
Federal .....	\$ 7,608	\$ 434	—	—	\$ (5,500)
Canadian .....	3,870	3,314	\$ 2,550	\$ 2,830	1,730
	11,478	3,748	2,550	2,830	(3,770)
Deferred Federal income tax expense .....	19,645	18,376	15,346	11,800	(280)
Income taxes included in operating expenses .....	31,123	22,124	17,896	14,630	(4,050)
Deferred Federal income taxes included in Other Income (Net) .....	(11,690)	(5,043)	(718)	—	—
<b>Total .....</b>	<b>\$19,433</b>	<b>\$17,081</b>	<b>\$17,178</b>	<b>\$14,630</b>	<b>\$ (4,050)</b>
<b>Timing differences resulting in deferred Federal income taxes</b>					
<i>(see Note 1)</i>					
Depreciation .....	\$22,753	\$ 7,146	\$ 6,223	\$ 1,313	\$ 985
Cost of removal of property .....	2,310	245	566	(899)	(750)
Investment tax credit .....	6,899	6,077	4,847	12,523	—
Recoverable energy and purchased gas costs .....	7,012	69	3,650	(477)	2,770
Necessity certificates .....	(700)	(700)	(700)	(700)	(700)
Nuclear fuel disposal cost .....	(28,411)	—	—	—	—
Gain on Roseton sale .....	(3,962)	—	—	—	—
Pension costs under the age retirement allowance plan .....	—	—	—	—	(2,585)
Other .....	2,054	496	42	40	—
<b>Deferred Federal income taxes (net) .....</b>	<b>\$ 7,955</b>	<b>\$13,333</b>	<b>\$14,628</b>	<b>\$11,800</b>	<b>\$ (280)</b>
<b>Reconciliation between Federal and Canadian income taxes and the tax computed at prevailing U.S. statutory rate (48%) on income before income taxes and cumulative effect of accounting change</b>					
Computed tax .....	\$77,086	\$67,638	\$60,301	\$62,124	\$39,579
<b>Reduction attributable to flow-through of certain tax adjustments:</b>					
Depreciation .....	13,931	19,703	19,741	20,123	16,602
Allowance for funds used during construction .....	21,601	16,389	9,942	14,100	13,426
Taxes, pensions and employee benefits capitalized for accounting purposes .....	8,537	7,071	5,731	7,920	7,112
Real estate taxes on an assessment date basis .....	560	1,042	2,813	3,035	4,415
Investment tax credit .....	13,165	—	—	—	—
Income tax refunds .....	—	619	4,313	—	—
Other .....	(141)	5,733	583	2,316	2,074
	57,653	50,557	43,123	47,494	43,629
<b>Federal and Canadian income taxes .....</b>	<b>\$19,433</b>	<b>\$17,081</b>	<b>\$17,178</b>	<b>\$14,630</b>	<b>\$ (4,050)</b>

**NOTE 10. Information Regarding the Electric and Gas Businesses**

The Company is engaged in the electric and gas utility businesses. Certain information regarding these segments for the years ended December 31, 1978 and 1977 is set forth on the following page. General corporate expenses, property common to both segments and depreciation of such common property have been allocated to the segments in accordance with practices established for regulatory purposes. Corporate assets consist of other property and investments, cash, accounts receivable, income tax refund claims, pre-

payments, unamortized debt expense and other deferred debits.

The Company provides electric and gas service to approximately 15,000 Federal, state and local governmental agency locations. During the years ended December 31, 1978 and 1977, approximately \$134,000,000 and \$122,000,000, respectively, of revenue was received from these agencies.

Pretax operating income, including AFC, was \$180,077,000 electric, \$24,340,000 gas for 1976; \$197,788,000 electric, \$20,787,000 gas for 1975 and \$143,974,000 electric, \$15,721,000 gas for 1974.

	<i>In thousands of dollars</i>			<i>In thousands of dollars</i>		
	Electric	1978 Gas	Total	Electric	1977 Gas	Total
Operating revenues .....	\$1,020,313	\$259,935	\$1,280,248	\$ 987,760	\$238,072	\$1,225,832
Operating expenses						
Depreciation .....	71,750	8,933	80,683	68,400	8,713	77,113
Other, excluding income taxes .....	760,327	223,742	984,069	742,541	203,556	946,097
Total .....	832,077	232,675	1,064,752	810,941	212,269	1,023,210
Operating income before taxes .....	188,236	27,260	215,496	176,819	25,803	202,622
AFC .....	44,770	231	45,001	33,991	153	34,144
Pretax operating income, including AFC ...	<u>\$ 233,006</u>	<u>\$ 27,491</u>	260,497	<u>\$ 210,810</u>	<u>\$ 25,956</u>	236,766
Income taxes .....			31,123			22,124
Other income (net) .....			13,235			3,645
Interest charges .....			101,447			94,455
Net income .....			<u>\$ 141,162</u>			<u>\$ 123,832</u>
Construction expenditures (including nuclear fuel) .....	\$ 301,583	\$ 14,697	\$ 316,280	\$ 277,828	\$ 12,103	\$ 289,931
Identifiable assets:						
Utility plant, net .....	\$2,595,298	\$288,659	\$2,883,957	\$2,428,623	\$283,439	\$2,712,062
Materials and supplies .....	98,058	1,910	99,968	104,653	1,656	106,309
Deferred recoverable energy costs .....	23,868	4,098	27,966	19,170	5,781	24,951
Corporate assets .....			177,221			175,732
Total assets .....			<u>\$3,189,112</u>			<u>\$3,019,054</u>

#### NOTE 11. Commitments

The Company presently estimates that the construction program for the years 1979 through 1981 will require over \$635,000,000, excluding AFC and certain overheads capitalized. At December 31, 1978, substantial construction commitments exist, including those for the Company's share of Unit #2 at Nine Mile Point Nuclear Station, Unit #6 at Oswego Steam Station and the Sterling Nuclear Station.

#### NOTE 12. Replacement Cost (Unaudited)

Because of inflation, the cost of replacing the Company's plant in service today would exceed the amounts actually spent for such facilities and reported in the Company's financial statements. The Company believes that any higher replacement costs it may experience will be recovered through the normal regulatory process. The Company has computed the replacement cost data in accordance with Securities and Exchange Commission requirements and such data are reported in its Form 10-K.

#### NOTE 13. Quarterly Financial Data (Unaudited)

Operating revenues, operating income, net income and earnings per common share by quarters for 1978 and 1977 are shown in the following table. The Company, in its opinion has included all adjustments (consisting only of normal recurring accruals) necessary for a fair statement of the results of operation for the quarters. Due to the seasonal nature of the utility business, the annual amounts are not generated evenly by quarter during the year.

Quarters ended	<i>In thousands of dollars</i>			
	Operating revenues	Operating income	Net income	Earnings per common share
December 31				
1978	\$321,788	\$33,881	\$26,977	\$.32
1977	\$309,348	\$38,100	\$24,001	\$.31
September 30				
1978	\$276,442	\$37,571	\$27,273	\$.32
1977	\$282,209	\$35,488	\$21,409	\$.27
June 30				
1978	\$309,666	\$47,976	\$35,527	\$.49
1977	\$281,762	\$42,647	\$28,902	\$.40
March 31				
1978	\$372,352	\$64,945	\$51,385	\$.78
1977	\$352,513	\$64,263	\$49,520	\$.77

# Summary of Electric and Gas Utility Plant

	At December 31,	In thousands of dollars	
		1978	% 1977
<b>Utility plant:</b>			
Electric plant .....	\$2,680,999	69	\$2,625,797
Nuclear fuel (Note 4) .....	215,207	6	175,884
Gas plant .....	350,029	9	341,010
Common plant .....	59,726	1	57,584
Construction work in progress .....	599,413	15	446,999
<b>Total utility plant .....</b>	<b>\$3,905,374</b>	<b>100</b>	<b>\$3,647,274</b>

## Long-Term Debt

	At December 31,	In thousands of dollars	
		1978	1977
<b>First Mortgage Bonds:</b>			
2¾% Series due January 1, 1980 .....	\$	40,000	\$ 40,000
2⅞% Series due October 1, 1980 .....		40,000	40,000
12.6% Series due October 1, 1981 .....		125,000	125,000
3¾% Series due December 1, 1981 .....		15,000	15,000
3½% Series due February 1, 1983 .....		25,000	25,000
3¼% Series due October 1, 1983 .....		40,000	40,000
3½% Series due August 1, 1984 .....		25,000	25,000
10⅞% Series due September 1, 1985 .....		47,000	47,000
3⅞% Series due May 1, 1986 .....		30,000	30,000
4⅞% Series due September 1, 1987 .....		50,000	50,000
3⅞% Series due June 1, 1988 .....		50,000	50,000
4¾% Series due April 1, 1990 .....		50,000	50,000
4½% Series due November 1, 1991 .....		40,000	40,000
4⅞% Series due December 1, 1994 .....		40,000	40,000
5⅞% Series due November 1, 1996 .....		45,000	45,000
6¼% Series due August 1, 1997 .....		40,000	40,000
6½% Series due August 1, 1998 .....		60,000	60,000
9½% Series due December 1, 1999 .....		75,000	75,000
7¾% Series due February 1, 2001 .....		65,000	65,000
7⅞% Series due February 1, 2002 .....		80,000	80,000
7¼% Series due August 1, 2002 .....		80,000	80,000
8¼% Series due December 1, 2003 .....		80,000	80,000
9½% Series due December 1, 2003 .....		31,500	—
10.2% Series due March 1, 2005 .....		47,000	50,000
8.35% Series due August 1, 2007 .....		75,000	75,000
8⅞% Series due December 1, 2007 .....		50,000	50,000
<b>Paul Smith's Electric Light &amp; Power &amp; Railroad Company First Mortgage Bonds:</b>			
4½% Series due July 1, 1979 .....		450	450
5½% Series due May 1, 1985 .....		450	450
<b>Promissory Note, 8% Series A due June 1, 2004 .....</b>		<b>46,600</b>	<b>46,600</b>
<b>Notes payable:</b>			
7¾% due in equal installments, November 1, 1978, 1979 and 1980 (Note 4) .....		12,000	18,000
Prime rate plus ½% (not to exceed 7½%) due in 24 equal quarterly installments commencing July 1, 1978 .....		13,750	15,000
<b>Unamortized premium .....</b>		<b>6,697</b>	<b>7,137</b>
<b>Total long-term debt .....</b>		<b>1,425,447</b>	<b>1,404,637</b>
<b>Less long-term debt due within one year .....</b>		<b>10,450</b>	<b>10,250</b>
		<b>\$1,414,997</b>	<b>\$1,394,387</b>

# Preferred Stock

Cumulative preferred stock, authorized 3,400,000 shares, \$100 par value and 9,600,000 shares, \$25 par value

Cumulative preference stock, authorized 4,000,000 shares, \$25 par value

	In thousands of dollars		Redemption price per share (Before adding accumulated dividends)		
	At December 31,	1978	December 31, 1978	Eventual Minimum	
<b>Preferred \$100 par value</b>					
3.40% Series; 200,000 shares .....	\$	20,000	\$ 20,000	\$103.50	\$103.50
3.60% Series; 350,000 shares .....		35,000	35,000	104.85	104.85
3.90% Series; 240,000 shares .....		24,000	24,000	106.00	106.00
4.10% Series; 210,000 shares .....		21,000	21,000	102.00	102.00
4.85% Series; 250,000 shares .....		25,000	25,000	102.00	102.00
5.25% Series; 200,000 shares .....		20,000	20,000	102.00	102.00
6.10% Series; 250,000 shares .....		25,000	25,000	103.00	101.00
7.45% Series; 564,000 and 582,000 shares ....		56,400	58,200	106.25	100.00
7.72% Series; 400,000 shares .....		40,000	40,000	107.37	102.36
10.60% Series; 400,000 shares .....		40,000	40,000	110.60	102.65
11.75% Series (Note 7) .....		—	30,000	—	—
<b>Preferred \$25 par value</b>					
8.375% Series; 1,600,000 shares .....		40,000	—	27.09	25.00
9.75% Series; 1,200,000 shares .....		30,000	30,000	27.1825	25.00
<b>Preference \$25 par value</b>					
7.75% Series; 1,360,000 shares .....		34,000	—	*	25.00
<b>Total preferred and preference stock</b>		<b>410,400</b>	<b>368,200</b>		
<b>Less sinking fund requirements .....</b>		<b>1,800</b>	<b>1,800</b>		
		<b>\$408,600</b>	<b>\$366,400</b>		

\*Not redeemable until October 1, 1981.

Certain of the Company's preferred stock series provide for a mandatory sinking fund for the annual redemption, at par, as follows:

		Number of shares	Beginning
Preferred \$100 par value	7.45% Series	18,000	June 30, 1977
	10.60% Series	20,000	March 31, 1980
Preferred \$25 par value	8.375% Series	100,000	April 1, 1983
	9.75% Series	66,000	October 1, 1980
Preference \$25 par value	7.75% Series	140,000	September 30, 1980

These series also have optional sinking funds through which the Company may redeem, at par, a like amount of additional shares (limited to 120,000 shares of the 7.45% Series and 300,000 shares of the 9.75% Series). The mandatory sinking fund for the 7.75% Series increases by 20,000 shares and 80,000 shares beginning September 30, 1982 and 1984, respectively.

## Report of Independent Accountants

PRICE WATERHOUSE & CO.

To the Stockholders and the Board of Directors of  
Niagara Mohawk Power Corporation

Syracuse, New York  
January 24, 1979

We have examined the consolidated balance sheets of Niagara Mohawk Power Corporation and its subsidiaries as of December 31, 1978 and 1977, and the related consolidated statements of income and retained earnings and of changes in financial position for the five years ended December 31, 1978, appearing on pages 13 through 22. 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 as we considered necessary in the circumstances.

In our report dated January 25, 1978, our opinion on the financial statements was qualified as being subject to the effect, if any, on the financial statements of the ultimate resolution of certain litigation relating to "guideline refund claims." As explained in Note 9, the litigation was terminated in June 1978 with no resulting effect on the financial state-

ments. Accordingly, our present opinion on the financial statements, as presented herein, is no longer qualified with respect to this matter.

In our opinion, the consolidated financial statements examined by us present fairly the financial position of Niagara Mohawk Power Corporation and its subsidiaries at December 31, 1978 and 1977, and the results of their operations and the changes in their financial position for each of the five years in the period ended December 31, 1978, in conformity with generally accepted accounting principles consistently applied during the period subsequent to the change, with which we concur, in the method of accounting for increased energy costs made as of January 1, 1974, as described in Notes 1 and 3.

*Price Waterhouse & Co.*

## Financial Statistics

Capitalization ratios:	1978	1977
Common stock equity .....	36.9%	35.5%
Preferred stock .....	14.1	13.4
Long-term debt .....	49.0	51.1
Ratio of earnings to fixed charges .....	2.58	2.49
Ratio of earnings to fixed charges and preferred stock dividends .....	1.95	1.90
Other ratios—% of operating revenues:		
Maintenance and depreciation .....	12.6	13.2
Taxes .....	14.3	14.0
Operating income .....	14.4	14.7
Balance available for common stock .....	8.8	8.0
Ratio of depreciation and amortization reserve to gross utility plant ..	26.2%	25.6%
Ratio of mortgage bonds to net utility plant .....	46.7%	48.6%

## Electric Capability

Thermal	At January 1,	Thousands of Kilowatts		
		1979	%	1978
<i>Coal fuel</i>				
Huntley, Niagara River .....		785	11	831
Dunkirk, Lake Erie .....		585	8	640
<i>Total coal fuel</i> .....		<b>1,370</b>	<b>19</b>	<b>1,471</b>
<i>Residual oil fuel</i>				
Albany, Hudson River .....		400	6	400
Oswego, Lake Ontario .....		1,190	17	1,225
Roseton, Hudson River .....		360	5	480
<i>Middle distillate oil fuel</i>				
20 Combustion turbine and diesel units .....		354	5	354
<i>Total oil fuel</i> .....		<b>2,304</b>	<b>33</b>	<b>2,459</b>
<i>Nuclear fuel</i>				
Nine Mile Point, Lake Ontario .....		610	9	610
Purchased—firm contract				
Power Authority—FitzPatrick, Lake Ontario .....		176	2	184
<i>Total nuclear fuel</i> .....		<b>786</b>	<b>11</b>	<b>794</b>
<b>Total thermal sources</b> .....		<b>4,460</b>	<b>63</b>	<b>4,724</b>
<b>Hydro</b>				
Owned and leased hydro stations (81 in 1978) .....		733	10	737
Purchased—firm contracts				
Power Authority—Niagara River .....		1,122	16	1,161
Power Authority—St. Lawrence River .....		115	2	115
Power Authority—Blenheim-Gilboa Pumped Storage Plant ...		550	8	550
Other .....		76	1	74
<b>Total hydro sources</b> .....		<b>2,596</b>	<b>37</b>	<b>2,637</b>
<b>Total capability*</b> .....		<b>7,056</b>	<b>100</b>	<b>7,361</b>
		1978		1977
<b>Electric peak load during year</b> .....		<b>5,485</b>		<b>5,405</b>

\*Available capability can be increased during heavy load periods by purchases from neighboring interconnected systems. Hydro station capability is based on average December stream-flow conditions.

# Electric and Gas Statistics

Electricity generated and purchased: (Millions of kw-hrs.)	1978	%	1977	%
<b>Thermal:</b>				
<b>Generated</b>				
Coal .....	7,016	20	7,579	22
Oil .....	8,691	25	8,293	24
Nuclear .....	4,467	13	2,946	8
Purchased—Nuclear from Power Authority .....	886	2	911	3
<b>Total thermal .....</b>	<b>21,060</b>	<b>60</b>	<b>19,729</b>	<b>57</b>
<b>Hydro:</b>				
<b>Generated</b> .....				
.....	3,472	10	3,782	11
<b>Purchased from Power Authority</b> .....				
.....	8,563	24	8,851	26
<b>Total hydro .....</b>	<b>12,035</b>	<b>34</b>	<b>12,633</b>	<b>37</b>
<b>Other purchased power—various sources</b> .....				
.....	2,118	6	1,926	6
<b>Total generated and purchased .....</b>	<b>35,213</b>	<b>100</b>	<b>34,288</b>	<b>100</b>

Electric sales: (Millions of kw-hrs.)	1978	1977
Residential .....	8,127	7,895
Commercial .....	9,117	8,770
Industrial .....	12,187	11,878
Municipal service .....	276	276
Other electric systems .....	2,675	2,548
<b>Total .....</b>	<b>32,382</b>	<b>31,367</b>

Electric revenues: (Thousands of dollars)	1978	1977
Residential .....	\$ 319,667	\$304,229
Commercial .....	333,862	325,985
Industrial .....	258,649	253,690
Municipal service .....	21,515	20,905
Other electric systems .....	59,445	58,601
Miscellaneous .....	27,175	24,350
<b>Total .....</b>	<b>\$1,020,313</b>	<b>\$987,760</b>

Electric customers: (Average)	1978	1977
Residential .....	1,197,060	1,187,318
Commercial .....	128,481	128,070
Industrial .....	2,873	2,876
Other .....	2,257	2,235
<b>Total .....</b>	<b>1,330,671</b>	<b>1,320,499</b>

Residential: (Average)	1978	1977
Annual kw-hr. use per customer .....	6,790	6,649
Cost to customer per kw-hr. ....	3.93¢	3.85¢
Annual revenue per customer .....	\$267.04	\$256.23

Gas sales: (Millions of cubic feet)	1978	1977
Residential .....	53,301	52,684
Commercial .....	23,088	20,305
Industrial .....	15,204	14,528
Other gas systems .....	3,740	3,310
<b>Total .....</b>	<b>95,333</b>	<b>90,827</b>

Gas revenues: (Thousands of dollars)	1978	1977
Residential .....	\$158,599	\$150,510
Commercial .....	60,794	51,512
Industrial .....	32,422	29,336
Other gas systems .....	6,858	5,595
Miscellaneous .....	1,262	1,119
<b>Total .....</b>	<b>\$259,935</b>	<b>\$238,072</b>

Gas customers: (Average)	1978	1977
Residential .....	382,691	384,197
Commercial .....	28,451	28,632
Industrial .....	522	540
Other .....	2	2
<b>Total .....</b>	<b>411,666</b>	<b>413,371</b>

Residential: (Average)	1978	1977
Annual use per customer (Thousands of cubic feet) .....	139.3	137.1
Cost to customer (per thousand cubic feet) .....	\$2.98	\$2.86
Annual revenue per customer .....	\$414.43	\$391.75
Maximum day gas sendout (Thousands of cubic feet) .....	637,556	660,974



## Officers

**John G. Haehl, Jr.**  
President and Chief Executive Officer

**James Bartlett**  
Executive Vice President

**William J. Donlon**  
Senior Vice President

**James J. Miller**  
Senior Vice President

**John H. Terry**  
Senior Vice President, General Counsel  
and Secretary

**Richard F. Torrey**  
Senior Vice President

**Richard C. Clancy**  
Vice President—Research and  
Environmental Affairs

**Donald P. Dlse**  
Vice President—Engineering

**John J. Ehlinger**  
Vice President—Employee Relations

**John M. Endries**  
Vice President and Controller

**William C. Franklin**  
Vice President—Purchasing

**John M. Haynes**  
Vice President and Treasurer

**John P. Hennessey**  
Vice President—Management Systems  
and Services

**Eugene J. Morel**  
Vice President—Employee Services  
and Risk Management

**James F. Morrell**  
Vice President—Corporate Planning

**Gerald K. Rhode**  
Vice President—System Project  
Management

**Rudolph R. Schneider**  
Vice President—Electric Production

**Kenneth A. Tramutola**  
Vice President—Rates

**Robert M. Cleary, Jr.**  
Vice President and General  
Manager—Western Division

**Raymond Kolarz**  
Vice President and General  
Manager—Central Division

**Richard H. Kukuk**  
Vice President and General  
Manager—Eastern Division

**Edward P. Gueth, Jr.**  
Assistant General Counsel

**Herman B. Noll**  
Assistant General Counsel

**Anthony J. Baratta, Jr.**  
Assistant Controller

**Adam F. Shaffer**  
Assistant Controller

**Henry B. Wightman, Jr.**  
Assistant Controller

**John W. Powers**  
Assistant Treasurer

**Harold J. Bogan**  
Assistant Secretary

**Joseph F. Cleary**  
Assistant Secretary—Eastern Division

**Frederick C. McCall**  
Assistant Secretary—Western Division

## Directors

**James Bartlett**  
Executive Vice President, Syracuse

**Thomas J. Brosnan**  
Consultant (formerly Vice  
President—Research and Development,  
Environmental Matters), Syracuse

**Edmund M. Davis**  
Partner, Hiscock, Lee, Rogers, Henley &  
Barclay, attorneys-at-law, Syracuse

**Edward W. Duffy**  
Chairman of the Board and Chief Executive  
Officer, Marine Midland Banks, Inc., a bank  
holding company, Buffalo

**Edmund H. Fallon\***  
Executive Consultant, Agway, Inc., purchasing  
and marketing organization, Syracuse

**John G. Haehl, Jr.**  
President and Chief Executive Officer,  
Syracuse

**Edwin F. Jaeckle**  
Senior Partner, Jaeckle, Fleischmann & Mugel,  
attorneys-at-law, Buffalo

**Lauman Martin**  
Consultant (formerly Senior Vice President and  
General Counsel), Syracuse

**Baldwin Maull**  
Director of various corporations, New York

**Martha Hancock Northrup**  
Housewife, former President, Crouse-Irving  
Memorial Hospital Board, Syracuse

**Frank P. Piskor**  
President, St. Lawrence University, Canton

**Donald B. Riefler**  
Chairman, Sources and Uses of Funds  
Committee, Morgan Guaranty Trust Company  
of New York, commercial bank, New York

**Lewis A. Swyer**  
President, L.A. Swyer Company, Inc., builders  
and construction managers, Albany

**John G. Wick**  
President and Chief Executive Officer,  
Merchants Insurance Group, Buffalo

## Board committees

**Executive Committee**  
John G. Haehl, Jr., Chairman  
Edmund H. Fallon\*  
Edwin F. Jaeckle  
Frank P. Piskor  
Baldwin Maull  
John H. Terry, Secretary

**Pension Committee**  
Edmund H. Fallon\*, Chairman  
Edmund M. Davis  
Baldwin Maull

**Salary Committee**  
Baldwin Maull, Chairman  
Edwin F. Jaeckle  
Edmund M. Davis

**Audit Committee**  
Edward W. Duffy, Chairman  
Lewis A. Swyer  
Frank P. Piskor

**Committee on Corporate  
Public Policy**  
Frank P. Piskor, Chairman  
Martha H. Northrup  
Edmund H. Fallon\*

**Finance Committee**  
Donald B. Riefler  
John G. Wick  
Edmund M. Davis



Niagara Mohawk position paper is reviewed by Directors at periodic meeting of Committee on Corporate Public Policy, with chairman Frank P. Piskor, left, Edmund H. Fallon\* and Martha Hancock Northrup.

*\*(Deceased February 7, 1979)*

# NIAGARA MOHAWK

300 ERIE BOULEVARD WEST  
SYRACUSE, NEW YORK 13202

Buildings near Lake Placid to house athletes for 1980 Winter Olympic Games will be scene of one-of-a-kind energy research project by Niagara Mohawk. (See page 9 inside.)

