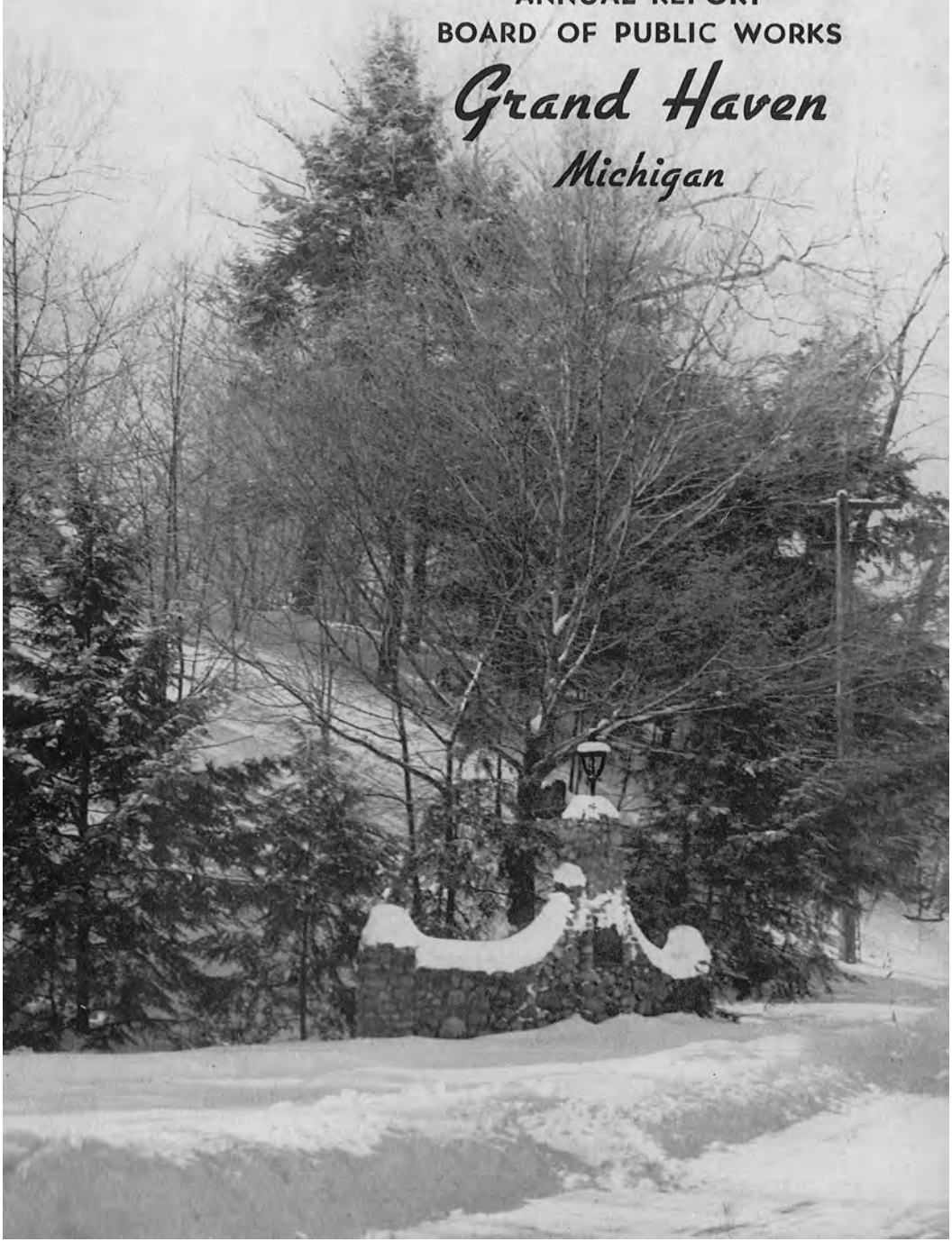


1944
ANNUAL REPORT
BOARD OF PUBLIC WORKS

Grand Haven
Michigan



FIFTEENTH ANNUAL REPORT
of the
BOARD OF PUBLIC WORKS
GRAND HAVEN, MICHIGAN

For the fiscal year ended
September thirtieth
Nineteen Hundred Forty-four

**MUNICIPAL
POWER AND LIGHTING
SYSTEMS**
1896 - 1944

Cover—Lake Avenue entrance to Duncan Park.

*Page 2—Scene on water front in Grand Haven. Power Plant
at left.*

Page 10—Winter scene in harbor near Power Plant.

*Page 11—Illuminated Honor Roll of men in service on City
Hall grounds.*

Page 16—Aerial view of State Park beach at Grand Haven.



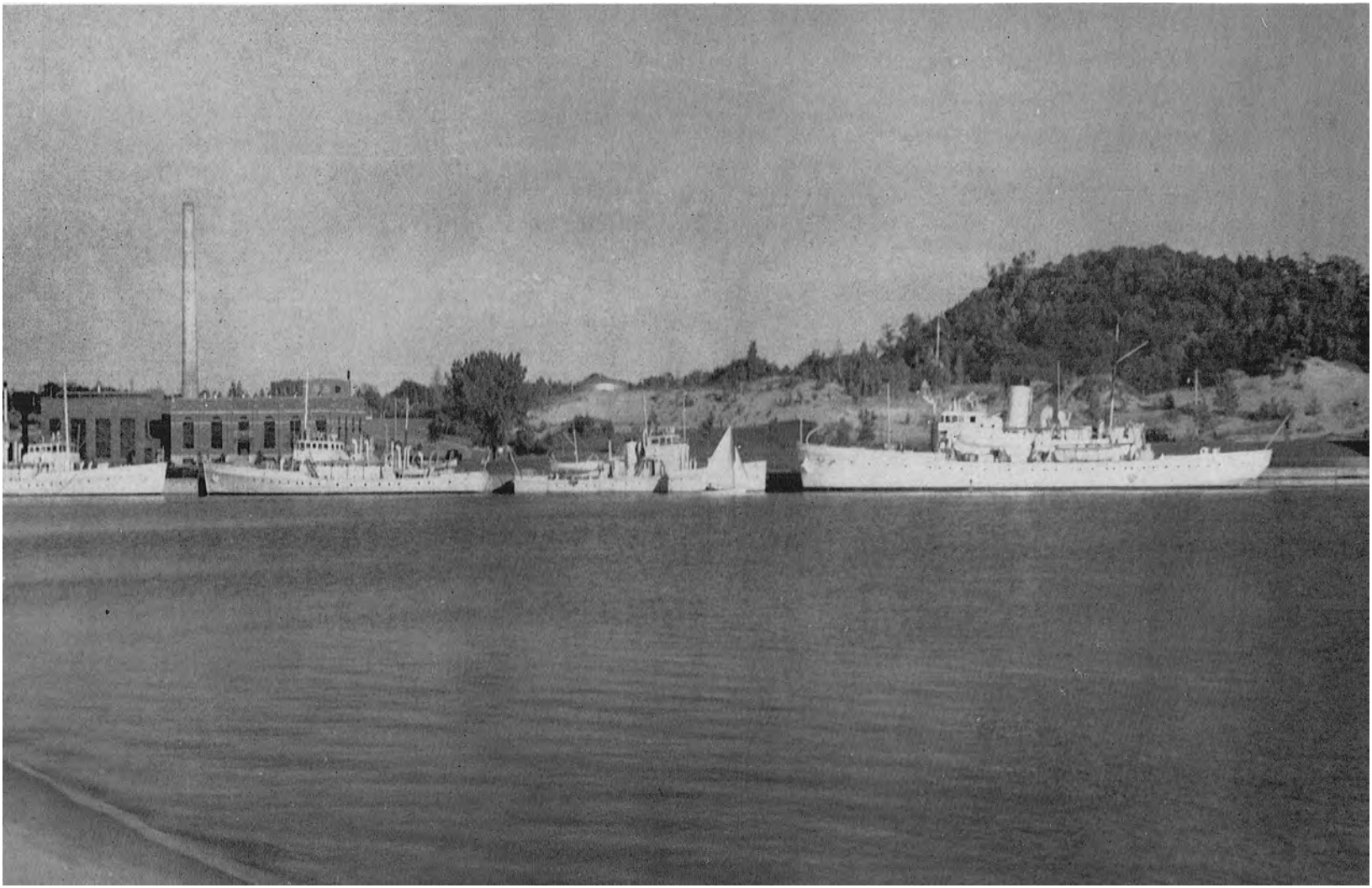
ABRAM J. WESSEL
President

NELSON H. FISHER

CLIFFORD J. WALSH

ADRIAN H. RINGELBERG ARTHUR G. WALTER

J. BRYAN SIMS
Superintendent



PERSONNEL OF THE BOARD OF PUBLIC WORKS AND LENGTH OF TIME SERVED

Members

JOHN J. MULDER*
 EDWARD L. BEHM
 JAMES H. JOHNSTON†
 O. T. SCHUBERT‡
 HARRY J. SWANSON°
 HARTGER JONKER
 HUGH P. MULLIGAN§
 ARTHUR G. WALTER
 ADRIAN H. RINGELBERG
 ABRAM J. WESSEL
 NELSON H. FISHER
 CLIFFORD J. WALSH

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
JOHN J. MULDER*		RE-ELECTED													
EDWARD L. BEHM			RE-ELECTED				PRESIDENT								
JAMES H. JOHNSTON†	PRESIDENT	PRESIDENT		RE-ELECTED											
O. T. SCHUBERT‡			PRESIDENT	PRESIDENT	RE-ELECTED	PRESIDENT				RE-ELECTED					
HARRY J. SWANSON°							RE-ELECTED	PRESIDENT			RE-ELECTED	PRESIDENT			
HARTGER JONKER			APPOINTED	ELECTED				RE-ELECTED	PRESIDENT	PRESIDENT					
HUGH P. MULLIGAN§					APPOINTED	ELECTED				RE-ELECTED	PRESIDENT				
ARTHUR G. WALTER								ELECTED					RE-ELECTED		
ADRIAN H. RINGELBERG											APPOINTED	ELECTED	PRESIDENT	PRESIDENT	PRESIDENT
ABRAM J. WESSEL											APPOINTED	ELECTED			
NELSON H. FISHER												ELECTED			
CLIFFORD J. WALSH												APPOINTED	ELECTED		

Superintendents

HARRY J. BADCON
 EDWARD L. BEHM
 J. BRYAN SIMS

Original members of Board elected are the first five listed and their terms in years as originally appointed are in the same sequence.

* John J. Mulder resigned June, 1932, and Hartger Jonker was appointed.
 † James H. Johnston resigned July, 1934, and Hugh P. Mulligan was appointed.
 ‡ O. T. Schubert resigned January, 1940, and Adrian H. Ringelberg was appointed.
 § Hugh P. Mulligan resigned January, 1940, and Abram J. Wessel was appointed.
 ° Harry J. Swanson resigned August, 1941, and Clifford J. Walsh was appointed.

THE ANNUAL REPORT

The Board of Public Works of the City of Grand Haven, Michigan submits herewith its fifteenth Annual Report of the operations of the Municipal Electric System for the fiscal year ending September 30, 1944, with comparative figures taken from the audit of the city finances recently completed by the firm of Maihofer, Moore & DeLong.

The comparative statement of operations is included as the center sheet of this report.

You will note that the operating revenues of the system increased \$6,583.21, or approximately 2 per cent, compared with the previous year, due principally to the increased usage by customers of electricity in the community, although 17 new residential meters were added to the system during the fiscal year. Electrical consumption by residential users increased 8.2 per cent, commercial usage increased 2.9 per cent and industrial power usage decreased .2 per cent.

The average yearly use of electricity by residential customers continues to increase. In 1937 the yearly usage was between 700 and 800 kwh. In 1942 this had risen to 1355 kwh, and in 1943 to 1421 kwh. This increased to 1526 kwh in 1944.

Operating revenues from residential customers increased 6.5 per cent and from commercial lighting customers 1.4 per cent. Revenues from industrial power users decreased 1.5 per cent.

While the total revenues of the system increased 2 per cent due to greater usage of electricity and the production cost per kilowatt hour showed a slight decrease due to this greater volume, the *net* per kilowatt hour received by the department decreased due to higher operating costs. There was a general increase in wages. Also, \$4,680.48 was paid into the employees pension fund established in May 1943. A substantial amount of maintenance was done during the year. Four of the Diesel engines had major overhauls, revamping them completely with new cylinder liners, etc. These overhauls were the first since 1938 on these engines, and substantially improve the expected life of the units. The electric system paid \$7,096.21 in voluntary city and public school taxes. \$9,900.00 was applied to the amortization of Municipal Hospital bonds issued in 1938-39. \$3,600.00 was paid into the general fund representing rent for use of offices in the City Hall. Substantial investments of depreciation and breakdown insurance funds were made in government bonds as announced in the local newspapers. Plans were started on expansion of the plant and will be continued.

With existing rates, as the consumption per customer increases, particularly in the case of the residential user with a fixed billing demand, the cost per kilowatt hour to the customer becomes lower and the net to the system less. This trend continued in 1944 as will be noted from the illustrative curves herein, and reflects the substantial rate reductions made in the past few years.

COMMENTS OF AUDITORS

The following are excerpts taken from the yearly audit:

"We examined the minute book of the Board, and as far as we could determine, all transactions made during the year under review were in accordance therewith.

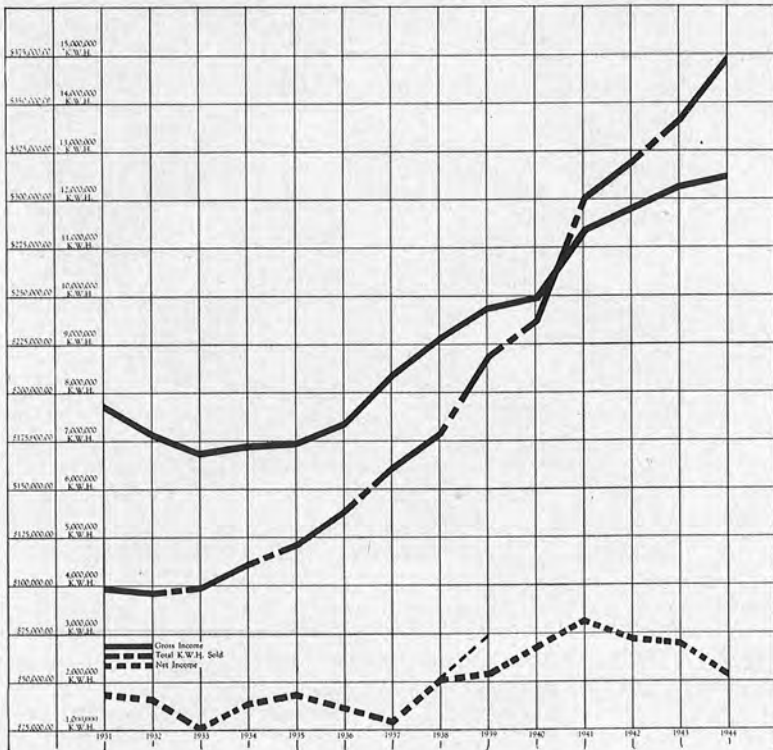
"The Department obtained the principal portion of its funds from operating income. The funds thus obtained were used for the purchase of fixed assets, for contributions to the Municipal Hospital Department, for major repairs, to increase the reserve for insurance and purchase investments.

"We determined that the reserve for insurance was funded by investments purchased and segregated in the insurance fund.

"During the year under review the Department made major repairs to the Diesel engines at a total cost of \$18,240.78. This amount was charged against the reserves for depreciation.

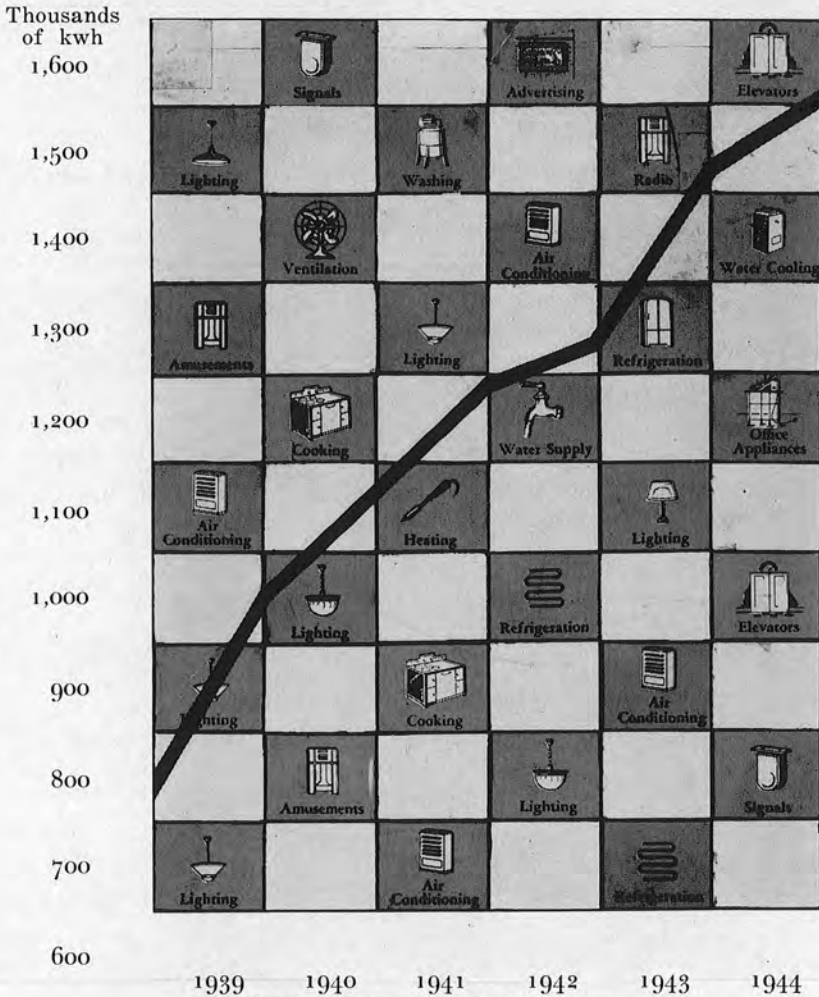
"Construction work in progress in the amount of \$158.35 represented the estimated cost of drafting plans for post-war construction projects.

Curves showing comparison of kilowatt hours sold with gross and net revenues, illustrating greater amount of current sold with correspondingly less gross and net income. (Small dotted line on net for 1938 shows amount of retroactive rate reduction returned to users in "paid" bills).



“Both the operating revenues and operating expenses increased, the increase in operating expenses being greater than the increase in operating revenues, resulting in the decrease in net operating revenue. This decrease plus the decrease in non-operating income resulted in the decrease in net income to surplus of \$14,197.80.

“The increase in operating revenues was represented principally by increased revenues from residential light and rural sales. Operating expenses increased in some divisions and decreased in others, the greater increases being in power plant labor, fuel, maintenance of Diesel engines and pension contributions.



Load growth curve of the system.

As the electrical usage per customer increases, particularly in the case of the residential user, the cost per kilowatt decreases. The average cost to the customer per kilowatt hour in 1937 was 3.3c, in 1941 2.6c and in 1944 2.21c.

ON A KILOWATT HOUR GENERATED BASIS

"The following comparison shows the amount of income and expense per kilowatt hour metered in each of the two years:

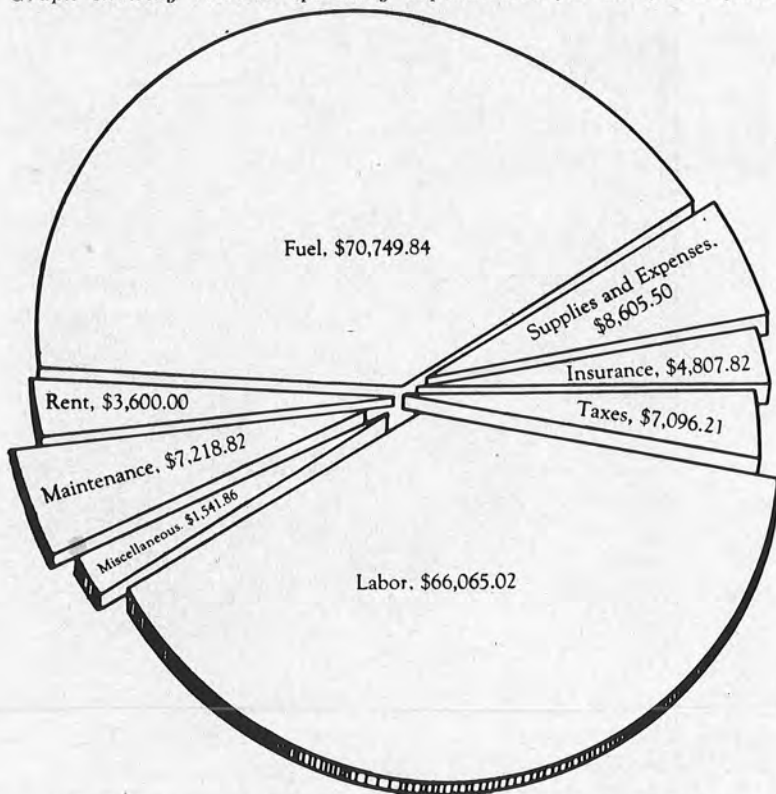
	1944	1943	Increases Decreases*
Operating Revenues	\$ 0.02099	\$ 0.02247	\$ 0.00148*
Operating Expenses	0.01736	0.01753	0.00017*
Net Operating Revenues	\$ 0.00363	\$ 0.00494	\$ 0.00131*
Non-operating Income	0.00004	0.00011	0.00007*
Net Income to Surplus	\$ 0.00367	\$ 0.00505	\$ 0.00138*

"On a kilowatt hour basis, the operating revenues decreased 6.59%, while the operating expenses decreased 0.01%.

"Summarizing the above comparisons, the following facts are to be noted:

1. The total operating revenues increased 2.14%, while the revenues per kilowatt hour decreased 6.59%.
2. The total operating expenses increased 8.31%, while the expenses per kilowatt hour decreased 0.01%.
3. Total kilowatt hours generated increased 2.50%, and the total kilowatt hours metered increased 9.3%."

Graph showing relative operating expenditures for the fiscal year.



Labor on new construction in addition to the above, \$1,955.47.

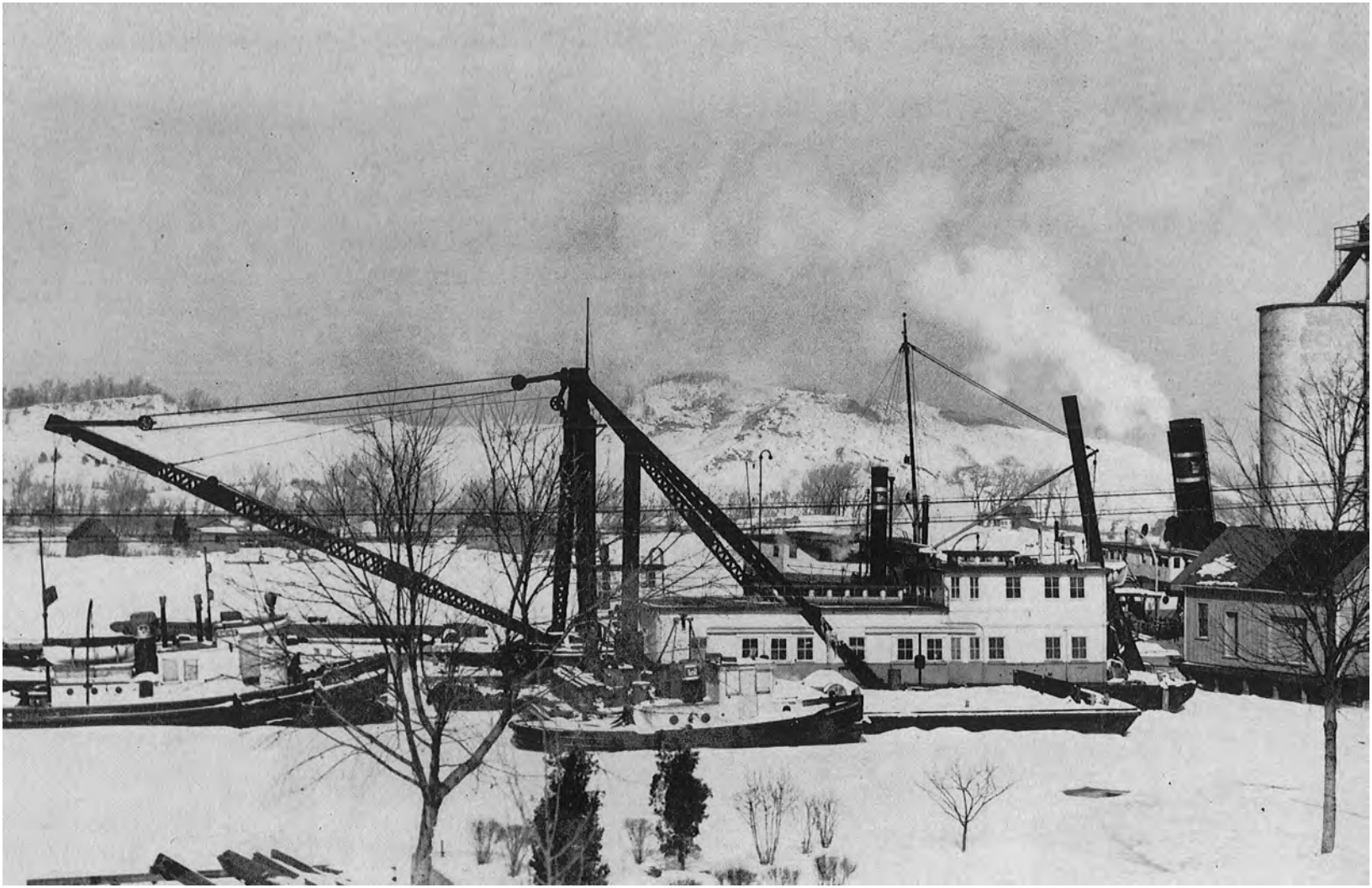
MUNICIPAL POWER AND LIGHT DEPARTMENT

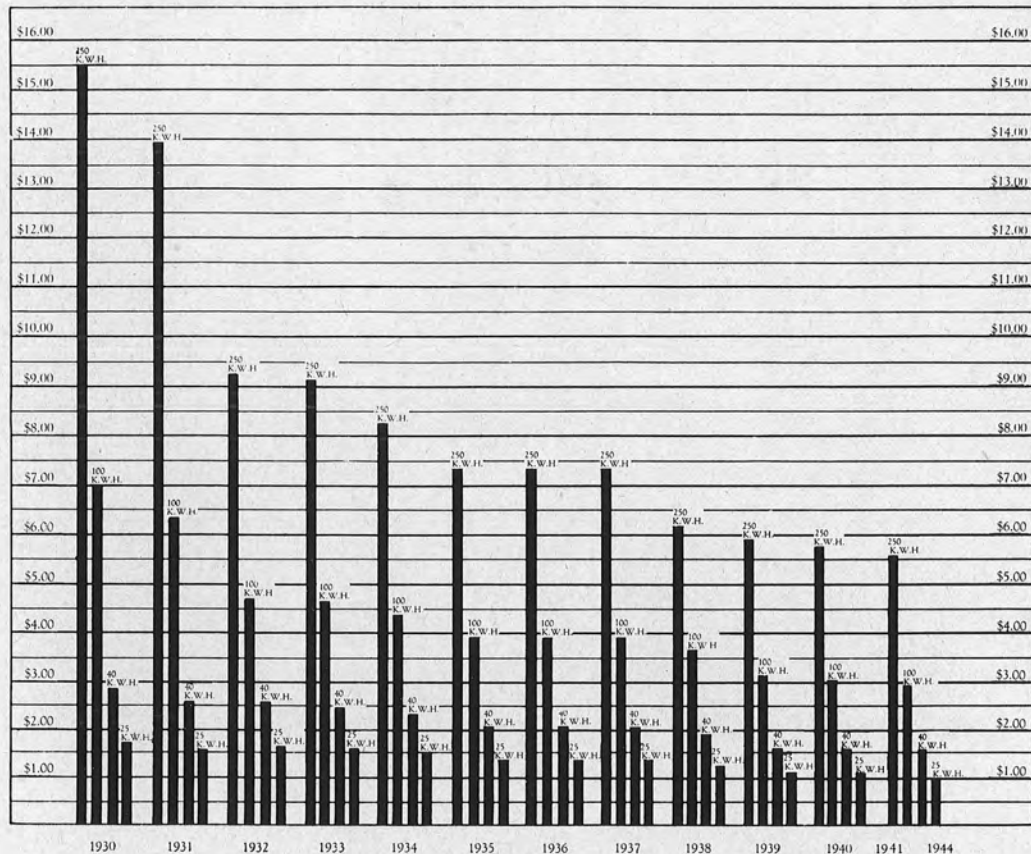
COMPARATIVE STATEMENT OF OPERATIONS

Years Ending September 30, 1943 and 1944

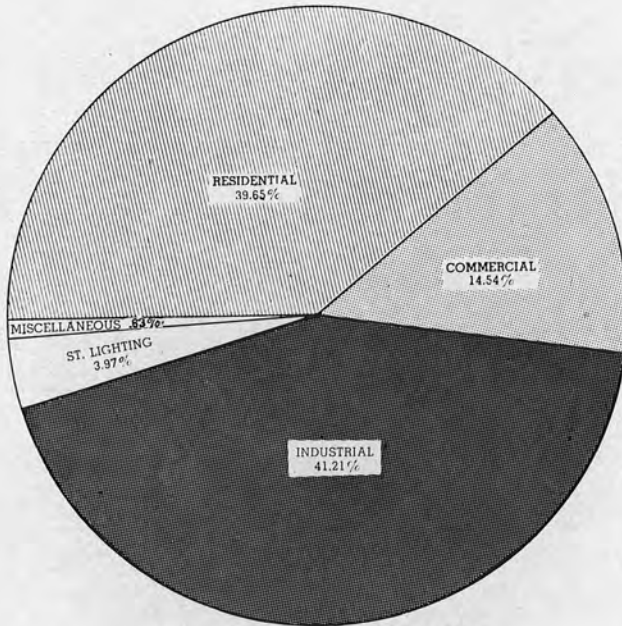
	Year Ending September 30, 1944	Year Ending September 30, 1943	Increase or Decrease*
OPERATING REVENUE	\$313,825.28	\$307,242.07	\$ 6,583.21
Miscellaneous Revenue	589.04	1,437.50	848.46*
Total Revenue	\$314,414.32	\$308,679.57	\$ 5,734.75
OPERATING EXPENSES (Power Plant)			
Superintendence and Labor	\$ 28,313.51	\$ 24,182.49	\$ 4,131.02
Fuel	70,749.84	63,780.63	6,969.21
Maintenance and Repairs	9,293.40	3,886.22	5,407.18
Supplies and Expenses	7,028.51	6,815.88	212.63
Total Plant Expenses	\$115,385.26	\$ 98,665.22	\$16,720.04
DISTRIBUTION EXPENSES (Power Lines, Etc.)			
Salaries and Labor	\$ 12,347.31	\$ 12,441.39	\$ 94.08*
Transportation (Truck Upkeep, Etc.)	601.33	629.46	28.13*
Supplies and Expenses	787.63	987.83	200.20*
Total Distribution Expenses	\$ 13,736.27	\$ 14,058.68	\$ 322.41*
UTILIZATION EXPENSES	\$ 1,766.74	\$ 1,717.95	\$ 48.79
COMMERCIAL EXPENSES	\$ 1,616.07	\$ 1,579.99	\$ 36.08
GENERAL EXPENSES (Office Administration)			
Salaries	\$ 13,675.34	\$ 12,537.09	\$ 1,138.25
Office Supplies and Expenses	789.36	889.84	100.48*
Rent	3,600.00	3,600.00	-----
Insurance (Fire and Breakdown)	4,807.82	4,424.21	383.61
Interest on Meter Deposits	385.79	433.53	47.74*
Interest—Other	-----	157.53	157.53*
Advertising	318.11	302.27	15.84
Bad Debts	88.34	198.24	109.90*
Transportation	576.81	529.84	46.97
Pensions	4,680.48	1,716.37	2,964.11
Miscellaneous	1,162.47	878.38	284.09
Total General Expenses	\$ 30,084.52	\$ 25,667.30	\$ 4,417.22
TOTAL OPERATING EXPENSES	\$162,588.86	\$141,689.14	\$20,899.72
NET INCOME (Before Taxes and Depreciation)	\$151,825.46	\$154,473.39	\$ 2,647.93*
DEDUCT:			
Taxes (City and School)	\$ 7,096.21	\$ 7,906.33	\$ 810.12*
Depreciation	89,911.96	90,069.01	157.05*
	\$ 97,008.17	\$ 97,975.34	\$ 967.17*
NET INCOME	\$ 54,817.29	\$ 69,015.09	\$14,197.80*

* Denotes Decrease

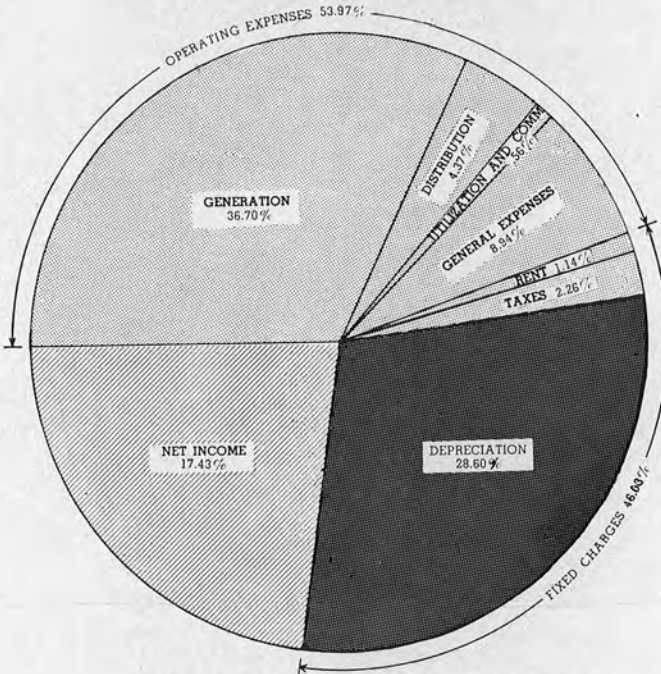




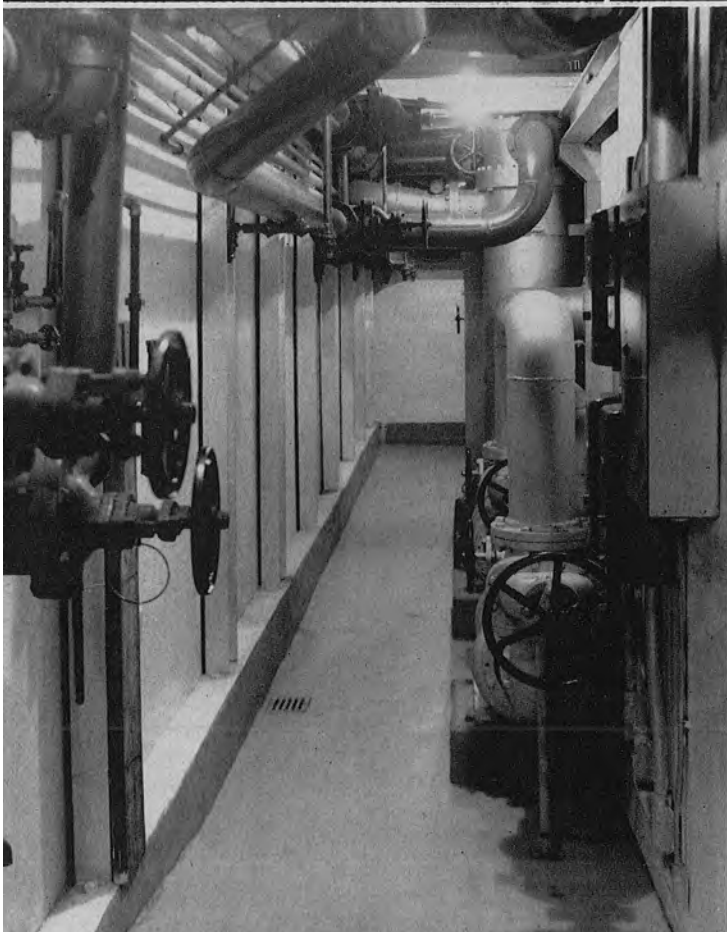
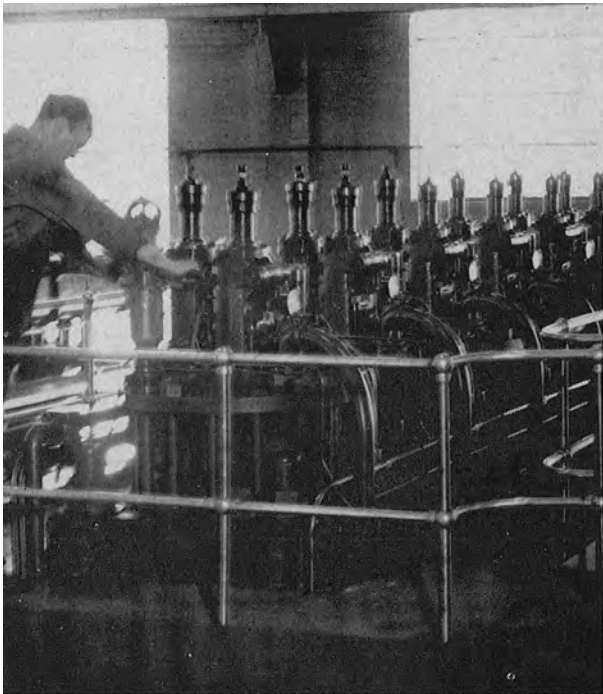
Cost of 25, 40, 100 or 250 Kilowatt Hours to Residence Customers since 1930.



SOURCE OF REVENUES
 Total area of chart equals \$314,414.32

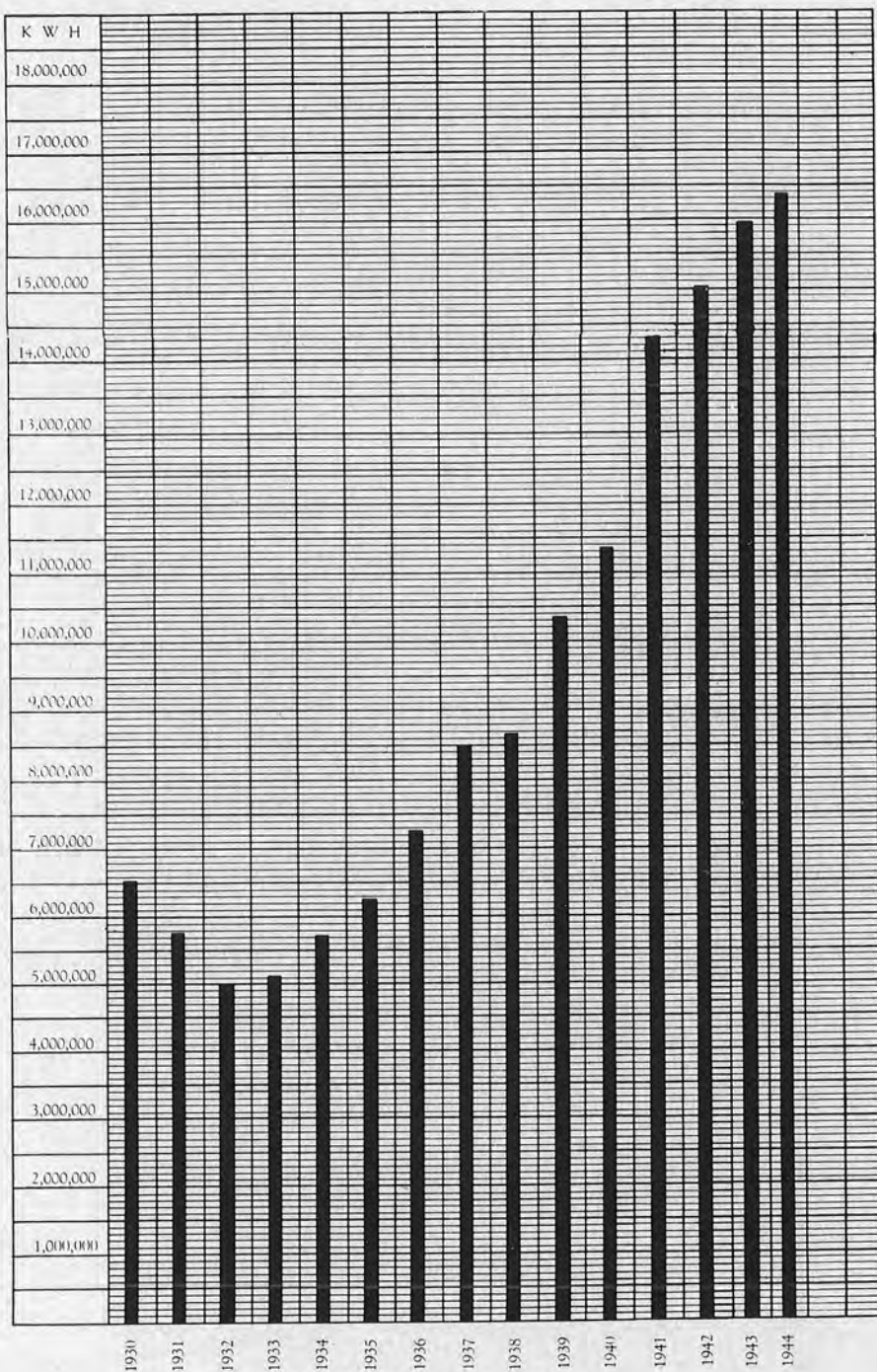


DISPOSITION OF REVENUES
 Total area of chart equals \$314,414.32



Above—On top of the 9 cylinder, 21½" bore by 31" stroke No. 4 Diesel generating unit showing (left) newly acquired air-driven wrench for the quick removal of large nuts on cylinder head bolts and (right) old method using sledge and wrench.

Belcw—Scene of aisleway in basement between No. 3 and No. 4 Diesel generating units.



Graph of Kilowatt Load Growth Since 1930.



