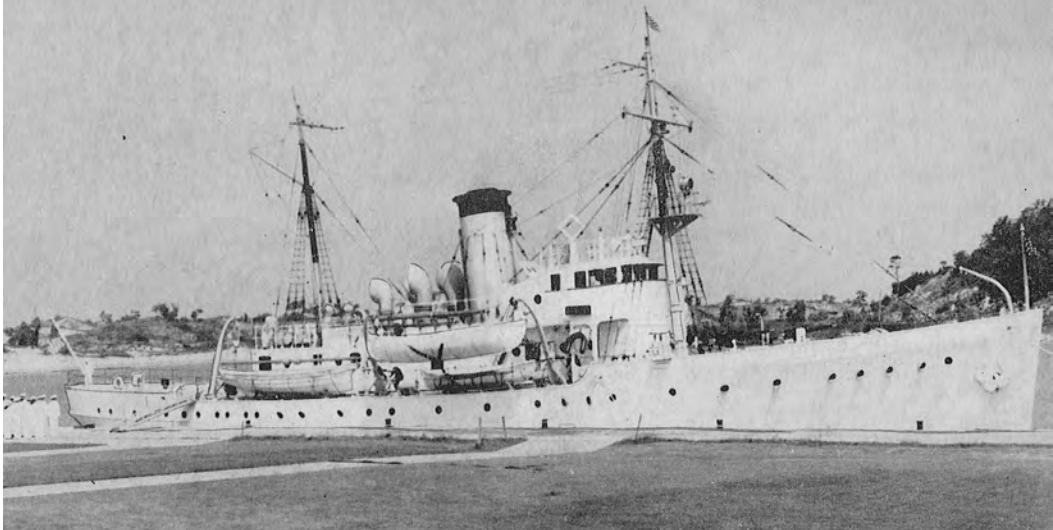


1942

ANNUAL REPORT  
BOARD OF PUBLIC WORKS

*Grand Haven*  
*Michigan*



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

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

**MUNICIPAL  
POWER AND LIGHTING  
SYSTEMS**  
1896 - 1942

*Cover—Coast Guard Cutter Escanaba in Grand Haven Harbor.  
Page 2—Coast Guard Training Station in foreground.*



ADRIAN H. RINGELBERG  
*President*

NELSON H. FISHER  
CLIFFORD J. WALSH

ARTHUR G. WALTER  
ABRAM J. WESSEL

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.....

## Superintendents

HARRY J. BADCON.....

EDWARD L. BEHM.....

J. BRYAN SIMS.....

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
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	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
ABRAM J. WESSEL											APPOINTED ELECTED		
NELSON H. FISHER												ELECTED	
CLIFFORD J. WALSH												APPOINTED	ELECTED
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 submits for your information the thirteenth annual report of the operations of the Municipal Electric System for the fiscal year ending September 30, 1942, with comparative figures taken from the audit of the city finances recently completed by the firm of Maihofer, Moore & DeLong.

Operating revenues for the year under review increased \$11,814.84 over the previous year, an increase of 4.11%. Electrical consumption by residential and industrial power customers increased while commercial lighting usage decreased. The increase by power users was 3.4% and the residential users 16.3%. The commercial lighting showed a decrease of 7.4%. The average yearly kilowatt hour consumption by residential users increased 76 KWH. Ninety residential meters were added to the system.

Total power plant operating expenses increased \$24,241.45 due to larger loads and increased cost of fuel, labor and maintenance.

Distribution and commercial expenses decreased slightly.

Voluntary city and school taxes were paid in the amount of \$4,246.40. \$15,600.00 was paid into the general fund of the city, which was the same amount paid in the previous year.

The decrease in the net and gross incomes on a kilowatt hour basis for the fiscal year was as anticipated and predicted in the previous annual report, wherein it was estimated that there would be a decrease due to substantial rate reductions put into effect in June, 1941. Increased expenses also contributed materially to the decrease in net.

The total increase in kilowatt hour consumption per residential customer was less than in the previous year, due in no small measure to the drastic curtailment of electrical appliances available. The conversion of industrial plants from normal civilian production to the production of war materials did not cause an unusually large increase in industrial power usage.

### COMMENTS OF AUDITORS

The following are excerpts taken from the yearly report:

"Operating revenues and operating expenses increased, the increase in operating expenses being greater than that in operating revenues, and the resulting decrease in net operating revenue was approximately equal to the decrease in net income to surplus.

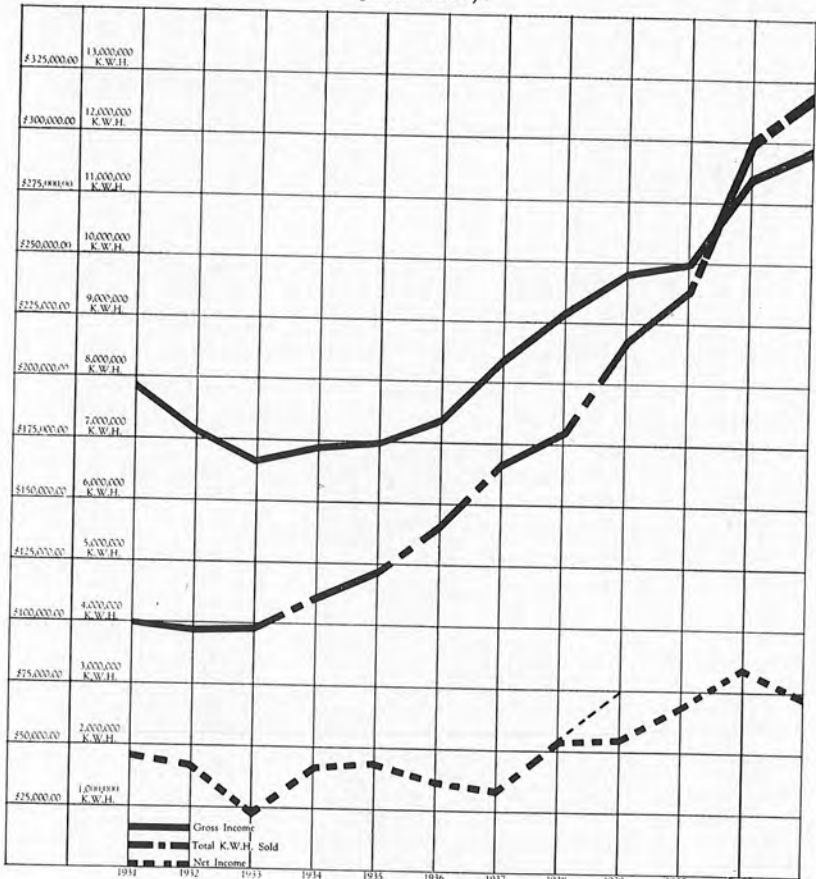
"The increase in operating revenues was represented principally by increased revenues from the sale of residence light and

industrial power. Operating expenses increased in some divisions and decreased in others. There were substantial increases in power plant supplies and expenses and maintenance. The largest increase in operating expenses was in the cost of fuel oil.

"The number of kilowatt hours generated for the two years was as follows:

Kilowatt hours generated in the year ended	
September 30, 1942 .....	15,024,800
Kilowatt hours generated in the year ended	
September 30, 1941 .....	14,308,600
Increase in kilowatt hours generated .....	716,200

*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).*



## ON A KILOWATT HOUR GENERATED BASIS

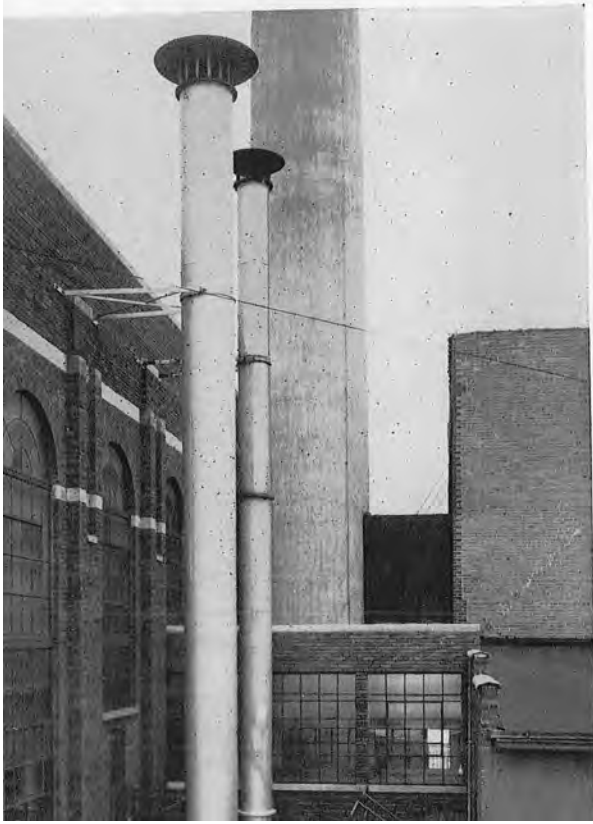
	1942	1941	<i>Decreases*</i>
Operating Revenues .....	\$0.01985	\$0.02002	\$0.00017*
Operating Expenses .....	0.01501	0.01411	0.00090
Net Operating Revenue .....	\$0.00484	\$0.00591	\$0.00107*
Non-Operating Income (Net) ..	0.00007	0.00003	0.00004
Gross Income .....	\$0.00491	\$0.00594	\$0.00103*
Non-Operating Expenses .....	.....	.....	.....
Net Income to Surplus .....	\$0.00491	\$0.00594	\$0.00103*

“On a kilowatt hour basis, the operating revenues decreased 0.85%, while the operating expenses increased 6.38%.

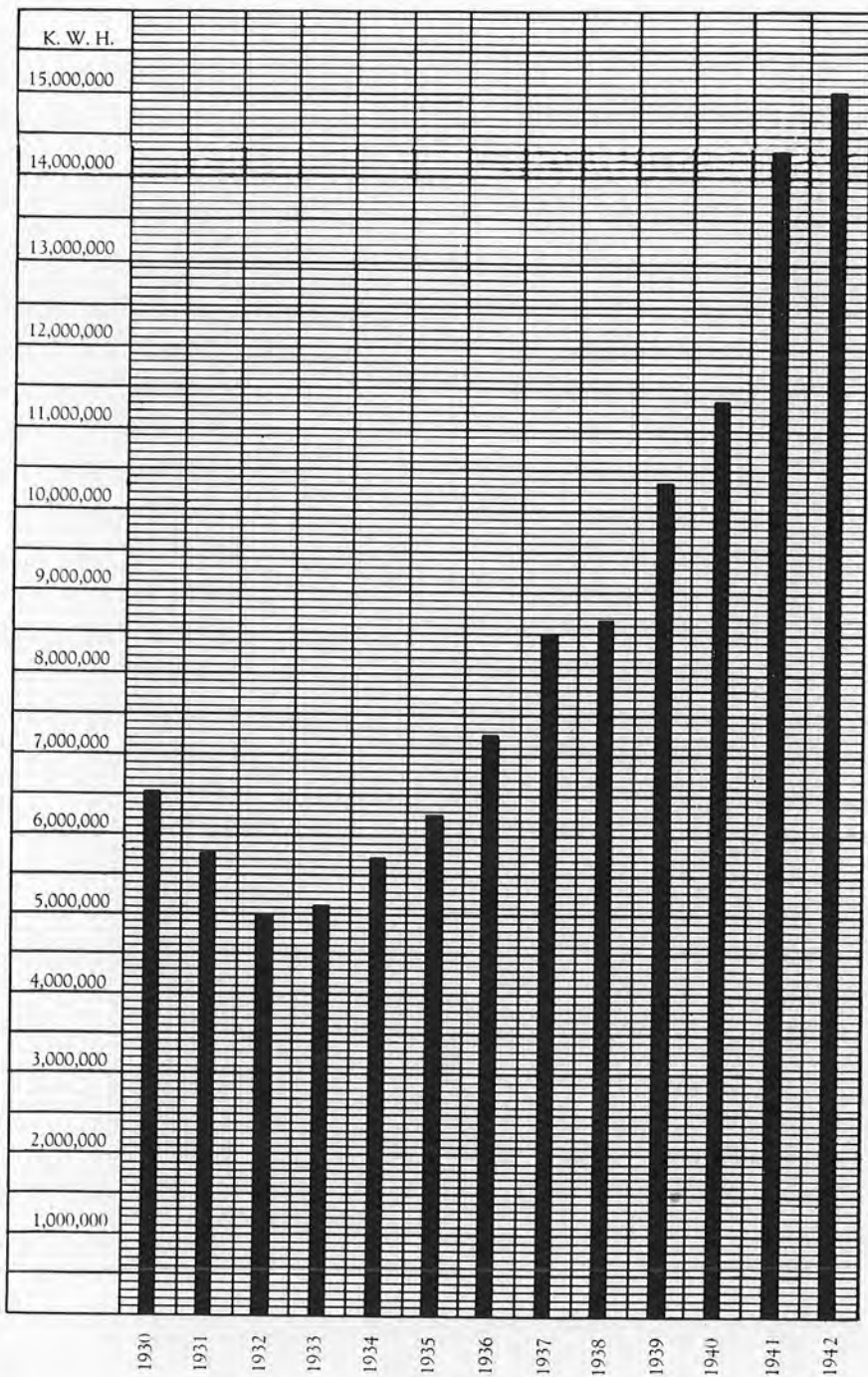
“Summarizing the above comparison, it is to be noted that the number of kilowatt hours generated increased 5.01%. Because of this increase in volume, the operating revenues increased 4.12%. Operating expenses increased 11.73% due to the increased cost of materials and supplies. The operating revenues per kilowatt hour, however, decreased 0.85% while the operating expenses increased 6.38%.

“In explanation of the apparent discrepancy between the increase in total operating revenues and the decrease therein on a kilowatt hour basis, it was noted that the rate was lowered in

the last third of the preceding fiscal year, and the lowered rate was in effect during the whole of the year ended September 30, 1942.”



*Recently constructed passage way between Diesel and Steam plants. Air intake down pipes into concrete air filter house for the 3850 BHP and 2250 BHP units may be seen in the foreground.*



*Graph of Kilowatt Load Growth Since 1930*



# MUNICIPAL POWER AND LIGHT DEPARTMENT

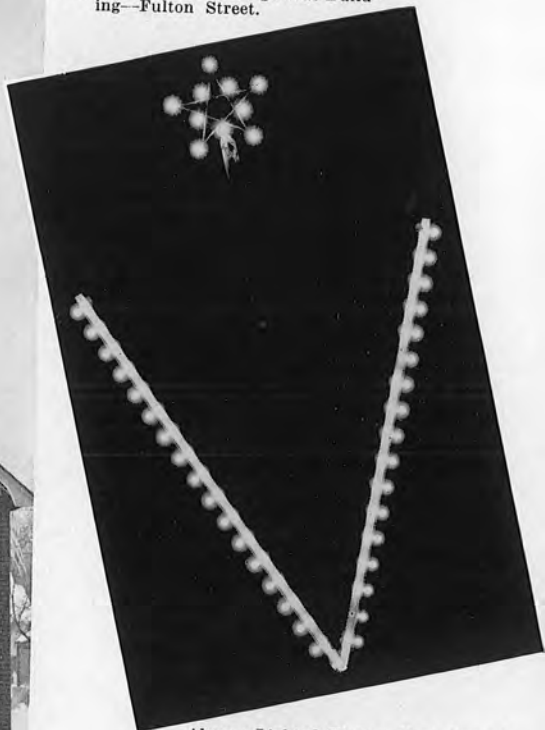
## COMPARATIVE STATEMENT OF OPERATIONS

Years Ending September 30, 1941 and 1942

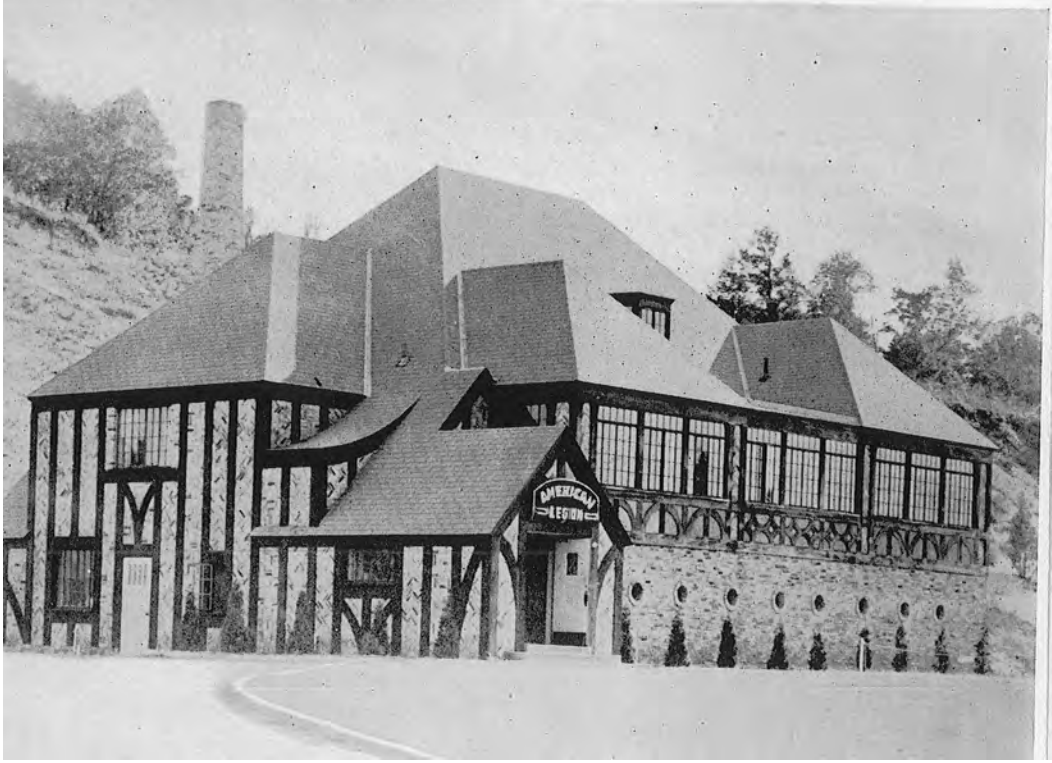
	Year Ending September 30, 1942	Year Ending September 30, 1941	Increase or Decrease*
OPERATING REVENUE.....	\$298,265.05	\$286,450.21	\$11,814.84
Miscellaneous Revenue.....	1,090.07	407.80	682.27
Total Revenue.....	\$299,355.12	\$286,858.01	\$12,497.11
OPERATING EXPENSES (Power Plant)			
Superintendence and Labor.....	\$ 22,485.15	\$ 21,676.86	\$ 808.29
Fuel.....	63,277.68	47,917.47	15,360.21
Maintenance and Repairs.....	12,287.99	5,144.89	7,143.10
Supplies and Expenses.....	7,954.57	7,024.72	929.85
Total Plant Expenses.....	\$106,005.39	\$ 81,763.94	\$24,241.45
DISTRIBUTION EXPENSES (Power Lines, Etc.)			
Salaries and Labor.....	\$ 10,516.69	\$ 11,398.21	\$ 881.52*
Transportation (Truck Upkeep, Etc.).....	458.74	550.96	92.22*
Supplies and Expenses.....	983.42	981.48	1.94
Total Distribution Expenses.....	\$ 11,958.85	\$ 12,930.65	\$ 971.80*
UTILIZATION EXPENSES.....	\$ 2,588.67	\$ 2,021.17	\$ 567.50
COMMERCIAL EXPENSES.....	\$ 1,496.30	\$ 1,604.07	\$ 107.77*
GENERAL EXPENSES (Office Administration)			
Salaries.....	\$ 10,919.95	\$ 10,091.31	\$ 828.64
Office Supplies and Expenses.....	922.61	935.83	13.22*
Rent.....	3,600.00	3,600.00	-----
Insurance (Fire and Breakdown).....	4,700.00	4,700.00	-----
Interest on Meter Deposits.....	511.72	518.12	6.40*
Interest—Other.....	115.01	-----	115.01
Advertising.....	287.38	604.54	317.16*
Bad Debts.....	232.70	258.74	26.04*
Transportation.....	363.03	457.43	94.40*
Miscellaneous.....	1,180.12	1,439.29	259.17*
Total General Expenses.....	\$ 22,832.52	\$ 22,605.26	\$ 227.26
TOTAL OPERATING EXPENSES.....	\$144,881.73	\$120,925.09	\$23,956.64
NET INCOME (Before Taxes and Depreciation).....	\$154,473.39	\$165,932.92	\$11,459.53*
DEDUCT:			
Taxes (City and School).....	\$ 4,246.40	\$ 5,167.98	\$ 921.58*
Depreciation.....	76,365.33	75,727.38	637.95
Change-over from 2 to 3 Phase.....	-----	19.75	19.75*
Total Deductions.....	\$ 80,611.73	\$ 80,915.11	\$ 303.38*
NET INCOME.....	\$ 73,861.66	\$ 85,017.81	\$11,156.15*

\* Denotes Decrease

Left: Veterans' of Foreign War Building—Fulton Street.



Above: Lighted Victory V at foot of Washington Street.  
Below: American Legion Building—Harbor Avenue.



## THE FISCAL YEAR

### LOAD GROWTH

In studying the operating records of the electric system, it is apparent that the electric load, while increasing over the previous year, did not show the substantial increase experienced in past years. It is also evident that this was almost wholly due to the war. Sale of electric appliances was drastically restricted, resulting in the curtailment of the normal rapid load growth in residential usage. War conditions also materially affected the commercial lighting usage. This was particularly noticeable in filling stations and other businesses more directly affected by war time conditions.

It was noted that the very substantial increase in industrial power usage expected by many in the electric power business did not materialize to the extent it had been anticipated, except in areas where large, new war production plants were built, inasmuch as many manufacturing concerns were in the process of changing from peace time to war time production. However, indications are that the local plants are now gradually increasing power usage due to the volume of war production.

### EXTENSIONS MADE

Due to war time conditions and restrictions on critical materials no major distribution extensions were made. Some urgently needed distribution line reconstruction was done, however, including the rebuilding of main feeder lines on Water Street and in other sections of the city.

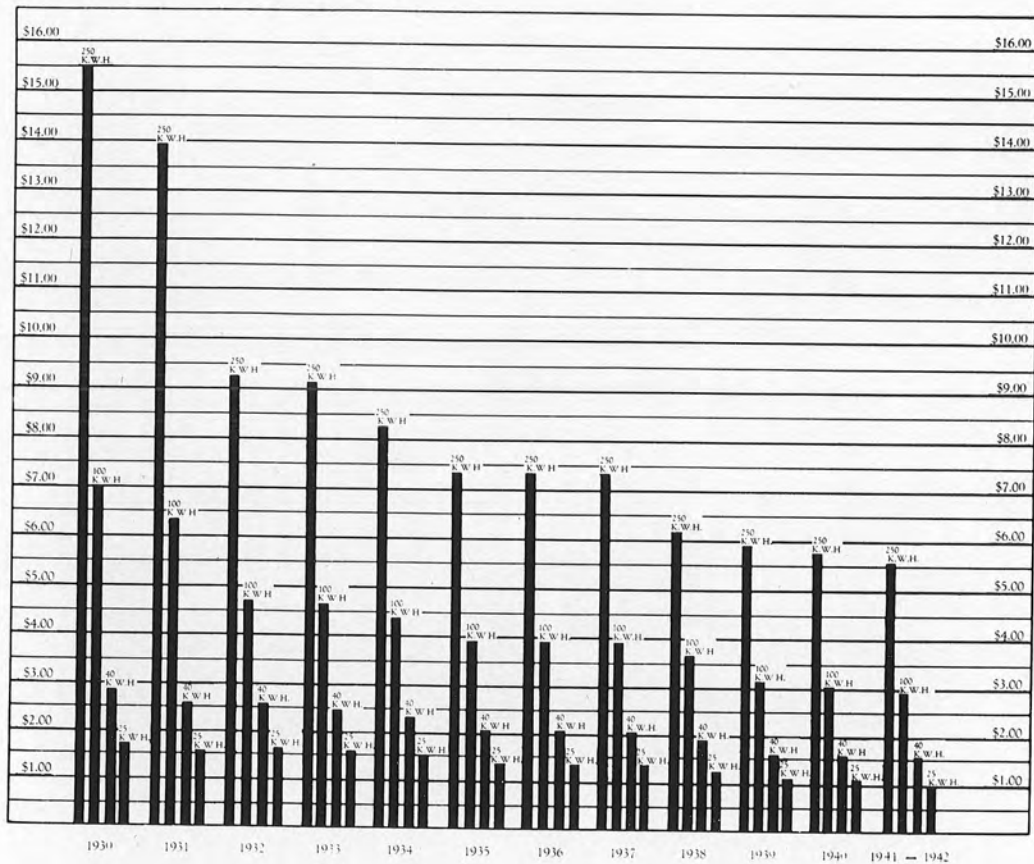
Transformer capacity was increased to several of the industrial plants who had made building extensions during the year, including the Ottawa Steel Products, Wm. H. Keller, Inc. and Dake Engine Company. Transformer capacity was also increased at the Bastian-Blessing Company, the Challenge Machinery Company and at other locations.

### COMPLETION AND ACCEPTANCE OF NEW UNIT

The new 9 cylinder, 3850 H.P., 2 cycle Nordberg Diesel engine direct connected to a 3390 KVA, 6900-7200 volt Allis-Chalmers A.C. generator was put into operation early in the year and, after test runs, was formally accepted from the manufacturer August 3, 1942.

The new unit supplements the 2250 H.P. Nordberg unit installed in 1936-37 and the 1200 H.P. De La Vergnes, two of which were installed in 1930 and one in 1934, and increased the total horsepower to nearly ten thousand. Increase in peak loads has justified the increased capacity made possible through the installation of this unit which has been operating sixteen to eighteen hours a day since its acceptance.

The Foster Wheeler waste heat boiler, purchased and installed as a part of the new unit project and utilizing the ex-



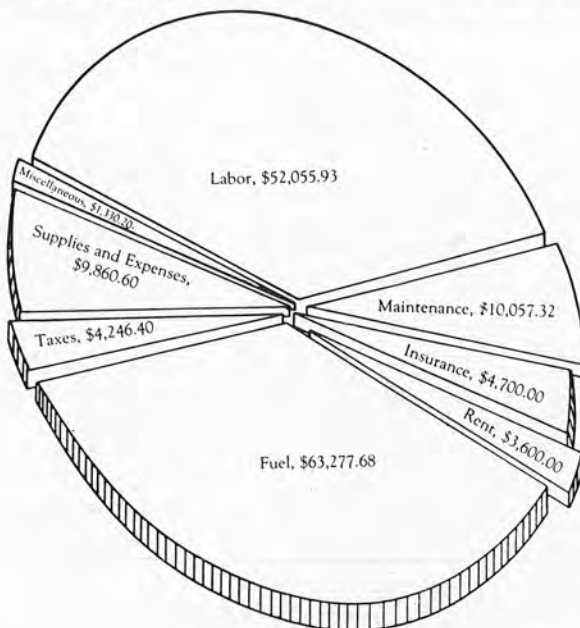
*Cost of 25, 40, 100 or 250 Kilowatt Hours to Residence Customers Since 1930*

haust from the new 3850 H.P. engine to generate steam, has supplied even more steam than that needed to heat both the Diesel and steam plants and the water pumping room. When the steam power plant is not operating, the excess steam from the waste heat boiler is used to keep the power boilers and piping of the steam plant warm so that it can be put into service more quickly if needed. This waste heat steam is available while the engine is running sixteen to eighteen hours per day. During the remaining hours steam is furnished by the fuel fired auxiliary heating boiler which formerly operated twenty-four hours per day during winter months. Thus the waste heat boiler is effecting substantial savings in fuel.

### PASSAGEWAY BETWEEN TWO PLANTS

When the Diesel plant was originally constructed in 1929-30 and the addition made in 1936-37, an indirect passageway between the two buildings was arranged over the top of the air filter houses. However, this was uncovered and hazardous for the operating personnel to use, particularly during the winter months, and in the past year a more direct enclosed passageway of brick, concrete and steel was constructed. This provides a direct connection between the turbine room of the steam plant and the operating floor of the Diesel plant, substantially improving operating conditions.

*Graph showing relative operating expenditures for the fiscal year.*



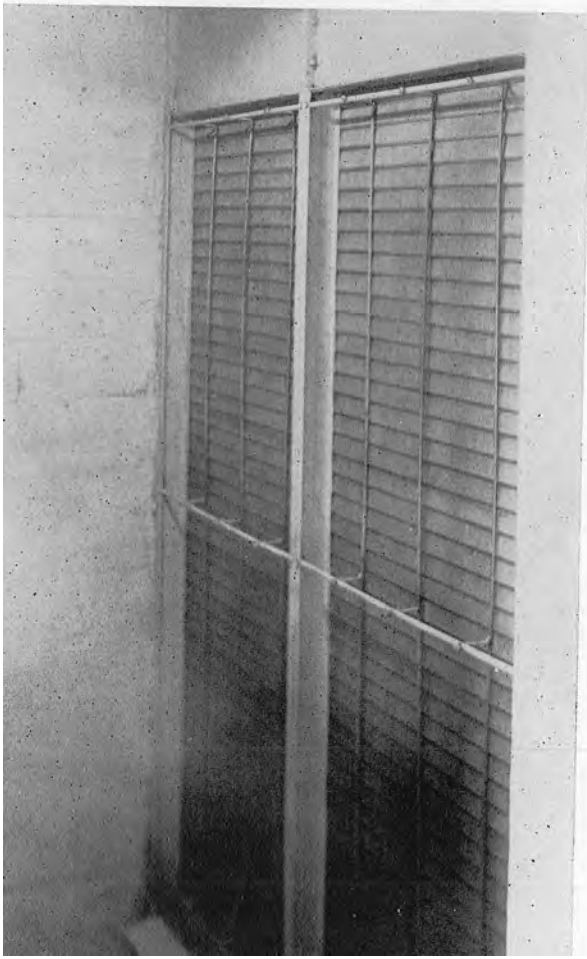
In addition to the above, \$16,375.91 was expended for labor on new construction.

## EMPLOYEE'S RETIREMENT PLAN

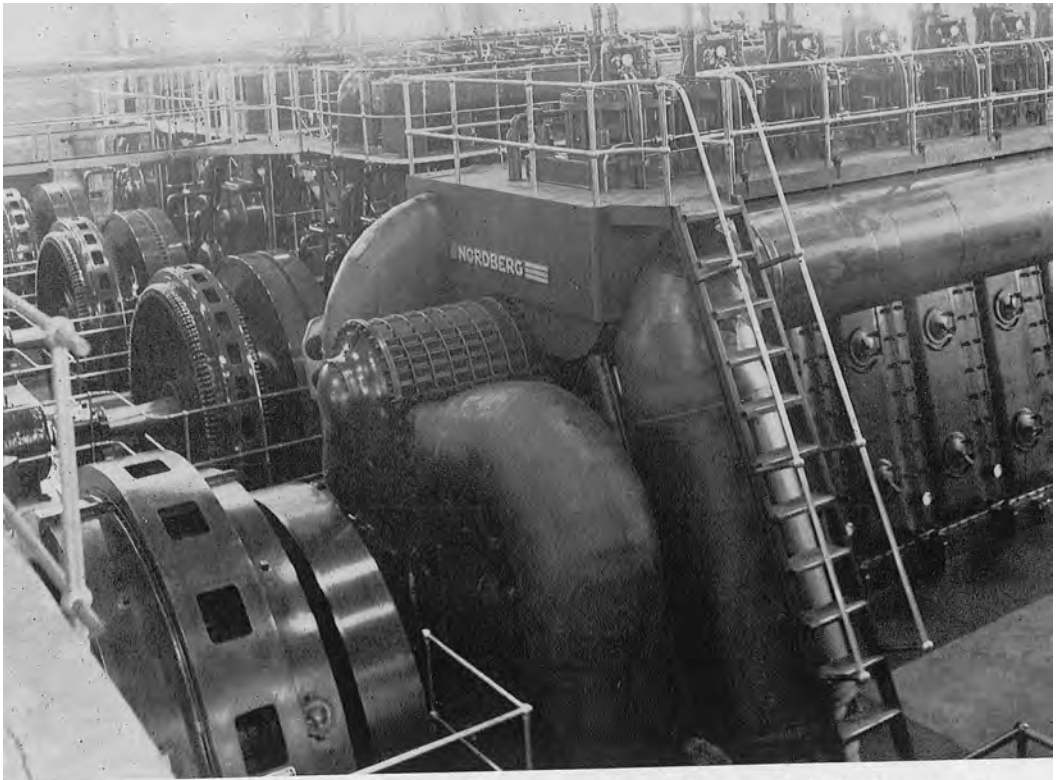
During the year a member of the Board and the superintendent served on a committee composed of citizens and city officials appointed by the Mayor to make a study of a retirement plan for all city employees. The Committee, following a preliminary study, obtained the services of an actuary, and after working out numerous details of a plan which it thought would meet the requirements of the employees and the approval of the citizens, submitted it to the Council and Board. A Charter amendment was then drawn up to be voted upon at the fall election.

The plan provides for retirement at the age of sixty-five with contributions to the retirement fund of five per cent of annual wages by employees and approximately seven per cent by each department. The difference of approximately two per cent in

the amounts paid by the employees and the departments is to provide for a retirement reserve to cover the period of service of the older employees rendered prior to the adoption of the plan which will become effective May 1, 1943.

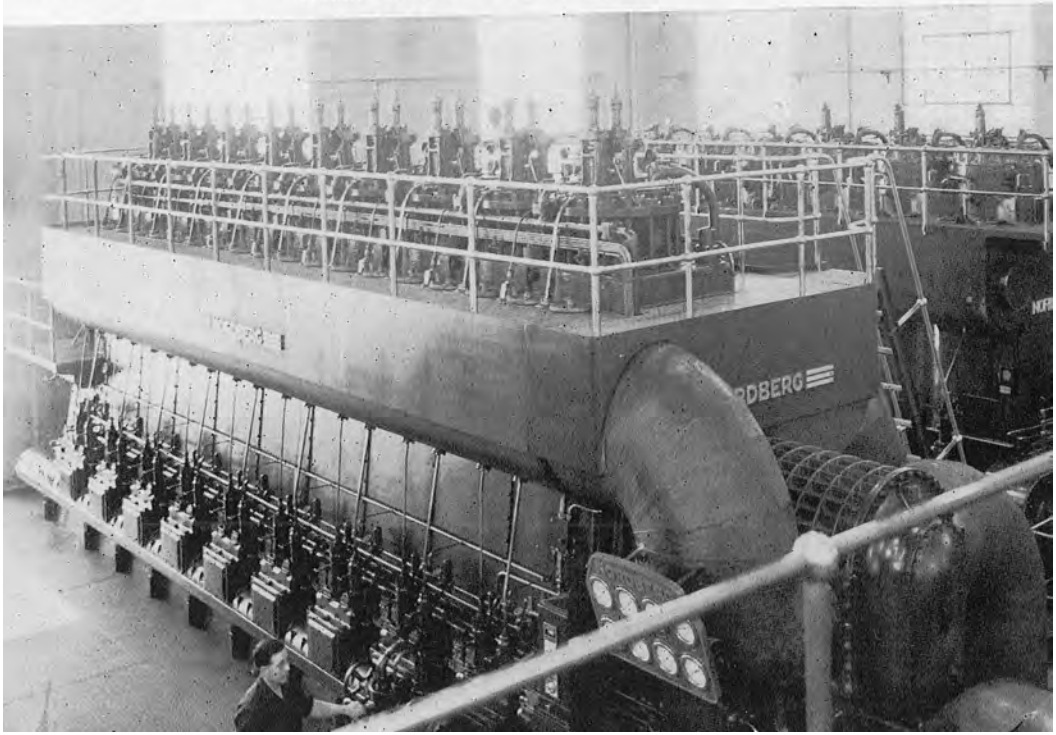


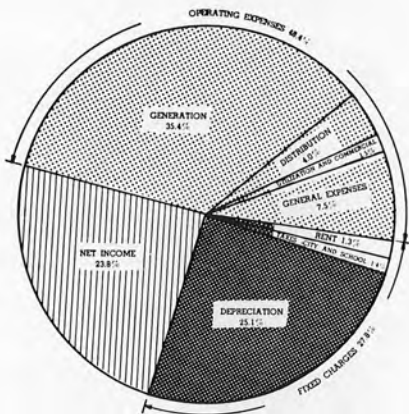
*Automatically Controlled Self Cleaning Air Filter for 3850 BHP Unit. A traveling screen passes through an oil bath eliminating the necessity of hand cleaning.*



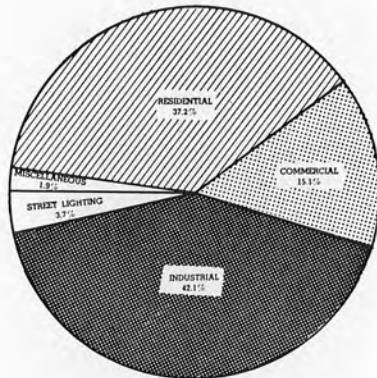
*Engine Room view showing 3850 BHP Nordberg Allis Chalmers Unit in foreground and three DeLaVergne Elliot Units in background*

*Another view of Engine Room showing 3850 BHP Unit in foreground and 2250 BHP Nordberg Elliott Unit in background*

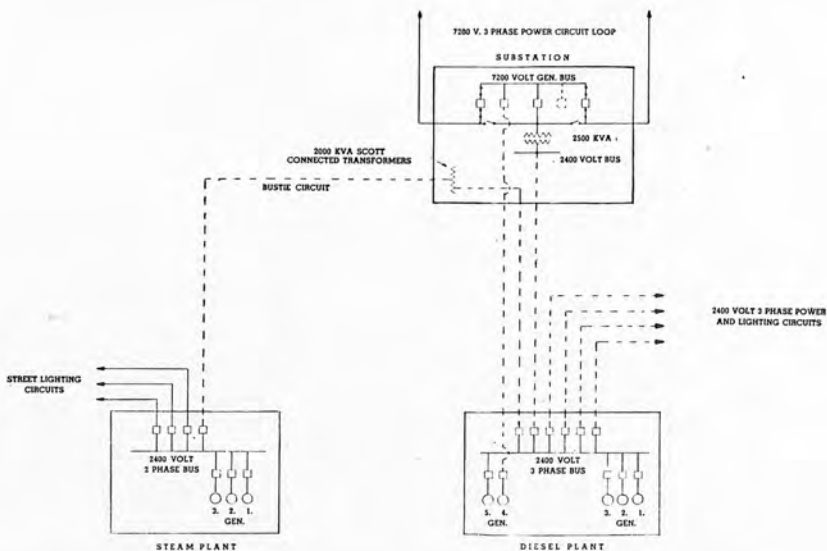




**DISPOSITION OF REVENUES**  
 Total area of chart equals \$299,355.12



**SOURCE OF REVENUES**  
 Total area of chart equals \$299,355.12



*Electrical Diagram of Principal Circuits in Steam, Diesel Plants and Steel Sub-Station*