

1947
ANNUAL REPORT
BOARD OF PUBLIC WORKS

Grand Haven

Michigan



51st YEAR
1896 -- 1947

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

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

**MUNICIPAL
POWER AND LIGHTING
SYSTEM**
1896 - 1947

Cover — Scene on Grand River adjacent to Power Plant.



NELSON H. FISHER
President

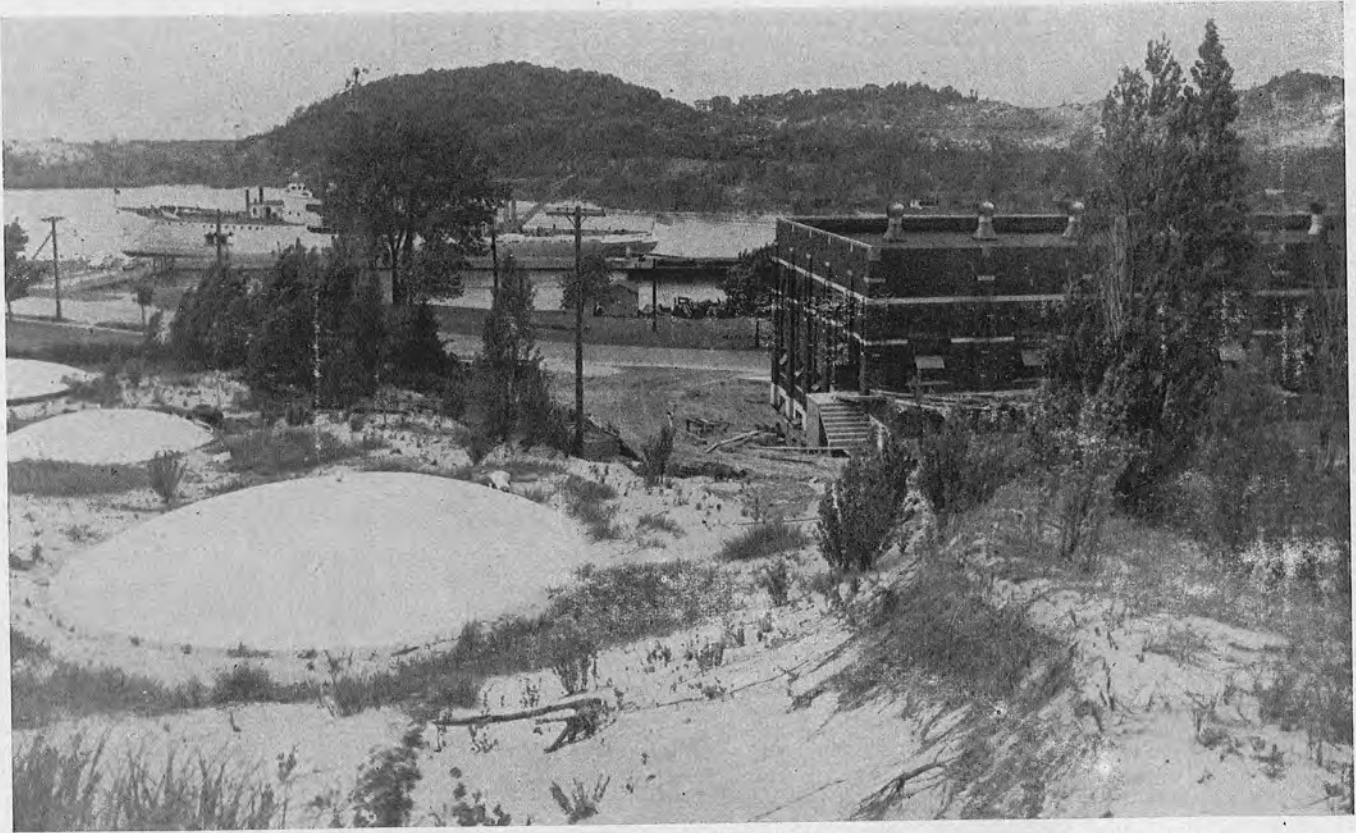
HUGH P. MULLIGAN

CLIFFORD J. WALSH

ADRIAN H. RINGELBERG

ABRAM J. WESSEL

J. BRYAN SIMS
Superintendent



New Diesel plant extension under construction. Three fuel oil storage tanks in foreground, and Diesel powered ice breaker S. S. Mackinaw lying in Grand River nearby.

THE ANNUAL REPORT

The Board of Public Works of the City of Grand Haven, Michigan submits herewith its eighteenth Annual Report of the operations of the Municipal Electric System (established in 1896) for the fiscal year ending September 30, 1947 with comparative figures taken from the audit of the city finances recently completed by the firm of Maihofer, Moore & DeLong, certified public accountants.

COMMENTS OF AUDITORS

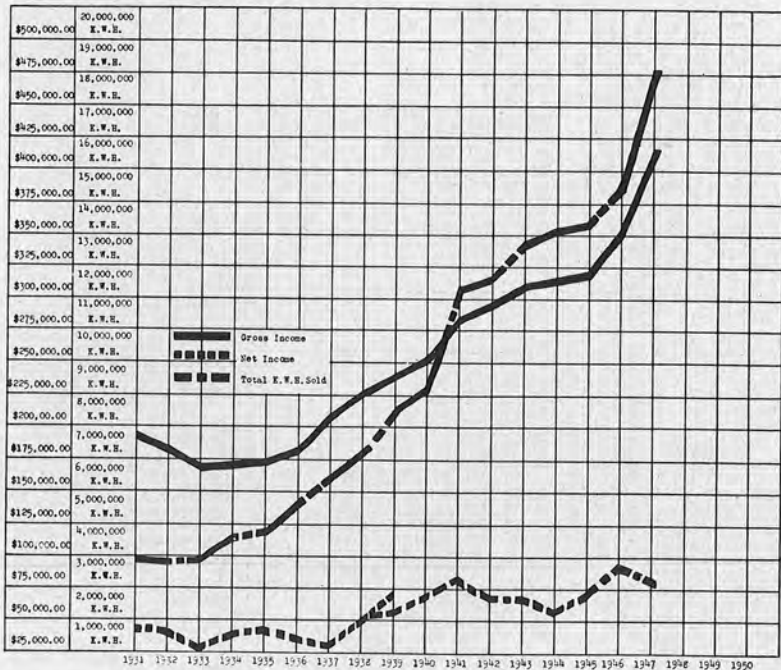
The following excerpts are taken from comments of the auditors:

"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 and cashing investments. The funds thus obtained were used for the purchase of fixed properties, for contributions to the Municipal Hospital Department, to increase construction work in progress, to increase the reserve for insurance, purchase investments and make additional deposits for the purchase of equipment.

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

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.)



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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.....
- HUGH P. MULLIGAN.....

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957		
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								RE-ELECTED										
HARRY J. SWANSON°							RE-ELECTED							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	RE-ELECTED					
ABRAM J. WESSEL														APPOINTED	ELECTED			RE-ELECTED	PRESIDENT	PRESIDENT	PRESIDENT		
NELSON H. FISHER																						RE-ELECTED	PRESIDENT
CLIFFORD J. WALSH															APPOINTED	ELECTED			RE-ELECTED				
HUGH P. MULLIGAN																							ELECTED

Superintendents

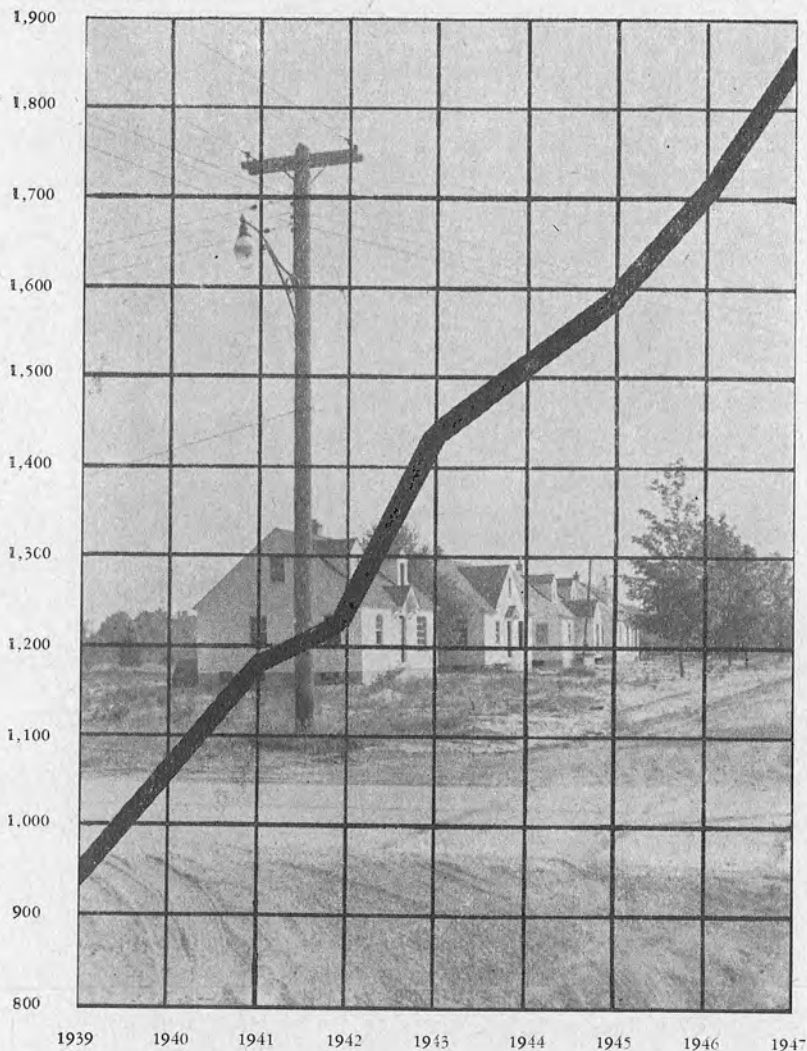
- HARRY J. BADCON.....
- EDWARD L. BEHM.....
- J. BRYAN SIMS.....

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. Johnson resigned July, 1934, and Hugh P. Mulligan was appointed.
 ‡ O. T. Shubert resigned January, 1940, and Adrian H. Ringelberg was appointed.
 § Hugh P. Mulligan resigned January, 1940, and Abraham J. Wessel was appointed.
 ° Harry J. Swanson resigned August, 1941, and Clifford J. Walsh was appointed.

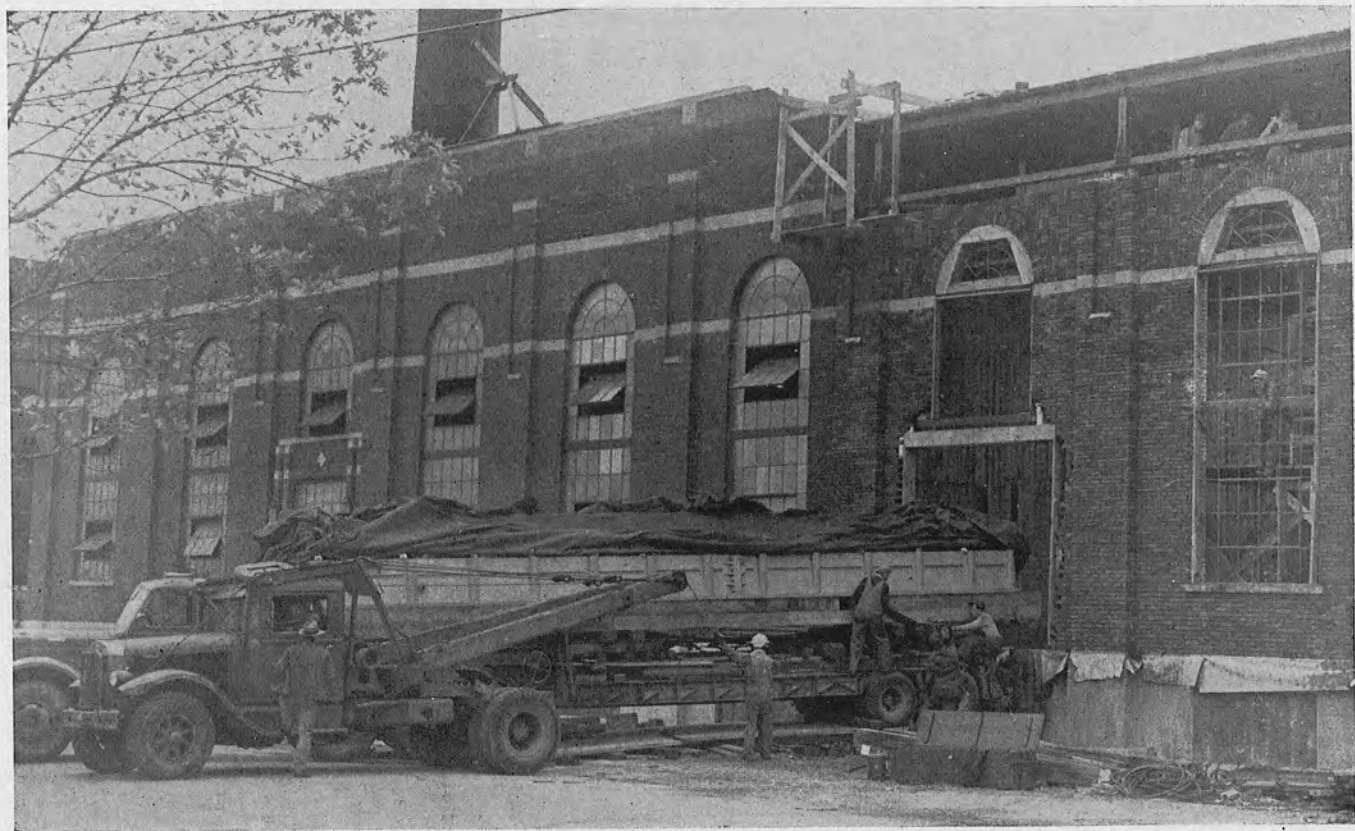
"Additions to fixed properties during the year under review, with the exception of relatively small items, were verified by inspection of purchase invoices and other data on file.

"We verified the advance payments made to the Nordberg Manufacturing Company on the purchase of a new Diesel generating unit by inspection of the invoices submitted to and checks issued by this Department to the Nordberg Manufacturing Company.

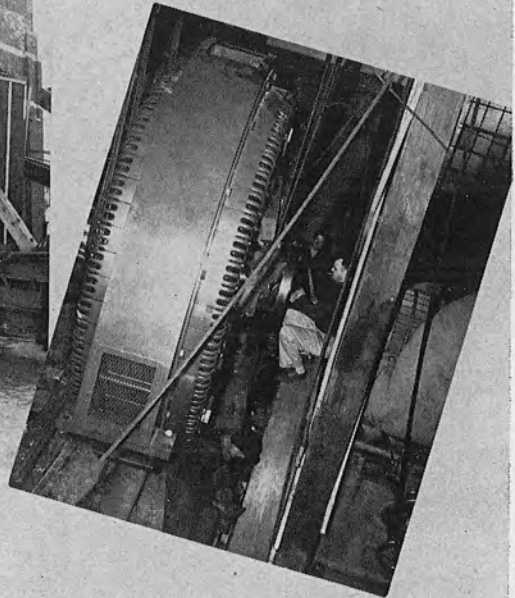
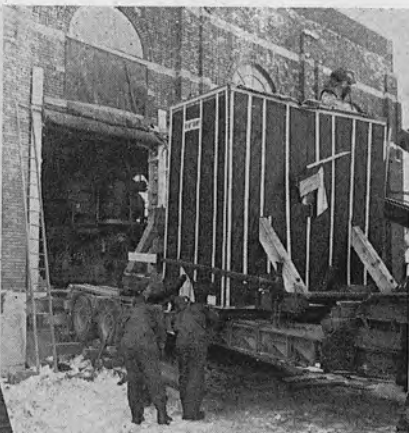
KILOWATT
HOURS



Kilowatt hours used by average residential customer per year.



UNLOADING 3850 HORSEPOWER DIESEL ENGINE BED PLATE



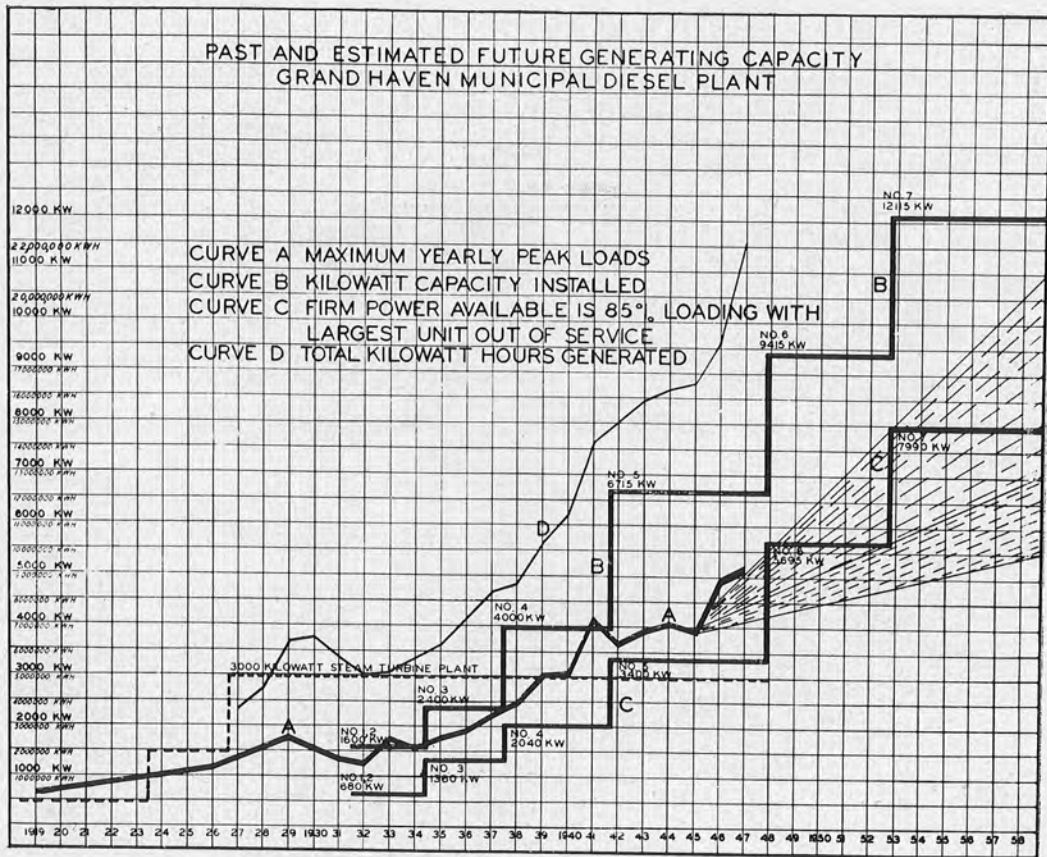
**MOVING NEW 3390 KVA, 6900-7200 VOLT
GENERATOR, INTO POWER PLANT.**

MUNICIPAL POWER AND LIGHT DEPARTMENT

Comparative Statement of Operations
Years Ending September 30, 1946 and 1947

	Year Ending Sept. 30, 1947	Year Ending Sept. 30, 1946	Increase or Decrease*
OPERATING REVENUE	\$415,763.20	\$353,552.74	\$ 62,210.46
Miscellaneous Revenue	2,150.57	1,653.78	496.79
Total Revenue	\$417,913.77	\$355,206.52	\$ 62,707.25
OPERATING EXPENSES (Power Plant)			
Superintendence and Labor	\$ 39,219.05	\$ 32,759.57	\$ 6,459.48
Fuel	122,190.11	76,368.65	45,821.46
Maintenance and Repairs	21,631.68	18,355.82	3,275.86
Supplies and Expenses	12,483.23	7,523.91	4,959.32
Total Plant Expenses	\$195,524.07	\$135,007.95	\$ 60,516.12
DISTRIBUTION EXPENSES (Power Lines, Etc.)			
Salaries and Labor	\$ 17,499.61	\$ 14,757.58	\$ 2,742.03
Transportation (Truck Upkeep, Etc.)	2,257.29	1,007.61	1,249.68
Supplies and Expenses	1,912.52	1,068.19	844.33
Total Distribution Expense	\$ 21,669.42	\$ 16,833.38	\$ 4,836.04
UTILIZATION EXPENSES	\$ 1,405.58	\$ 1,651.18	\$ 245.60*
COMMERCIAL EXPENSES	\$ 2,525.08	\$ 1,899.29	\$ 625.79
GENERAL EXPENSES			
Salaries	\$ 17,411.06	\$ 15,349.26	\$ 2,061.80
Office Supplies and Expenses	1,447.20	822.85	624.35
Rent	3,600.00	3,600.00	
Insurance	5,867.46	4,852.25	1,015.21
Interest on Deposits	456.59	487.96	31.37*
Advertising	377.00	168.24	208.76
Bad Debts — Net	105.69	12.37*	118.06
Transportation	1,535.07	412.22	1,122.85
Pension Contributions	8,822.85	6,111.72	2,711.13
Miscellaneous	1,435.21	1,351.68	83.53
Total General Expenses	\$ 41,058.13	\$ 33,143.81	\$ 7,914.32
TOTAL OPERATING EXPENSES	\$262,182.28	\$188,535.61	\$ 73,646.67
NET INCOME (Before Taxes & Deprec.)	\$155,731.49	\$166,670.91	\$ 10,939.42*
NON-OPERATING INCOME (NET)	5,013.19	2,706.14	2,307.05
DEDUCT:	\$160,744.68	\$169,377.05	\$ 8,634.37*
Taxes (City and School)	\$ 4,310.02	\$ 4,714.63	\$ 404.61*
Depreciation	70,621.09	71,717.68	1,096.59*
NET	\$ 74,931.11	\$ 76,432.31	\$ 1,501.20*
NET	\$ 85,813.57	\$ 92,944.74	\$ 7,131.17*

* — Denotes decrease.



PAST AND ESTIMATED LOAD GROWTH CURVES (Curves B and C Represent Diesel Capacity only)

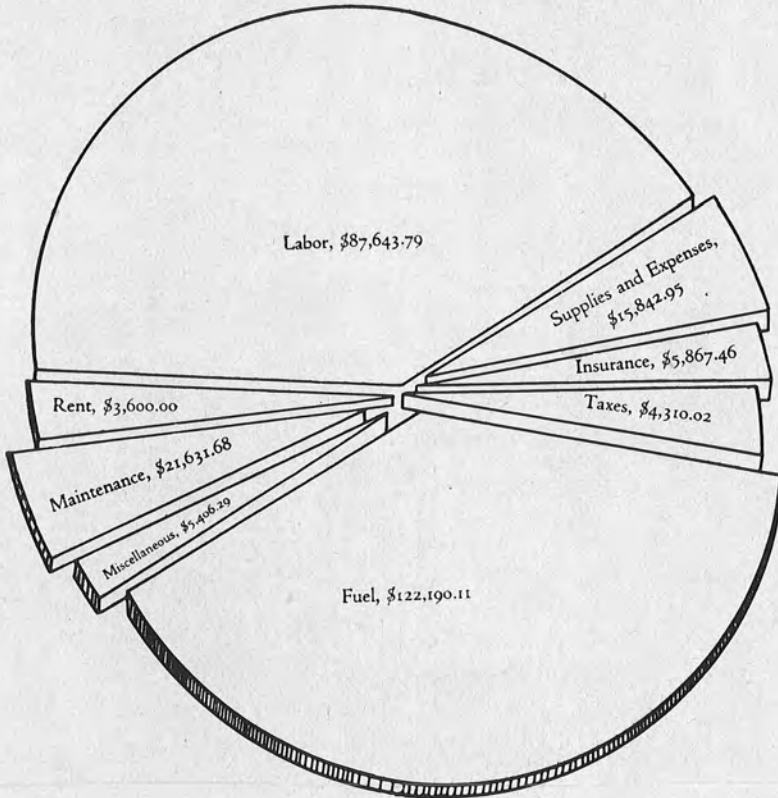
ON A KILOWATT HOUR GENERATED BASIS

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

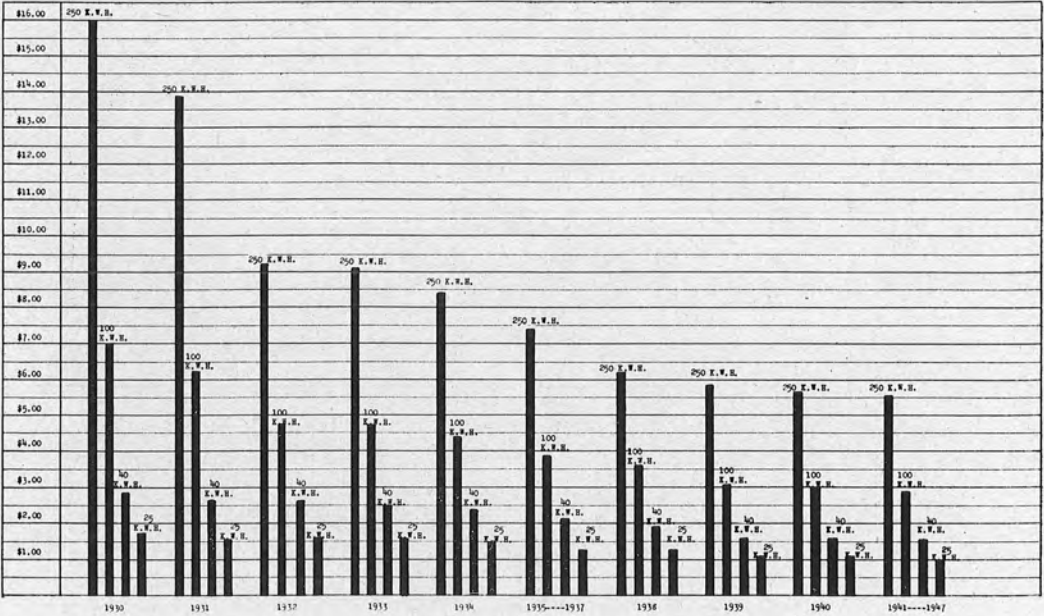
	Year Ended September 30		Increases Decreases*
	1947	1946	
Operating Revenues	\$0.02005	\$0.02300	\$0.00295*
Operating Expenses	0.01617	0.01716	0.00099*
Net Operating Revenue	\$0.00388	\$0.00584	\$0.00196*
Non-Operating Income	0.00024	0.00018	0.00006
Net Income to Surplus	\$0.00412	\$0.00602	\$0.00190*

"On a kilowatt hour sold basis, the operating revenues decreased 12.82% while the operating expenses decreased 5.77%.

Graph showing relative operating expenditures for the fiscal year.



Labor on new construction in addition to the
above, \$42,088.74



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

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

1. The total operating revenue increased 17.65%, and the revenues per kilowatt hour decreased 12.82%.
2. The total operating expenses increased 27.23%, and the expenses per kilowatt hour decreased 5.77%.
3. Total kilowatt hours generated increased 19.93%, and the total kilowatt hours sold increased 23.83%.

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

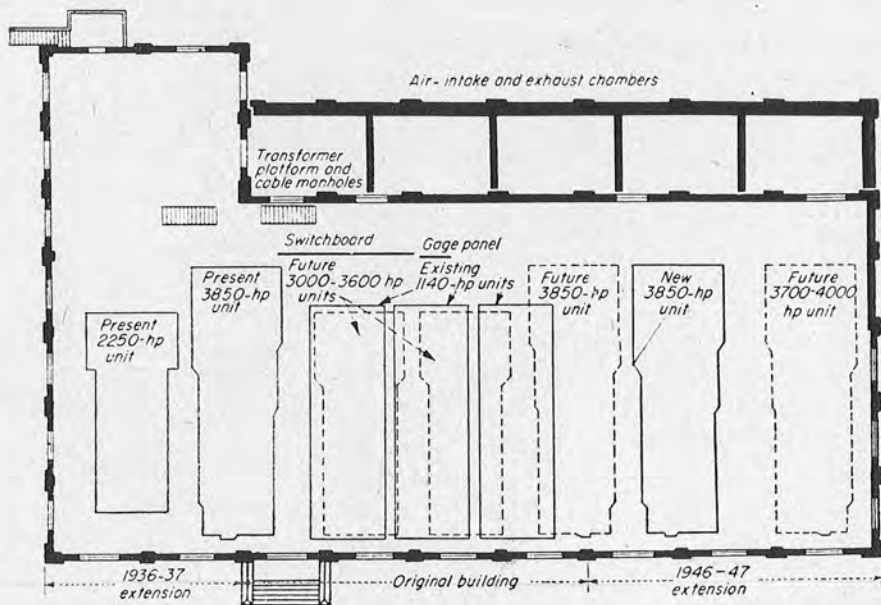
Operating revenues of the system increased \$62,707.25 or approximately 17.65% compared with the previous year, due principally to increased use of electricity. 243 more residential meters, 22 more commercial lighting meters and 8 more industrial power meters were served in 1947 than in the previous year.

Operating revenues from residential customers increased 10% and from commercial lighting customers 17.8%. Revenues from industrial power users increased 26.7%. Greater use of electricity caused the total revenues of the system to increase.

EACH CUSTOMER USED MORE ELECTRICITY

Electrical consumption by residential users increased 16%, commercial lighting usage increased 23% and industrial power usage increased 35%.

The average yearly use of electricity by each residential user continued to increase. In 1937 the yearly use per residential customer was approximately 700 kilowatt hours. In 1943 it was 1421 kilowatt hours, and in 1945 it was 1595. In 1946 it was 1722 kilowatt hours, and in 1947 it was 1865.



Floor plan of Diesel power plant showing new extension with possibilities of future expansion.

BUT OPERATING EXPENSES INCREASED SUBSTANTIALLY

Operating expenses continued to increase rapidly, including higher fuel costs, general increases in wages, etc. but as in the previous year of 1946 were partially offset by increased volume and reduction in depreciation by the auditors. It is anticipated that volume of sales cannot continue to offset the rapid increases in expenses, and that it will be difficult to maintain earnings with present rates and increasing expenses during the coming year.

CONTRIBUTIONS TO EMPLOYEES' PENSION FUND WERE MADE. VOLUNTARY TAXES TO CITY AND SCHOOLS AND HOSPITAL BONDS WERE PAID

The system paid \$4,310.02 in voluntary city and school taxes. \$8,822.85, approximately 6.9% of all payrolls, was contributed to the employees retirement fund (established by Charter amendment in May 1943). \$9,360.00 was applied to amortization of the Municipal Hospital bonds issued in 1938-39. \$3,600.00 was paid to the city general fund, representing rent for use of offices in the City Hall.

EMERGENCY BREAKDOWN FUND

\$1,050.00 per month was used to purchase government bonds to be used for investment in the emergency breakdown fund.

STATE REIMBURSES DEPARTMENT FOR POST WAR PLANS

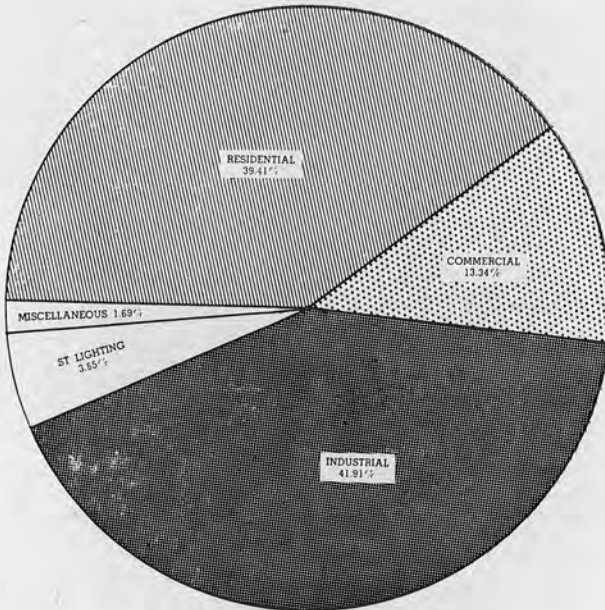
During the year the Michigan State Planning Commission reimbursed the Department \$7,375.75 for engineering plans prepared by the Department's organization for an extension to the power plant, substations, distribution system and a distribution storeroom, estimated at the time to be a post war project to cost in excess of \$500,000.00.

PROGRESS ON EXTENSION TO PLANT AS OF SEPTEMBER 30, 1947

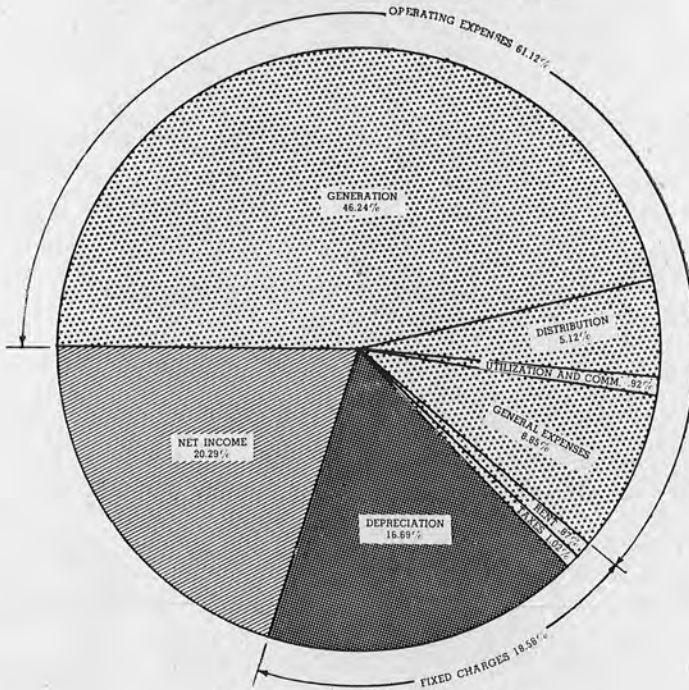
Substantial progress was made in the construction of the 3-bay addition to the power plant to house two additional Diesel engine-generator units as shown by illustrations in this report.

The new No. 6 unit being installed will be a 3850 B. Hp., 9 cylinder, 21½" bore x 31" stroke, direct connected to a 3390 KVA, 7200 V. generator. A waste heat boiler and other equipment will be similar to the unit installed in 1941.

Space is provided for a seventh generator to be installed within the near future. Constant increase in usage of electric power in the community has necessitated continued expansion of the system.



SOURCE OF REVENUES
 Total area of chart equals \$417,913.77



DISPOSITION OF REVENUES
 Total area of chart equals \$417,913.77

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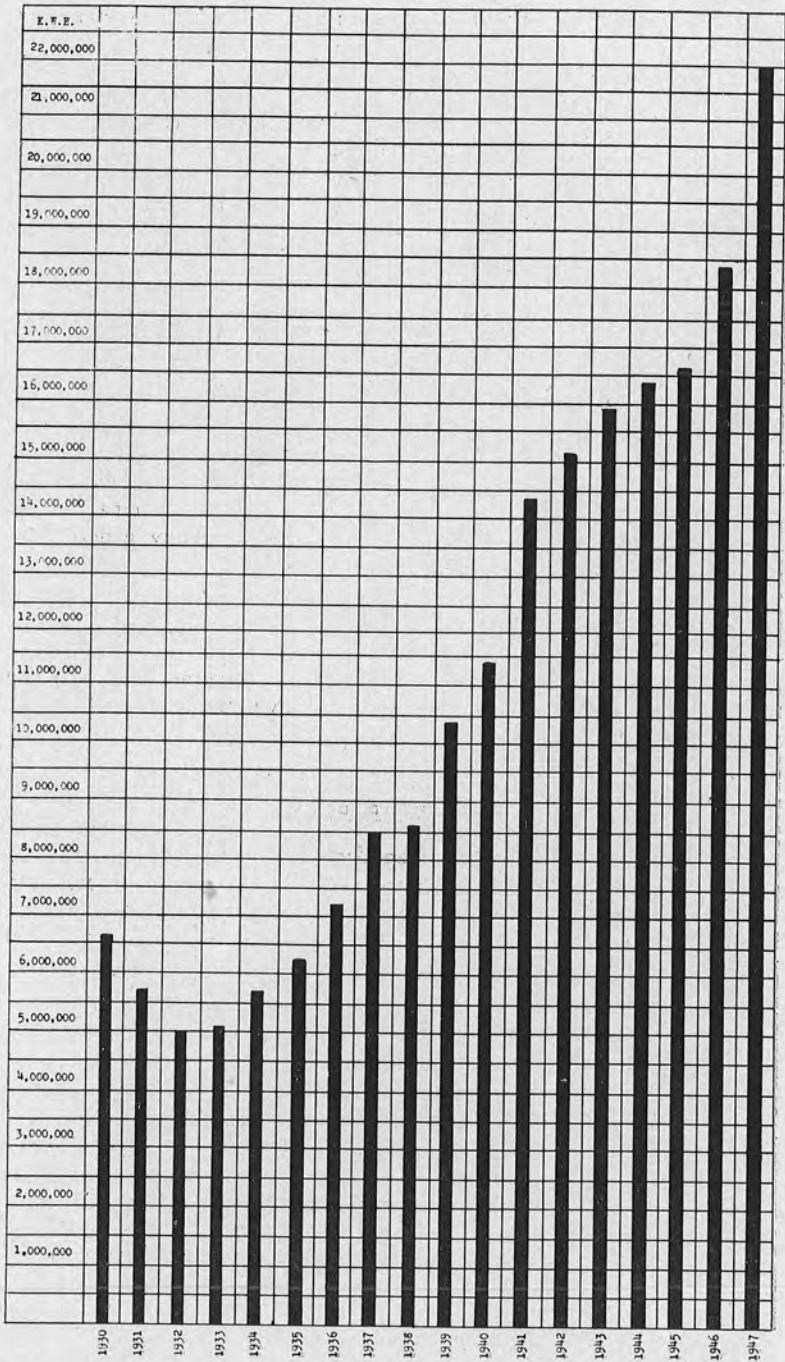
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Graph of Kilowatt Load Growth Since 1930