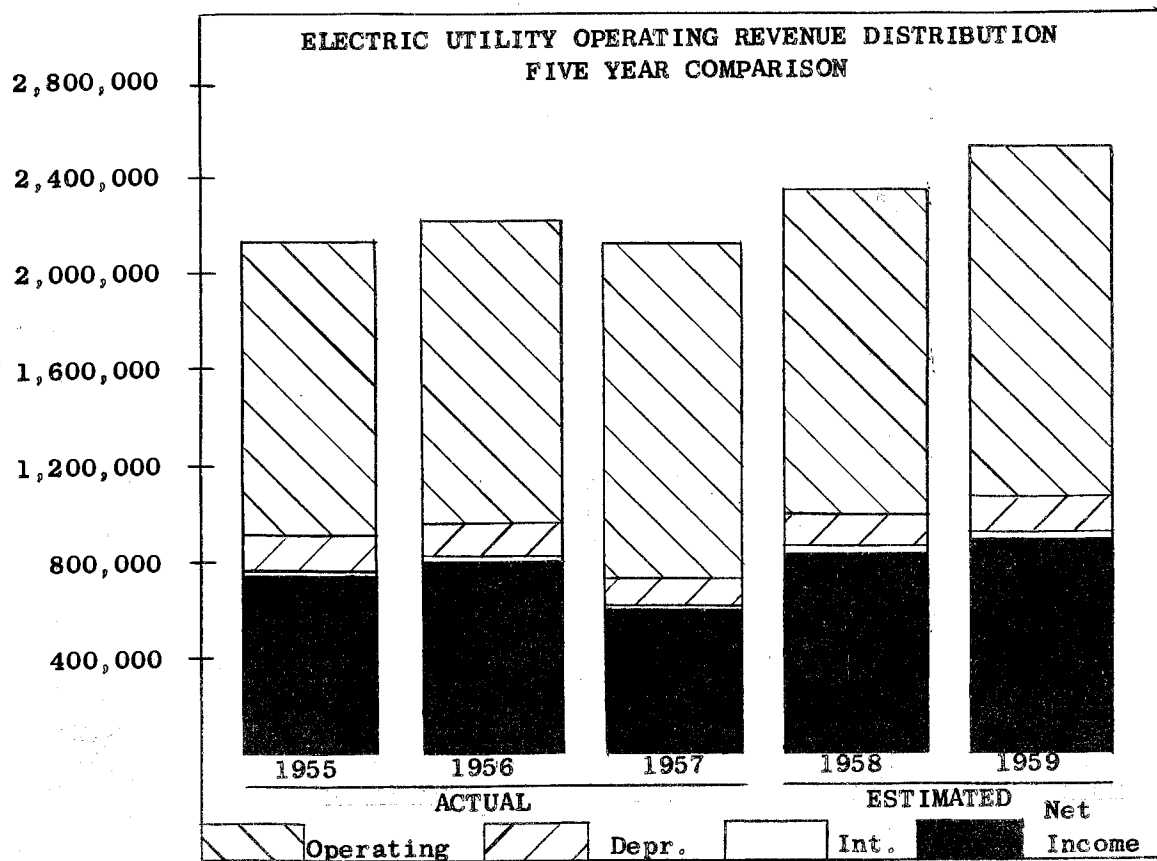
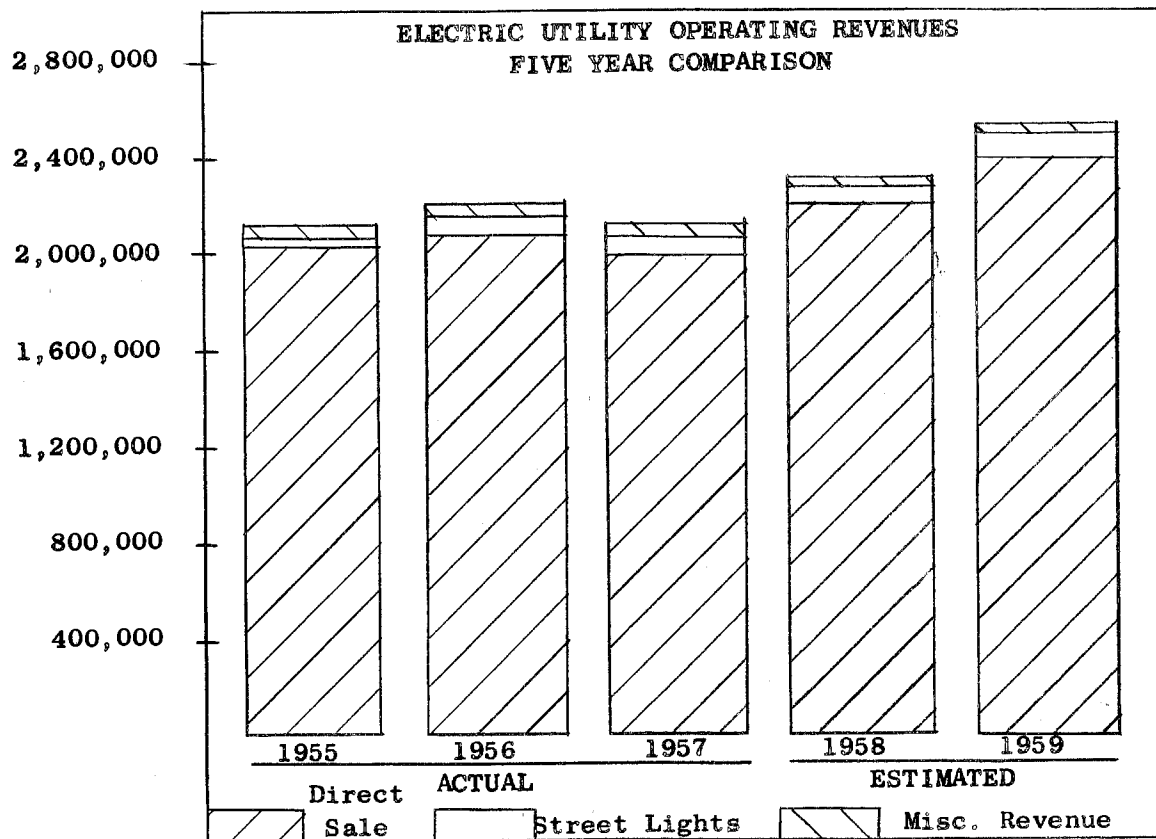
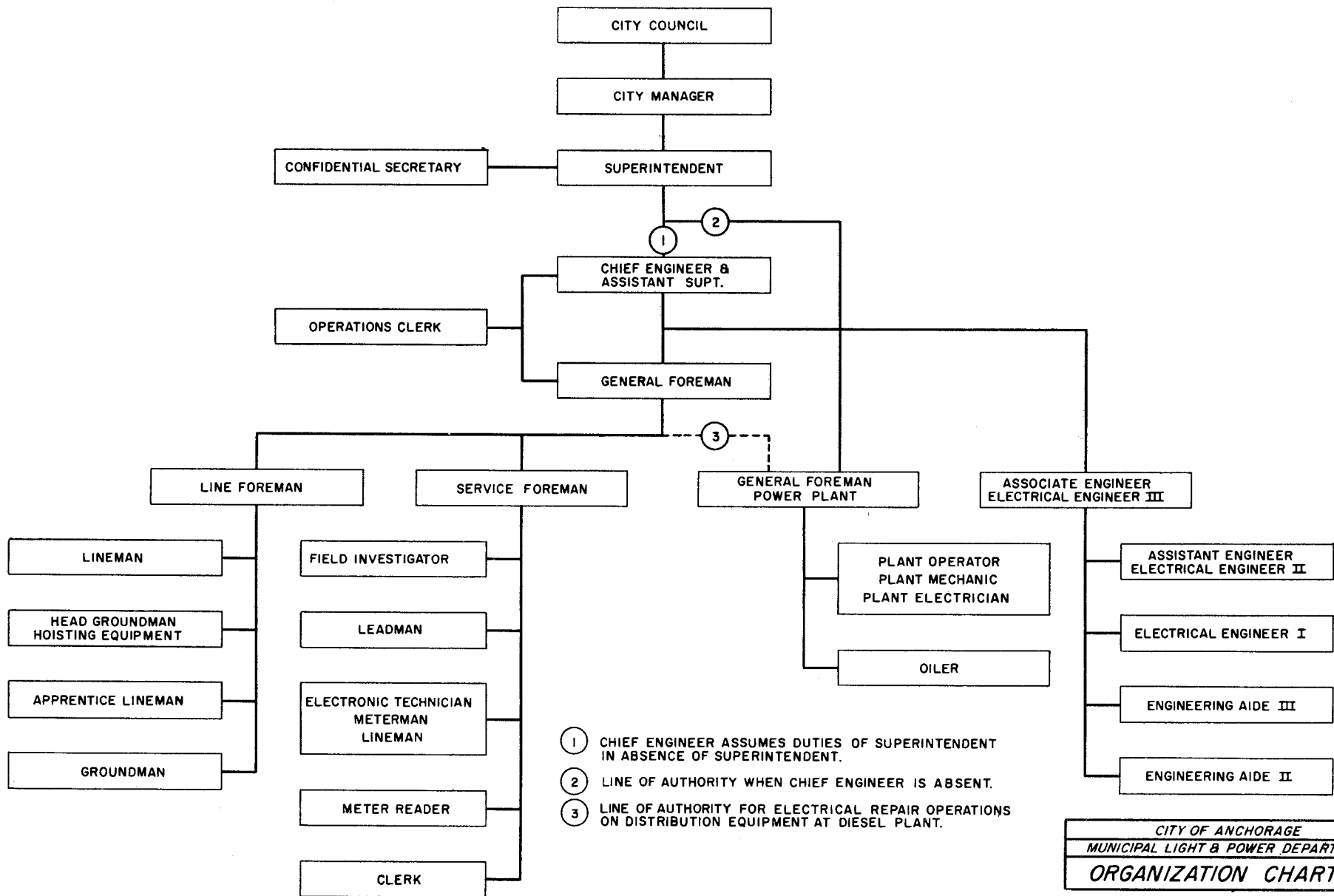


ELECTRIC UTILITY FUND BUDGET

**The City of Anchorage, Alaska
1959**





CITY OF ANCHORAGE
MUNICIPAL LIGHT & POWER DEPARTMENT
ORGANIZATION CHART

ELECTRIC UTILITY FUND
1959 BUDGET

BUDGET SUMMARY

	<u>Estimated 1958</u>	<u>Estimated 1959</u>
<u>REVENUES</u>		
Estimated Revenues	\$ 2,167,731	\$ 2,304,304
Depreciation	<u>216,000</u>	<u>217,306</u>
TOTAL FUNDS AVAILABLE.	\$ 2,383,731	\$ 2,521,610
<u>EXPENDITURES</u>		
Generation Expense	\$ 43,960	\$ 45,860
Purchased Power	<u>800,620</u>	<u>840,600</u>
Total Cost of Power	844,580	886,460
Distribution Operation	98,255	102,100
Distribution Maintenance	<u>59,920</u>	<u>69,120</u>
Total Distribution Expense	158,175	171,220
Customers' Accounting & Billing Expense	153,000	167,594
Administrative and General Expense	111,610	114,510
Clearing Accounts	<u>8,800</u>	<u>10,900</u>
Total Accounting & Administrative	273,410	293,004
Other Expenses	290,193	299,442
Transfer to General Fund	370,076	402,571
Construction Fund*	<u>447,297</u>	<u>468,913</u>
TOTAL EXPENSE.	\$ 2,383,731	\$ 2,521,610

* Construction Fund	
5% of \$5,032,138	\$ 251,607
Depreciation	<u>217,306</u>
	468,913

**ELECTRIC UTILITY FUND
1959 BUDGET**

<u>Code</u>		<u>Estimated 1958</u>	<u>Estimated 1959</u>
	<u>OPERATING REVENUES</u>		
E 600	Residential & Domestic	\$ 723,710	\$ 760,000
E 602	Commercial & Industrial	1,138,552	1,233,804
E 603	Public Street Lighting	81,300	88,700
E 604	Sales to Other Public Authorities	52,695	57,500
E 606	Water Heating	70,620	61,400
E 607	Other Department Sales	52,780	57,600
E 612	Customers' Forfeits & Discounts	19,600	21,000
E 614	Service Customers' Installations	5,444	6,000
E 615	Miscellaneous Electric Revenues	<u>23,030</u>	<u>18,300</u>
	Total Operating Revenues	\$ 2,167,731	\$ 2,304,304
	<u>NON-OPERATING REVENUE</u>		
	Depreciation Reserve	<u>216,000</u>	<u>217,306</u>
	TOTAL RESOURCES.	\$ 2,383,731	\$ 2,521,610

EXPLANATION OF ELECTRIC REVENUE ESTIMATES:

Sufficient experience has been gained under the new rate structure to enable forecast of revenues by comparison of like periods. Therefore, 1959 estimates are based on comparison of first seven months of 1958 as compared to a like period of 1957.

E 600 Residential and Domestic. 1958 revenues increased 5% over 1957, and it is estimated that this conservative growth will continue.

E 602 Commercial and Industrial. 1958 revenues increased 8% over 1957. New building expansion leads us to expect this same increase in 1959.

E 603 Street Lights. New street lights are continually being added to the City System and it is estimated the increased revenues to the Department will amount to 5% in 1959.

E 604 Sales to Other Public Authorities, which is the Civil Aeronautics Administration at International Airport. The CAA is adding

considerable equipment along with increased use which should cause a 5% growth.

E 606 Water Heating. There is a decrease in this account due to combining of accounts on domestic schedules. During 1958, this decrease was 25% and we expect a further decrease of 10% in 1959.

E 607 Other Departmental Sales. These accounts increased 5% during 1958 but are variable due to large volume used by City wells. However, we expect a like increase during 1959.

E 612 Customer's Forfeits and Discounts

E 614 Servicing Customers' Installations

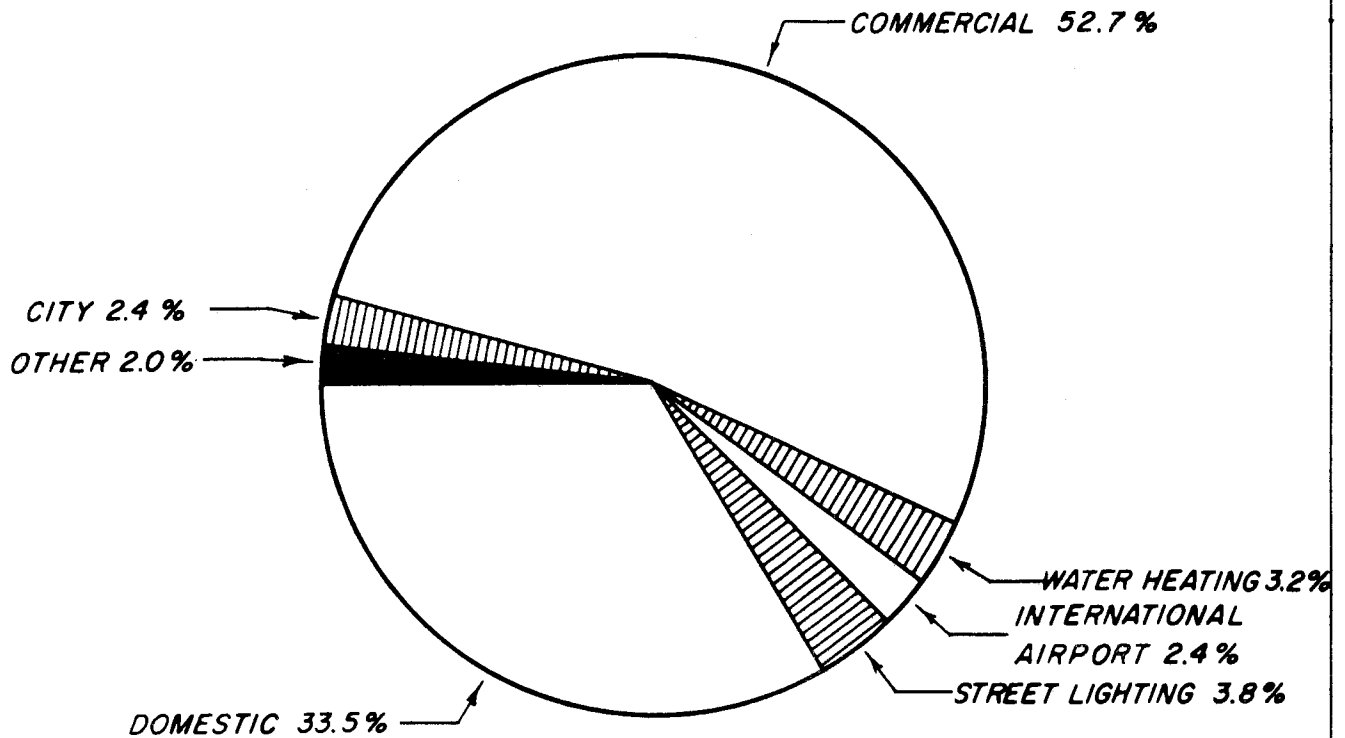
E 615 Miscellaneous Electric Revenue

These three accounts are not affected by rates charged for electricity and are estimated on known charges and past experience. The year 1958 remained about the same as 1957 and we expect this rate to increase.

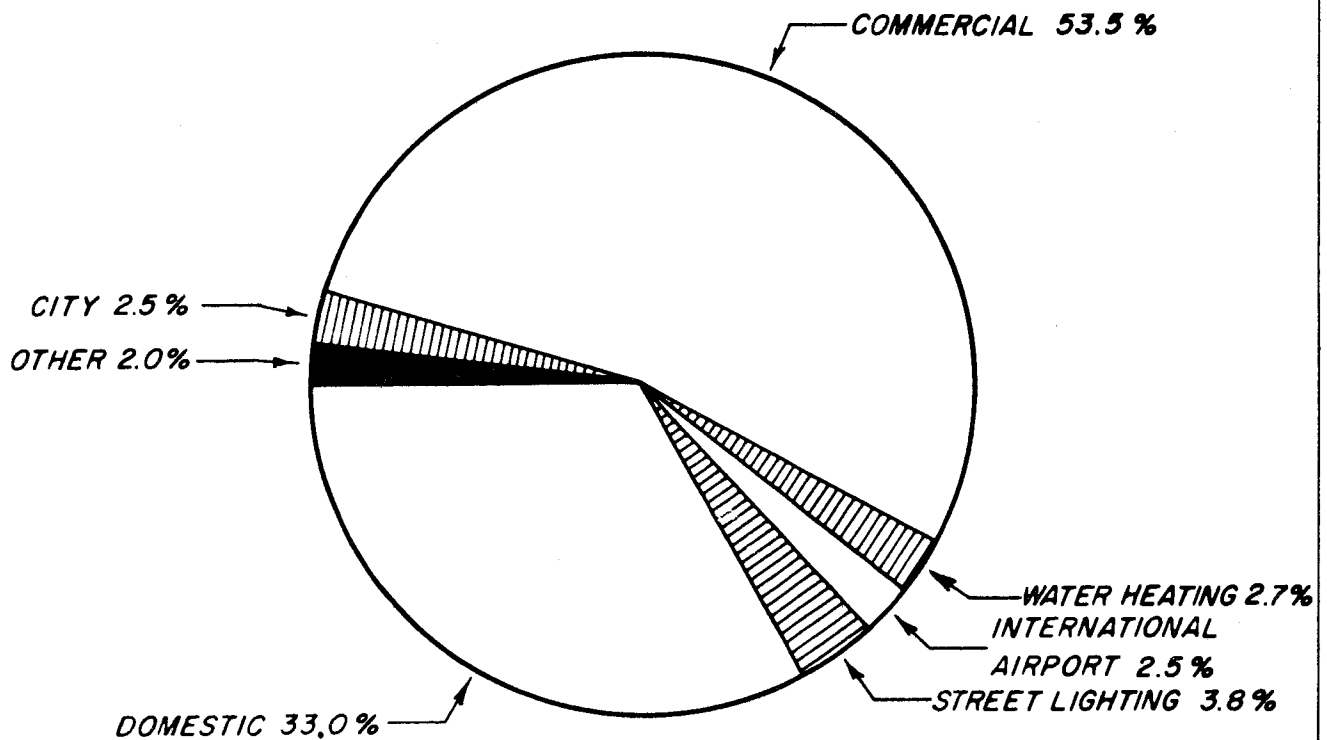
COMPARATIVE STATISTICS

	<u>1957</u>	<u>1958</u> <u>Actual 7 Mo.</u> <u>Est. 5 Mo.</u>	<u>% Over</u> <u>1957</u>	<u>1959</u> <u>Estimated</u>	<u>% Over</u> <u>1958</u>
Power Sales					
Commercial	34,231,155	36,627,336	7 %	39,739,253	8.36%
International Airport	2,356,000	2,790,400	9 %	3,044,884	9.12%
Residential	20,061,653	19,861,036	(1 %)	20,856,074	5.01%
Water Heating	4,582,107	3,436,580	(25%)	3,115,837	(10.04%)
City Use	3,375,487	4,120,336	22.06%	4,495,699	9.11%
Total K. W. H. Sold	64,606,402	66,835,688	3.45%	71,251,747	6.60%
Power Sales Revenue	\$ 2,044,167	\$ 2,117,292		\$ 2,259,004	
Average Revenue per KWH (Total)	.031409	.031679		.031704	
Average Number of Meters (By Class)					
Commercial	1,685	1,722	2.19%	1,755	1.91%
Residential	6,156	5,789	(5.96%)	6,000	3.64%
Water Heating	901	746	(17.20%)	670	(10.18%)
Total Average Number of Meters	8,742	8,257	(5.59%)	8,425	2.04%
Average Revenue per KWH (By Class)					
Commercial	.031084	.031084		.031047	
International Airport	.020519	.018884		.018884	
Residential	.036438	.036438		.036440	
Water Heating	.019861	.019861		.019705	
City Use	.032513	.032513		.032542	
Average KWH per month per Customer (By Class)					
Commercial	1,691.931	1,772.519		1,886.954	
International Airport	196,333.000	232,533.000		253,740.000	
Residential	270.822	285.901		289.667	
Water Heating	423.798	383.889		387.542	

REVENUE DISTRIBUTION



1958 REVENUE DOLLAR



1959 REVENUE DOLLAR

ELECTRIC UTILITY FUND EXPENDITURES

<u>Code</u>		<u>Estimated</u> <u>1958</u>	<u>Estimated</u> <u>1959</u>
<u>DIESEL GENERATION OPERATION EXPENSE</u>			
727	Operation Supervision & Engr.	\$ 4,800	\$ 5,000
728.1	Engine Labor	5,400	5,600
728.3	Miscellaneous Station Labor	300	300
729	Engine Fuel	6,000	6,500
730.1	Water	180	180
730.2	Lubricants	150	150
730.3	Station Supplies	400	400
730.4	Station Expense	300	300
	Total Diesel Operation Expense	\$ 17,530	\$ 18,430
<u>DIESEL MAINTENANCE EXPENSE</u>			
731	Maintenance Supervision & Engr.	\$ 4,800	\$ 5,000
732	Structures & Improvements	4,000	4,200
733	Fuel Holders	200	200
734.1	Engines	15,000	15,600
734.2	Generators	200	200
734.3	Accessory Electric Equipment	2,000	2,000
734.4	Power Plant Equipment	200	200
735	Rent	30	30
	Total Diesel Maintenance Expense	\$ 26,430	\$ 27,430
	TOTAL DIESEL OPERATION AND MAINTENANCE.	\$ 43,960	\$ 45,860
738	Purchased Power	\$ 800,620	\$ 840,600
	TOTAL COST OF POWER.	\$ 844,580	\$ 886,460
Estimated Kilowatt Hours		75,000,000	82,500,000
Estimated Average Cost - mills per KWH		11.3	10.7

<u>Code</u>		<u>Estimated 1958</u>	<u>Estimated 1959</u>
<u>DISTRIBUTION OPERATION EXPENSE</u>			
756	Supervision and Engineering	\$ 9,000	\$ 9,400
757	Load Dispatching	4,000	4,000
758.1	Distribution Maps & Records	20,000	21,000
758.2	Distribution Office Expense	180	500
759.1	Station Labor	2,500	2,000
759.2	Station Supplies	675	700
761.1	Overhead Lines	8,000	8,000
761.2	Underground Lines	1,600	2,000
761.3	Remove and Reset Transformers	9,000	9,000
762.1	Remove and Reset Meters	32,000	33,000
762.2	Other Services on Customers'		
	Premises	4,800	4,800
762.25	Free Services	800	800
763.1	Operation Street Lights	900	900
763.12	Operation Traffic Signals	4,800	6,000
	Total Distribution Operations	\$ 98,255	\$ 102,100
<u>DISTRIBUTION MAINTENANCE EXPENSE</u>			
764	Engineering and Supervision	\$ 9,000	\$ 10,000
765	Structures and Improvements	3,000	1,200
766	Station Equipment	1,500	1,200
768.1	Poles, Towers and Fixtures	5,000	9,000
768.2	Overhead Conductors	10,000	12,000
769.2	Underground Conductors & Devices	300	600
770	Distribution Transformers	2,000	4,800
771	Services	6,000	4,800
772	Meters	1,800	1,200
773	Installations on Customers' Premises	120	120
775.1	Street Lighting	14,000	15,000
775.2	Traffic Signals	6,000	8,000
776	Rents	1,200	1,200
	Total Distribution Maintenance	\$ 59,920	\$ 69,120
	TOTAL DISTRIBUTION EXPENSE	\$ 158,175	\$ 171,220
<u>ADMINISTRATIVE & GENERAL EXPENSE</u>			
790	Salary of General Officers	\$ 12,000	\$ 12,985
791	Other General Office Salaries	16,700	14,375
792.1	Expense of General Officers	480	480
793	General Office Expense	7,500	7,500
795	Special Services	12,000	12,000
796	Legal Services	11,700	14,300

<u>Code</u>		<u>Estimated 1958</u>	<u>Estimated 1959</u>
798	Insurance Loss & Damage	10,300	10,300
799	Insurance Injury & Damage	9,450	9,450
800.1	Employees Welfare	2,400	2,400
800.2	Pensions	4,260	6,000
801	Miscellaneous General Expense	700	600
802.1	Maintenance Structures & Improvements	300	300
802.2	Maintenance General Office Furniture	300	300
802.3	Maintenance of Communication Equip.	6,000	6,000
802.4	Maintenance Miscellaneous Property	600	600
803	Rents	16,920	16,920
	Total Administrative and General Expense	\$ 111,610	\$ 114,510

CUSTOMERS' ACCOUNTING & COLLECTING

780.3	Meter Reading	\$ 27,000	\$ 26,800
781	Billing and Collecting	120,000	133,794
783	Uncollectible	4,000	4,000
787.2	Advertising	2,000	3,000
	Total Customers' Accounting and Collecting	\$ 153,000	\$ 167,594

CLEARING

902	Stores	\$ 7,800	\$ 8,200
903	Transportation	--	--
904	Laboratory	--	--
905	Shop	1,000	2,000
909	National Guard Leave	--	700
	Total Clearing	\$ 8,800	\$ 10,900

TOTAL ACCOUNTING AND
ADMINISTRATION EXPENSE

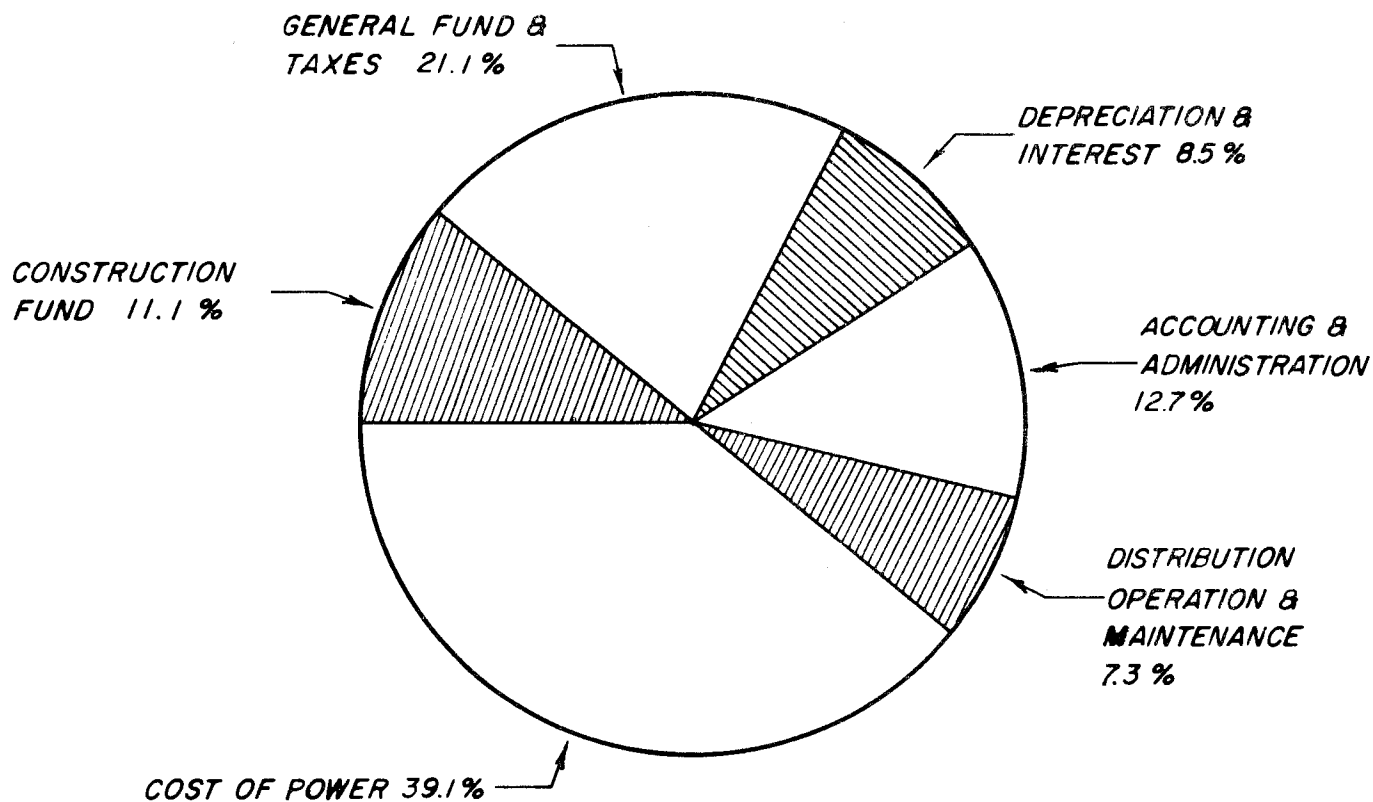
\$ 273,410	\$ 293,004
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OTHER EXPENSES

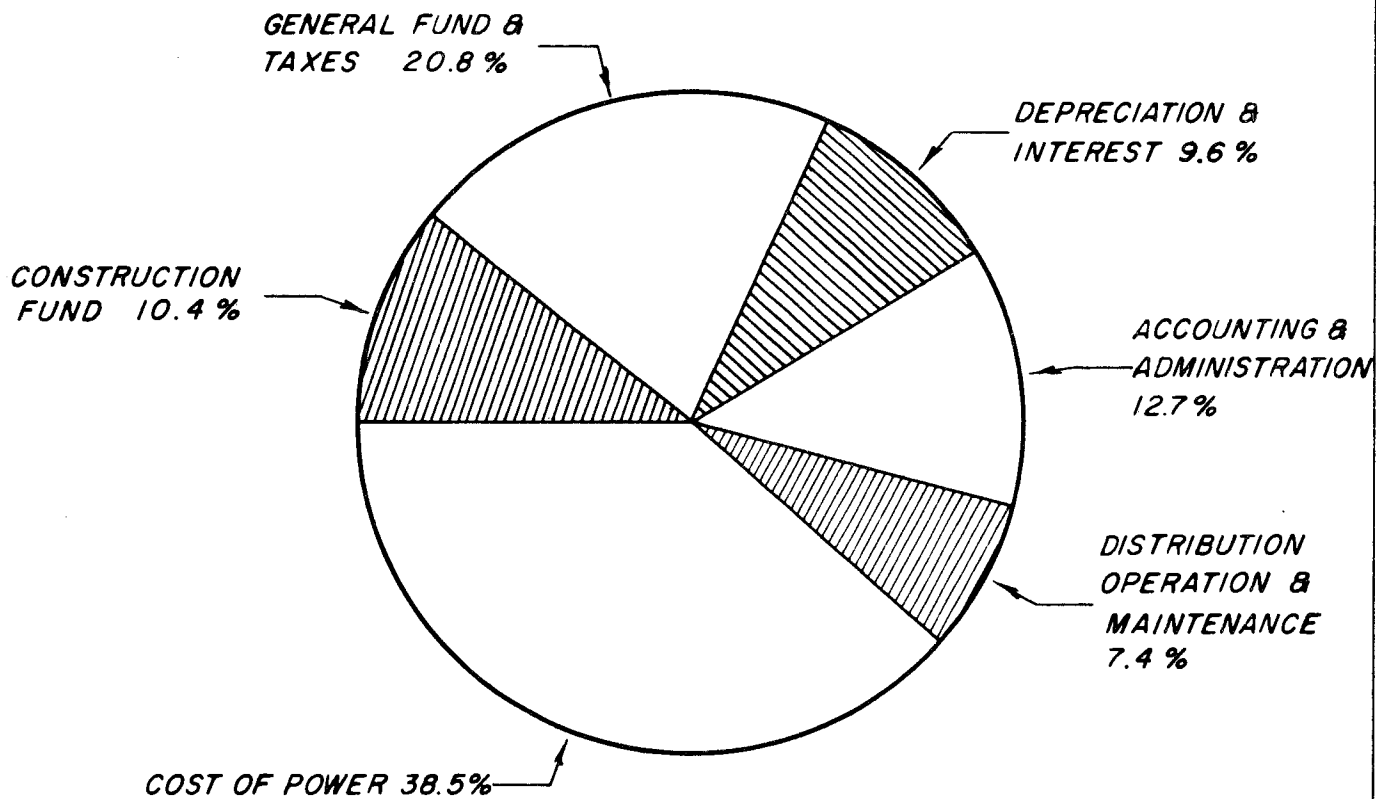
503	Depreciation	\$ 216,000	\$ 217,306
507	Operating Tax	69,843	77,786

<u>Code</u>		<u>Estimated 1958</u>	<u>Estimated 1959</u>
530	Interest	<u>4,350</u>	<u>4,350</u>
	Total Other Expenses	\$ 290,193	\$ 299,442
	TRANSFER TO GENERAL FUND	\$ 370,076	\$ 402,571
	CONSTRUCTION FUND	\$ 447,297	251,607
			<u>217,306</u>
			\$ 468,913
	TOTAL EXPENSES	\$ 2,383,731	\$ 2,521,610

EXPENSE DISTRIBUTION



1958 EXPENSE DOLLAR



1959 EXPENSE DOLLAR

1959 MAINTENANCE AND OPERATION:

Cost of Power:

These accounts are increased about 5% which covers 4% wage increase and increase in the amount of purchased power.

Distribution Operations:

Increase shown here reflects wage increase only.

Distribution Maintenance:

These accounts show an increase due to wage increase plus increased activity in some sub-accounts.

Administration and General Expense:

The increase shown here is due to increased cost of Attorney's office.

Customers' Accounting and Billing:

Increased due to increases in the Controller's Office.

Clearing Accounts:

These increases reflect increased labor rates.

Other Expenses:

Increase reflects increase in taxes and depreciation based on net plant values increase.

Transfer to General Fund:

Increase due to gross plant value increase.

CONSTRUCTION FUND

Work
Order

MINOR ITEMS

1-258	Purchase and Install Transformers	\$ 25,000
2-360	Purchase and Install meters	15,000
3-359	New Service	12,000
4-377	Purchase Tools and Equipment	600
5-372	Purchase Office Equipment	1,300
6-373	Transportation Equipment	- -
7-378	Communication Equipment	9,565
8-Several	Street Lights and Signal System	20,000
9-	Purchase Laboratory Equipment	- -
10-Several	Install Short Line Extensions	20,000
11-Several	Miscellaneous Plant Replacements	<u>25,000</u>
Total Blanket Work Orders		\$ 128,465

MAJOR ITEMS

Terminal Reserve Sub-Station	\$ 30,000
Underground Cable 3/4 Alley G + I	60,000
Underground Cable 5/6 Alley A to F	175,000
Major Line Extensions	<u>75,448</u>
Total Major Items	\$ 340,448

TOTAL CONSTRUCTION FUND	\$ 468,913
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DETAIL OF MINOR CONSTRUCTION FUND

E 1-258	Purchase and Install Transformers	\$ 25,000
E 2-360	Purchase and Install Meters	15,000
E 3-359	New Services	12,000
E 4-377	Purchase Tools and Equipment	
	Hydraulic Pole Puller	600
E 5-372	Purchase Office Equipment	
	Termafax Copy Machine	\$ 165
	3 Office Chairs	150
	1 Friden Calculator machine	900
	1 Legal File Case	85
		1,300
E 6-373	Transportation Equipment	
	(Transferred to Garage)	- -
E 7-378	Communication Equipment	
	Police Dept. 3 Mobile Units	\$ 1,800
	City Engr. 2 Mobile Units	1,200
	Telephone Dept. 8 Mobile Units	4,800
	Test Equipment 2 Units	550
	Phone connection to Radio	300
	ML & P Dept. 1 Mobile Unit	600
	Spare Traffic Control Chassis	315
		9,565
E 8-363	Install Street Lights & Signals	20,000
E 9-376	Laboratory Equipment	- -
E 10-Several	Install Short Line Extensions	20,000
E 11-Several	Miscellaneous Plant Replacements	25,000
	Total.	\$ 128,465

Minor Items:

This group consists of routine work orders which are considered each year and approved as blanket work orders.

Work Order No. E-1 No change from 1958.

Work Order No. E-2 No change from 1958.

Work Order No. E-3 No change from 1958.

Work Order No. E-4 Purchase Hydraulic Pole Puller.

This device connects to truck hydraulic system and saves hand labor.

Work Order No. E-5 Purchase Office Equipment. Thermafax machine and file case are in addition to existing facilities and are

needed for expansion. Chairs and calculating machine replace overage equipment.

Work Order No. E-6 Transportation Equipment will be handled by Municipal Garage.

Work Order No. E-7 Communication Equipment. New equipment as detailed will be purchased and amortized on rental basis by user.

Work Order No. E-8 Street Lights and Signal Systems. This budgeted amount covers normal growth of the system. Unusual additions will be covered by specific work order.

Work Order No. E-9 No additional Laboratory Equipment is required.

Work Order No. E-10 Short Line Extensions covers new lines \$1,000 or less per unit to service new customers.

Work Order No. E-11 Miscellaneous Plant Replacements covers cost of routine work due to obsolescence or increased load on existing facilities.

Major Items:

Terminal Reserve Substation: This item covers cost of installation of substation only, all equipment has been on hand for some time. Station will be located on lot leased from the Alaska Railroad at Second Avenue and H Street. Lot will be suitably landscaped to blend with neighborhood.

Underground Cable: Items of Underground Cable are in two sections because of geographical separation. This will complete the installation of the entire system started in 1955.

Major Line Extensions: This item of money is not specific and is intended to construct new facilities to areas developed during budget year.

ELECTRIC POWER FORECAST TO 1968

This study is made to advise on the trends, as of today, and as a guide for expenditures during the 1959 budget year.

The experience during the first seven months of 1958 indicates a very slow rate of growth in power load and consumption. The increase over a like period one year ago is only 2.5% to 3%. This, compared to some of the past experience, looks like a depression. It is, however, a slow but healthy growth.

If this rate continues, existing facilities are adequate for some time. The length of this period depends on how much we use the present high speed diesel generation and how much dump power is available from Eklutna.

If the rate of power use is accelerated by any of several things that can cause these changes, such as an "Oil Boom", present facilities will be inadequate very soon.

It is therefore recommended that other generation or power source be explored. The possible sources are:

1. Develop our own thermal plant.
2. Develop additional Diesel units.
3. Develop small automatic Hydro station or stations.
4. Explore purchase agreement with CEA for Knik Arm or Cooper Lake power.

Discussion:

Item 1 is not feasible due to the small block of power required in the near future.

Item 2. Slow speed diesels should be studied and compared to costs in Item 3.

Item 3. Study should be made of Grant Lake potential employing automatic equipment at the plant site, and wheeling power over CEA Cooper Lake lines.

Item 4. Purchase power agreement with CEA. It is likely that CEA will have excess generation for some time after completion of Cooper Lake which may be purchased. The amount of power available from this source will depend on their own growth, the growth on the Kenai peninsula and resolution of the area boundary agreement with the City.

Recommendation:

The Engineers be retained at once to file for permit from FPC on Grant Lake, and during budget year 1959 make study on power cost as compared to slow speed diesel power.

These studies will not preclude formation of a "Power Pool", but would indicate times of required construction to coordinate with "Pool" operation.

We are advised that CEA will be in a position to discuss power pool and power sales in the near future which will tie in with this recommendation. It is recommended that we proceed with these discussions.

Discussion:

From graphs, it appears that our system capacity as compared to our system demand (Chart I) is quite adequate for several years. However, the present diesel engines are not economical to run as base load machines and should only be used to generate during winter peaks. It is estimated that the optimum annual load factor is 10%. This means that we should not generate over five million KWH.

Our contract with the Bureau of Reclamation guarantees seventy-two million KWH per annum. Of course, on good or better water years, we are permitted to purchase in excess of the contract amount.

Therefore, based on minimum of seventy-two million from the Bureau, plus five million of City generation, we have a total of seventy-seven million annual of economical power which, by Graph II, will be saturated in 1960. Now, it is probable that we can always be able to purchase in excess of our minimum contract amount but the amount is questionable and can not be depended on. Thus follows the recommendation that other economical source of power be found at once.

