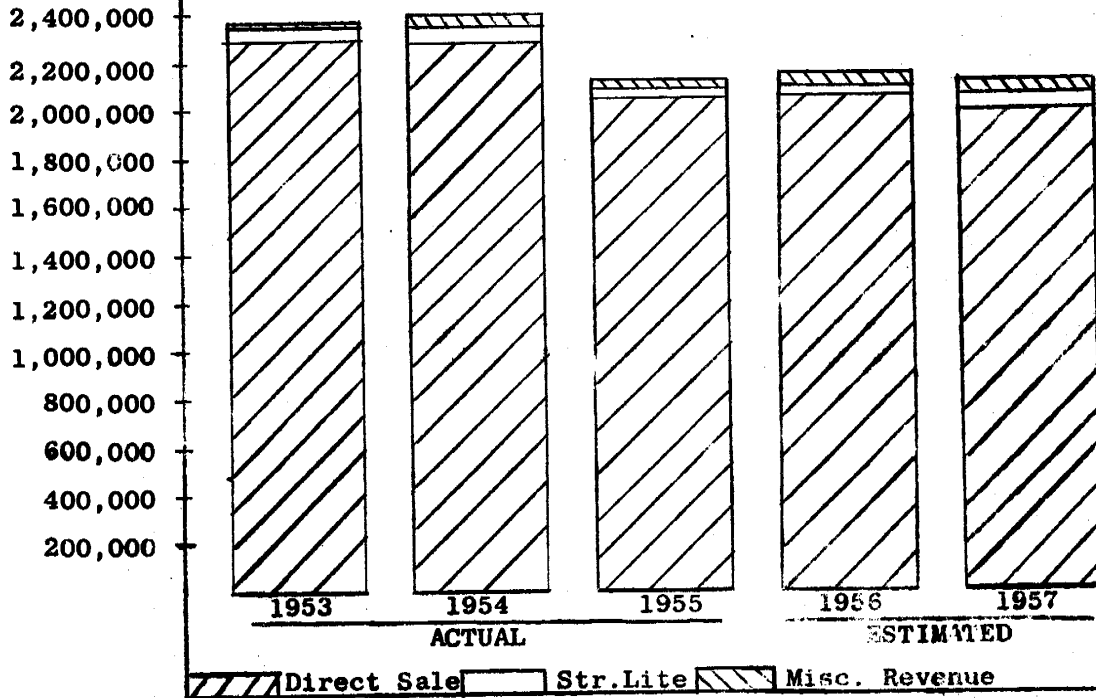


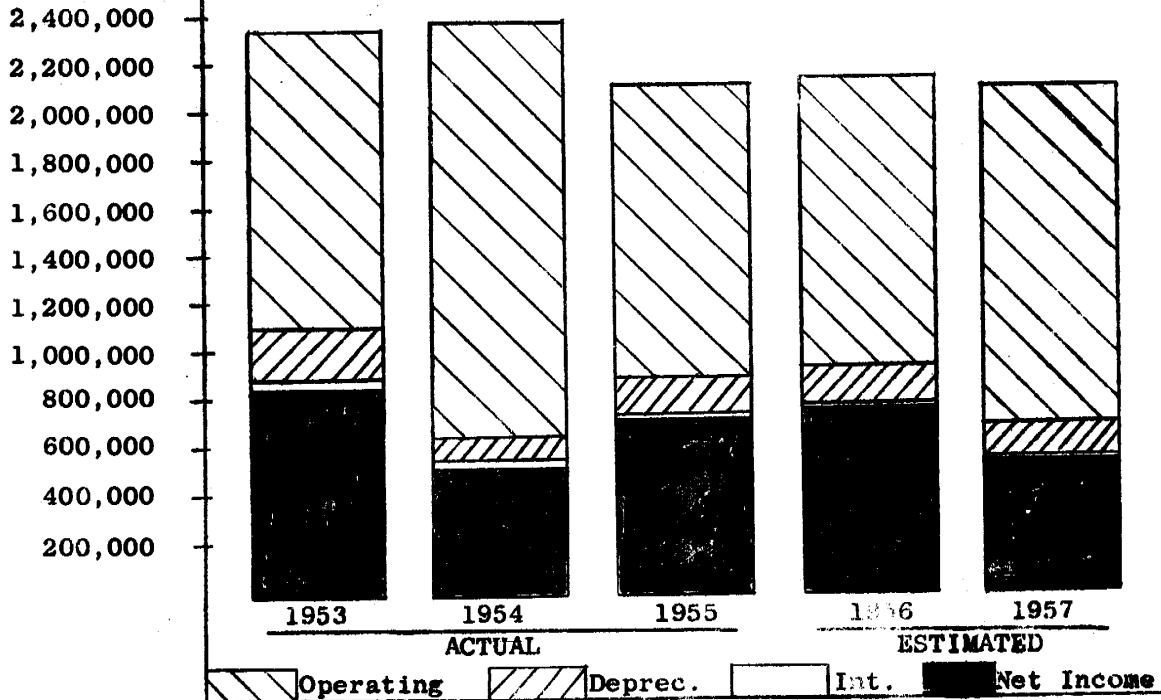
ELECTRIC UTILITY FUND BUDGET

**City of Anchorage
1957**

ELECTRIC UTILITY OPERATING REVENUES FIVE YEAR COMPARISON



ELECTRIC UTILITY OPERATING REVENUE DISTRIBUTION FIVE YEAR COMPARISON



ELECTRIC UTILITY FUND
1957 BUDGET

<u>Code</u>	<u>OPERATING REVENUES</u>	<u>Estimated 1956</u>	<u>Estimated 1957</u>
E 600	Residential & Domestic	\$ 759,960	\$ 750,960
E 602	Commercial & Industrial	1,090,424	1,045,521
E 603	Public Street Lighting	58,500	67,550
E 604	Sales to Other Public Authorities	47,940	41,800
E 606	Water Heating	116,790	106,400
E 607	Other Departmental Sales	36,081	38,400
E 612	Customer's Forfeits & Discounts	16,000	16,000
E 614	Service Customers Installations	6,020	7,200
E 615	Miscellaneous Electric Revenue	17,136	20,000
	Total Operating Revenue	\$ 2,148,491	\$ 2,093,831
 <u>NON-OPERATING REVENUE</u>			
	Depreciation Reserve	164,434	161,500
	1956 Unappropriated Surplus	<u> - </u>	<u>16,629</u>
	TOTAL RESOURCES	\$ 2,312,925	\$ 2,271,960

EXPLANATION OF ELECTRIC REVENUE ESTIMATES:

The comparative statistics table included in this budget is self explanatory as to the method of arriving at power revenues. Sales by classes was estimated on the basis of previous years experience in the case of commercial customers. International Airport shows an abnormal increase because of new equipment that we know is being installed. In the residential customer class, the high percentage increase in 1956 was due to the rate reduction promoting increased usage. The average increase over past years has been approximately 15%. Water heating revenue shows a decline because of the rate advantage of using the single meter. All-electric home schedule is gradually decreasing the use of a separate meter for hot water.

Average yearly increase in KWH sold over the past 5 years has been 14%. To be conservative, only a 12.4% increase in sales was estimated for 1957 over 1956. The Depreciation Reserve is added to the revenues for purposes of making capital additions to the plant. The 1956 Unappropriated Reserve is also provided to complete the proposed 1957 capital work program.

COMPARATIVE STATISTICS

	1955	1956 Actual 9 Mo. Est. 3 Mo.	% Over 1955	1957 Estimated	% Over 1956
Power Sales:					
Commercial	28,234,494	32,560,000	15.32	37,560,000	15.35
International Air	2,019,200	2,247,000	11.28	2,570,000	14.37
Residential	15,157,973	18,144,000	19.69	20,860,000	14.96
Water Heating	5,652,720	6,470,000	14.46	5,460,000	(15.61)
City Use	2,560,573	2,555,000	(.22)	3,210,000	25.64
Total K.W.H. Sold	53,624,960	61,976,000	15.57	69,660,000	12.40

Power Sales Revenue	\$ 2,096,893	\$ 2,109,335	\$ 2,050,631
Average Revenue per K.W.H. (Total)	.0391029	.033835	.029437

Average Number of Meters (By Class)

Commercial	1580	1617	2.34	1800	11.32
Residential	5934	6170	3.98	6400	3.73
Water Heating	1180	1235	4.66	900	(27.13)
Total Average Number of Meters	8694	9022	3.77	9100	.87

Average Revenue per K.W.H. (By Class)

Commercial	.039443	.033054	(16.19)	.027836	(15.78)
International Air	.024876	.021335	(14.24)	.016264	(23.77)
Residential	.048704	.041884	(14.00)	.036000	(14.05)
Water Heating	.018941	.018051	(4.70)	.019487	7.96
City Use	.034235	.037566	9.73	.033006	(12.14)

Average K.W.H. per Month per Customer (By Class)

Commercial	1,489.15	1,678.00	12.68	1,738.88	3.63
International Air	168,266.00	187,250.00	11.28	214,166.00	14.37
Residential	212.86	245.05	15.12	271.61	10.84
Water Heating	399.20	436.57	9.36	505.55	15.80

**ELECTRIC UTILITY FUND
1957 BUDGET**

EXPENDITURE SUMMARY

<u>Expenditure Classification</u>	<u>Estimated 1956</u>	<u>Estimated 1957</u>
Diesel Generation Expense	\$ 55,640	\$ 77,890
Purchased Power	690,600	790,080
Total Cost of Power	\$ 746,240	\$ 867,970
Distribution Operating Expense	83,470	106,190
Distribution Maintenance Expense	42,740	62,020
Customer's Accounting & Billing Expense	144,095	166,275
Administrative & General Expense	105,980	122,900
Clearing Accounts	30,050	23,000
Total Distribution Expense	\$ 406,335	\$ 480,385
Other Expenses	221,903	220,935
Transfer to the General Fund	312,000	322,794
Construction Fund*	626,447	379,876
	\$ 1,160,350	\$ 923,605
TOTAL MUNICIPAL LIGHT & POWER BUDGET	\$ 2,312,925	\$ 2,271,960

* Construction Fund

(1) 5% of Capital =	\$201,747
(2) Depreciation =	\$161,500
Total	\$363,247

1956 Unappropriated

Surplus	16,629
	\$379,876

ELECTRIC UTILITY EXPENDITURES

Code	DIESEL GENERATION OPERATING EXPENSE	Estimated 1956	Estimated 1957
E 727	Operation Supervision & Engineering	\$ 4,950	\$ 6,000
E 728.1	Engine Labor	8,500	12,000
E 728.2	Electric Labor	4,000	3,000
E 728.3	Miscellaneous Station Labor	6,000	3,000
E 729	Engine Fuel	8,400	24,000
E 730.1	Water	200	200
E 730.2	Lubricants	500	500
E 730.3	Station Supplies	300	600
E 730.4	Station Expenses	500	600
	Total Diesel Operation Expenses	\$ 33,350	\$ 49,900
<u>DIESEL MAINTENANCE EXPENSES</u>			
E 731	Maintenance Supervision & Engineering	\$ 6,000	\$ 6,000
E 732	Maintenance Structures & Improvements	2,400	2,400
E 733	Fuel Holders	300	600
E 734.1	Maintenance of Engines	12,000	18,000
E 734.2	Maintenance of Generators	180	180
E 734.3	Accessory Electric Equipment	180	180
E 734.4	Maintenance Misc. Power Plant Equipment	1,200	600
E 735	Rents	30	30
	Total Diesel Maintenance Expense	\$ 22,290	\$ 27,990
	TOTAL DIESEL GENERATION EXPENSES	55,640	77,890
E 738	Purchased Power (Eklutna-Hydro)	690,600	790,080
	TOTAL COST OF POWER	\$ 746,240	\$ 867,970
<u>DISTRIBUTION OPERATING EXPENSES</u>			
E 756	Supervision & Engineering	\$ 8,280	\$ 9,000
E 757	Load Dispatching	6,300	9,600
E 758.1	Distribution Maps & Records	10,500	20,000
E 758.2	Distribution Office Expense	360	360
E 759.1	Station Labor	1,200	1,500
E 759.2	Station Supplies	140	240
E 760.1	Station Storage Batteries	90	90
E 761.1	Overhead Lines	7,000	10,000
E 761.2	Underground Lines	600	1,200
E 761.3	Remove & Reset Transformers	9,000	9,000
E 762.1	Remove & Reset Meters	30,600	35,000
E 762.2	Other Services on Customer's Premises	4,800	4,800
E 763.1	Operation Overhead Street Light System	4,600	5,400
	Total Operation Expense	\$ 83,470	\$ 106,190

<u>Code</u>	<u>DISTRIBUTION MAINTENANCE EXPENSE</u>	<u>Estimated 1956</u>	<u>Estimated 1957</u>
E 764	Supervision & Engineering	\$ 8,000	\$ 8,400
E 765	Structures & Improvements	1,800	3,000
E 766	Station Equipment	1,000	1,500
E 767	Storage Battery Equipment	120	500
E 768.1	Maintenance of Poles, Towers & Fixtures	5,400	10,000
E 768.2	Maintenance Overhead Conductors & Devices	7,200	15,000
E 769.2	U. G. Conductors & Devices	100	600
E 770	Line Transformers & Devices	700	1,200
E 771	Maintenance of Services	3,000	3,000
E 772	Maintenance of Meters	900	900
E 773	Maint. of Installations on Cust. Premises	300	300
E 775	Street Light & Signal Systems	12,000	15,000
E 776	Rents	2,220	2,620
	Total Distribution Maintenance	\$ 42,740	\$ 62,020
	TOTAL DISTRIBUTION OPERATION AND MAINTENANCE	\$ 126,210	\$ 168,210
	<u>CUSTOMER'S ACCOUNTING & COLLECTION EXPENSE</u>		
E 780.3	Meter Reading	\$ 26,000	\$ 32,000
E 781	Billing and Collecting	114,095	130,275
E 783	Uncollectible Accounts	4,000	4,000
	Total Customer Accounting & Collecting	\$ 144,095	\$ 166,275
	<u>ADMINISTRATIVE & GENERAL EXPENSES</u>		
E 790	Salaries of General Officers	\$ 13,400	\$ 14,400
E 791	Other General Office Salaries	13,400	18,000
E 792.1	Expenses of General Officers	1,900	1,500
E 793	General Office Supplies	5,000	5,000
E 795	Special Services	13,500	20,000
E 796	Legal Services	11,200	12,000
E 798	Insurance Losses & Damages	15,330	12,600
E 799	Insurance Injuries & Damages	14,425	15,800
E 800.1	Employees Welfare Expense	725	1,200
E 800.2	Pension	4,000	4,500
E 801	Miscellaneous General Expense	300	500
E 802.1	Maint. of Structures & Improvements	300	400
E 802.2	Maint. of Office Furniture & Equipment	200	200
E 802.3	Maintenance of Communication Equipment	3,200	7,200
E 802.4	Maintenance of Miscellaneous Property	100	600
E 803	Rents	9,000	9,000
	Total Administrative & General Expense	\$ 105,980	\$ 122,900

<u>Code</u>	<u>CLEARING ACCOUNTS</u>	<u>Estimated 1956</u>	<u>Estimated 1957</u>
E 902	Stores Expense	\$ 18,000	\$ 20,000
E 903	Transportation	10,000	- - -
E 904	Laboratory Expense	200	800
E 905	Shop Expense	1,650	2,000
E 909	National Guard Leave	200	200
	Total Clearing Accounts	\$ 30,050	\$ 23,000
	<u>OTHER EXPENSES</u>		
E 503	Depreciation	\$ 164,434	\$ 161,500
E 507	Operating Tax	53,119	55,085
E 530	Interest	4,350	4,350
	Total Other Expenses	\$ 221,903	\$ 220,935
	<u>OTHER REVENUE DEDUCTIONS</u>		
	Transfer to General Fund	\$ 312,000	\$ 322,794
	Construction Fund	626,447	379,876
	Total Other Revenue Deductions	\$ 938,447	\$ 702,670
	TOTAL MUNICIPAL LIGHT & POWER BUDGET	\$ 2,312,925	\$ 2,271,960

Comparative Statement of Income & Expense:

	<u>Actual 1955</u>	<u>Estimated 1956</u>	<u>Estimated 1957</u>
Operating Revenues	\$ 2,125,533	\$ 2,148,491	\$ 2,110,460
Less:			
Operating Expenditures	1,223,914	1,205,694	1,403,440
Depreciation	162,460	164,434	161,500
Net Operating Income	739,159	778,363	545,520
Less: Interest Expense	14,775	4,350	4,350
Net Income	\$ 724,384	\$ 774,013	\$ 541,170
<u>Appropriation of Net Income:</u>			
Contribution to General Fund	360,000	312,000	322,794
Transfer to City Equity	184,838	462,013	218,376
Reserve for Construction	131,227	-0-	-0-
Reserve for Contingent Liabilities	48,319	-0-	-0-
Totals	\$ 724,384	\$ 774,013	\$ 541,170

1957 WORK PROGRAM - ELECTRIC UTILITY

Study of the comparative statistical table for 1956 and 1957, which follows the Electric Revenue estimates will be of tremendous help in reviewing the 1957 expenditures. The cost of power includes diesel generation (peaking and standby) and the purchase of power from the Eklutna-Hydro Plant. The budget estimates for the standard FPC account numbers.

Diesel operating and maintenance costs (Account Codes E 727 thru E 735) have increased in proportion to the increase in diesel generation. There is no increase in labor costs although the distribution of labor has changes in several codes. Engine fuel costs will increase \$15,600 because over 1,000,000 KWH more will be generated by the diesels than in 1956. The maintenance of engines include \$6,000 for the overhaul of the engine moved from "Little" Eklutna which will be installed in 1957.

The cost of Purchased Power, (Account Code 738) from the Eklutna-hydro will increase \$99,480 because of the increase purchase of approximately 9,000,000 KWH is expected in 1957.

The Distribution Operating Expenses are increased to provide; (1) better load dispatching and closer supervision of power purchases (Code E 757); (2) bring distribution maps and records up to date for inventory and appraisal of electric plant property (Code E 758.1); (3) undertake a larger number of load and voltage surveys on the overhead distribution system since customer consumption is constantly increasing (Code E 761.1; and (4) provide for more meter testing in 1957 (Code E 762.1). Other Code increases are normal rises in accordance with increased power usage.

The Distribution Maintenance Expenses have increased over 1956 for the following main reasons: (1) provide for alterations to the office building by enlarging second floor office space (Code E 765); (2) include maintenance of substation relays that have previously been neglected (Code E 766); (3) increased expense on the maintenance of poles and conductors because of the requirement to move poles in the new paving districts to be constructed in 1957 (Code E 768.1 and Code E 768.2); and (4) with the addition of several new traffic signals and new radio control devices maintenance cost will correspondingly increase (Code E 775).

The Customer's Accounting and Collection expenses include: (1) the increase of one meter reader part time (E 780.3); (2) increased billing and collection expenses as programmed in the City Clerk and the Comptroller budgets (Code E 781).

Administrative and General Expenses provide for the operation of the general office, insurance, social security, rent and miscellaneous items. Legal costs include the Electric Utility Fund's share of the operation of the City

Attorney's Office (Code E 796). Special services (Code E 795) include \$8,000 for engineering services incidental to the acquisition of the C.E.A. properties that are to be purchased in accordance with Council policy, the costs for the legal service for the rate case appeal in the Court of Appeals, Ninth Circuit, San Francisco and approximately \$6,000 for hiring an engineering consultant firm to study the proposed electrical generation plans. The Maintenance of Communication Equipment (Code E 802.3) has been increased to provide better maintenance to more equipment on the radio communication equipment.

Capital Expenditures - Plant Construction and Equipment

The summary of the Capital program of \$379,876 follows:

Major Plant Changes - Construction	\$ 285,126
Minor Plant Changes	68,000
Plant Equipment	26,750
	<u>\$ 379,876</u>

Major Plant Changes - Construction:

The unsettled situation with regard to area boundaries continues to create a difficult problem in the matter of planning for distribution facilities and to a lesser degree to generation plans. The assumptions that have been made for the purpose of planning are: (1) that the City will serve all residents within the City Limits, preferably through the purchase of CEA facilities within the present City Limits; (2) that the City will continue to serve our existing customers outside the City Limits; (3) that the distribution facilities in areas that are subsequently annexed to the City will be acquired by the City through purchase from CEA.

Summary Major Plant Changes - Construction

Substations	\$ 30,626
Concrete Platform	3,500
Radio Traffic Signal Control	40,000
Transmission Line	30,000
Underground System	181,000
Total Major Plant	<u>\$ 285,126</u>

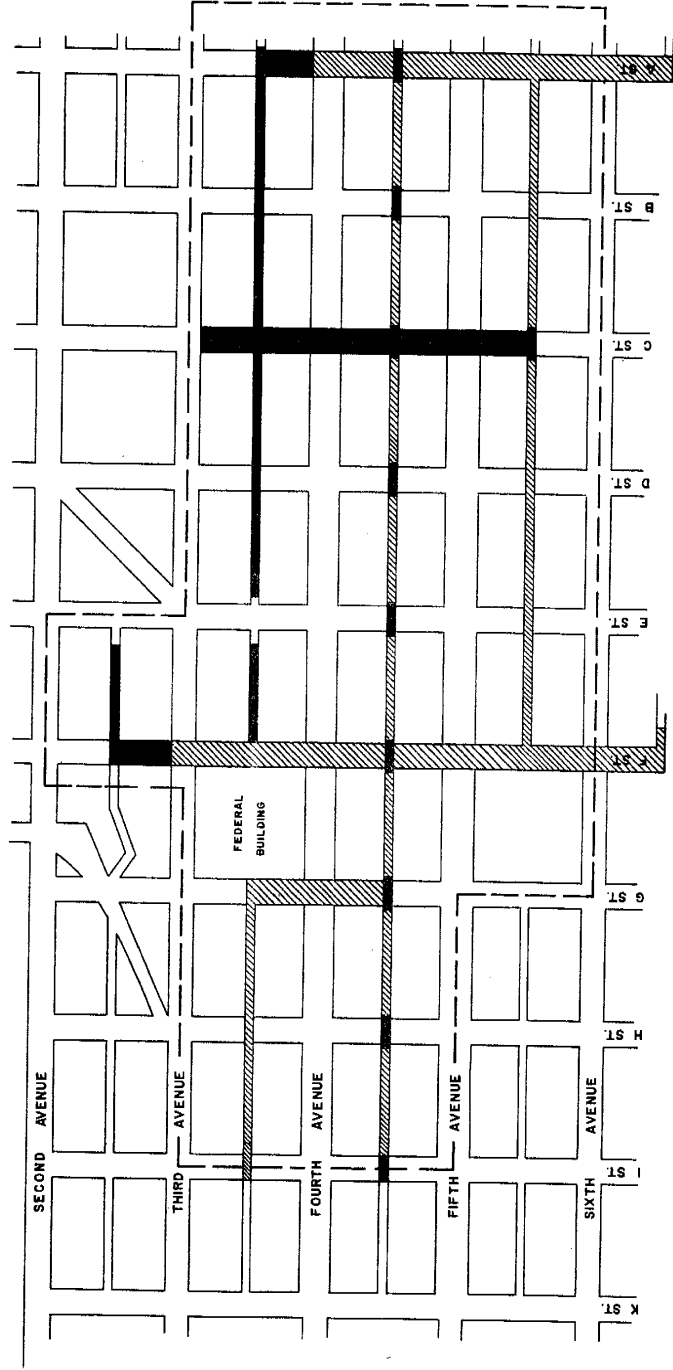
Plans have been made and equipment has been ordered for the installation of a 3,000 KVA Substation in Mountain View and the replacement of the 1,000 KVA Substation now in Anchor Park with a 3,750 KVA package substation. This will permit the equipment now installed at Anchor Park to be moved over to Northern Lights. The transfer will double the capacity of Northern Lights substation. The cost of this equipment installed will be \$126,000, the cost of moving the Anchor Park equipment will be \$10,000. The substations cost \$105,374 and have been purchased in 1956, so \$30,626 must be provided to complete these two projects.

CITY OF ANCHORAGE

PROPOSED UNDERGROUND

MUNICIPAL LIGHT & POWER DEPT.

LEGEND



A concrete platform is planned in the west portion of the warehouse yard for the storage of transformers. The present covered storage area being used for storage of transformers will be used for cable and special equipment storage that does not need to have heated storage. The cost of this platform will be \$3,500.

The initial installation of radio control for signals in the downtown area will be installed in 1957. It is proposed that the transmitting equipment, tone translator, master control, dial offset interrupter, automatic program devices and 12 local intersection tone translators be installed this first year. This includes remote control of the signals on Sixth Avenue and the four new intersections at 4th, 5th, Cordova and A streets over the new system. The remainder of 4th & 5th will continue to be controlled through the cable system until 1958. Cost of the equipment for this project is \$32,000 plus \$8,000 labor for installation. The use of radio control for traffic signals means that a duct in our underground system need not be allocated for the installation of a cable for this control. The radio control equipment will permit establishment of fire lanes, change of cycle length and offset to fit traffic needs, remote flash control and shut down, all by remote control.

A project is proposed for 1957 which will complete a second sub transmission line from the Bureau of Reclamation substation at Goose Lake to town. This second route will be complete from the Bureau substation to Bragaw and Division and from First and Sitka to the Diesel Plant terminal in 1956. The remaining 1-1/4 miles from First and Sitka to Bragaw and Division will complete the line at a cost of \$30,000.

The portion of the underground system planned for 1957 consists of the completion of the duct system and manholes as shown on the drawing included in the budget. The cost for 1957 is estimated at \$181,000.

Minor Plant Changes:

Summary Minor Plant Changes

E 1.358	Purchase and Install Transformers	\$ 18,000
E 2.360	Purchase and Install Meters	8,000
E 3.359	New Services	12,000
E 8.	Several--Street Lighting	10,000
E 10	Several--New Short Extensions	10,000
E 11	Several--Miscellaneous Replacements	10,000
Total Minor		<u>\$ 68,000</u>

There will be an estimated 72 transformers added to the system by the end of 1956. This is 22 more than the estimate of 50 in the 1956 budget. 16 of these 22 were installed to supply City residents who desired City power rather than CEA power. This 72 transformer addition to our plant will add

1600 KVA of capacity requirement to the system. The addition of 65 transformers with a capacity of 1300 KVA is estimated for 1957.

E2.360 is for the purchase of new meters. \$6,000 was spent in 1956 but \$8,000 will be required in 1957. This is because the rate schedule has been altered in such a manner that it is advantageous for customers to go to one meter. For commercial customers, this usually requires meters which are not in stock. Based on experience of 1956, the additional \$2,000 seems justified.

E3.359 New Services. \$15,000 was spent in 1956 but it is estimated that \$12,000 will be required in 1957, principally because the water main replacement program will be completed. That project required the replacement of many services.

Street light location modification is being planned so that an emphasis is put on intersection lighting and the number of poles on a given street is reduced. This can be done by using poles for more than one purpose such as traffic signal mounting, distribution, telephone and street lighting. Because of the large appropriations in 1955 and 1956 for street lights, the \$10,000 request should take care of the requests for 1957.

E10. Several - for short customer extensions of less than \$1,000 cost each.

E11 Several - Miscellaneous replacements is to cover replacements necessary that cost less than \$1,000 each.

Plant Equipment:

Plant equipment recommended for purchase in 1957 follows:

E 4.377	Tools & Equipment:		
	Pipe Threading Machine	3,200	
	Miscellaneous Small Tools	800	
			4,000
E 5.372	Office Equipment:		
	Bruning Printing Machine	2,400	
	Draftsman's Desk	500	
	Calculator	600	
	Rest Room Furniture (Girls)	150	
			3,650
E 6.373	Transportation:		
	Digging Machine	10,000	
	2 Pickup Trucks	7,400	
			17,400
E 7.378	Communication Equipment:		
	Miscellaneous Test Equipment	1,000	
			1,000
E 9.376	Laboratory Equipment:		
	Recording Meters		700
	Total Plant Equipment		\$ 26,750

E4.377 covers the cost of an electric pipe threading machine and miscellaneous tools and equipment. This pipe threading machine will be electric and mounted on a trailer so it can be transported to the job. It will thread pipe from 1/2" to 4" and bolts.

The installation of the underground system requires much conduit work with most of it in the 3 to 4" sizes. Using hand tools, it takes a man approximately 1/2 hour to cut a thread with hand equipment not counting the reaming and hand cutting the pipe with a hack saw. This machine will cut, ream and thread the pipe in 44 seconds.

E5.372 Office Equipment includes the purchase of a Bruning printing machine, draftsman's desk, calculator and rest room furniture. The Bruning printing machine is being purchased to replace an obsolete Ozalid printing machine on which the maintenance is high and the speed of printing is too slow for economical use. The Bruning machine is more versatile in the types of work that can be done.

E6.373 Transportation, includes a new hydraulically operated hole digging and pole setting machine to replace an obsolete digger (purchased second-hand in 1951) which is very expensive to maintain. The new digger will be mounted on the old truck chassis.

Two pickup trucks are being requested to replace No. 93 and No. 95, both Chevrolet trucks 1949 model. Maintenance costs on these trucks have been abnormally high during 1956.

The miscellaneous test equipment is for meters, signal generators and such items as are needed to equip the radio shop.

E9.376 is laboratory equipment consisting of recording meters to be used in load and voltage checking.

1957 WORK PROGRAM - GENERATION CONSTRUCTION RESERVE FUND

Additional work programmed for 1957, not included in the operation is proposed to be accomplished from appropriations from the Generation Construction Reserve Fund since the work will add to the present diesel generation capacity.

The installation of the Eklutna Diesel engine in the existing diesel plant was planned for 1956. It appeared that it would be more economical to sell the engine and generator if a satisfactory bid could be obtained and apply that money on a larger unit. Several offers were made during the year but none of them satisfactory to the City, therefore the installation of the machine at the new Diesel plant will proceed as planned. This will require a building addition and modification at an estimated cost of \$50,000. The estimated cost of installation of the engine and necessary accessories is \$25,000.