

**ELECTRIC UTILITY FUND BUDGET**

**The City of Anchorage, Alaska  
1962**

**ELECTRIC UTILITY FUND  
1962 BUDGET**

**BUDGET SUMMARY**

	<u>Estimated 1961</u>	<u>Estimated 1962</u>
<u><b>REVENUES</b></u>		
Estimated Revenues	\$ 2,573,273	\$ 2,743,700
Depreciation	<u>274,497</u>	<u>231,500</u>
<b>TOTAL ESTIMATED FUNDS AVAILABLE . . . . .</b>	<b>\$ 2,847,770</b>	<b>\$ 2,975,200</b>

**EXPENDITURES**

Total Diesel Generation	\$ 93,280	\$ 71,520
Other Power Supply Expenses	<u>977,240</u>	<u>1,081,840</u>
Total Power Production Expenses	\$ 1,070,520	\$ 1,153,360
Distribution Operation	\$ 120,370	\$ 128,070
Distribution Maintenance	<u>82,720</u>	<u>85,320</u>
Total Distribution Expenses	\$ 203,090	\$ 213,390
Customer Accounts Expenses	\$ 161,600	\$ 175,570
Sales Expenses	6,000	6,000
Administration & General Expenses	<u>110,811</u>	<u>119,170</u>
Total Accounting & Administrative Expenses	\$ 278,411	\$ 300,740
Other Expenses	\$ 321,277	\$ 283,800
Transfer to General Fund	\$ 456,544	\$ 487,640
Construction Fund*	\$ 517,928	\$ 536,270
Unappropriated Balance	-	-
<b>TOTAL EXPENSES . . . . .</b>	<b>\$ 2,847,770</b>	<b>\$ 2,975,200</b>

\*Construction Fund = 5% of \$6,095,475 - \$304,770  
 Depreciation 231,500  
 Total \$536,270

Personnel Authorized	43	43
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ELECTRIC UTILITY FUND  
1962 BUDGET

<u>Code</u>		<u>Estimated</u> 1961	<u>Estimated</u> 1962
	<u>SALES OF ELECTRICITY</u>		
3440	Residential Sales	\$ 817,273	\$ 865,200
3442	Commercial & Industrial Sales	1,525,000	1,630,500
3444	Public Street Lighting	95,000	100,000
3448	Interdepartmental Sales	65,000	73,000
	Total Sales of Electricity	<u>\$ 2,502,273</u>	<u>\$ 2,668,700</u>
	<u>OTHER OPERATING REVENUES</u>		
3450	Forfeited Discounts	\$ 20,000	\$ 24,000
3451	Miscellaneous Service Revenues	6,000	6,000
3456	Other Electric Revenues	45,000	45,000
	Total Other Operating Revenues	<u>\$ 71,000</u>	<u>\$ 75,000</u>
	TOTAL OPERATING REVENUES	<u>\$ 2,573,273</u>	<u>\$ 2,743,700</u>
	<u>NON-OPERATING REVENUES</u>		
	Depreciation Reserve	\$ 274,497	\$ 231,500
	TOTAL RESOURCES	<u>\$ 2,847,770</u>	<u>\$ 2,975,200</u>

DISCUSSION OF ELECTRIC REVENUE ESTIMATES:

Sales of Electricity:

Account No. 3440 - Residential Sales. It is expected that these revenues will increase only 6%. While there is considerable residential building in progress in our service area, residential land areas have nearly reached saturation and most revenue growth will be from purchase of electric appliances to be added to our existing system.

Account No. 3442 - Commercial and Industrial Sales. It is hoped that this class of service will grow more rapidly with the large number of new buildings under construction. It is quite possible that some of our industrial heating load may be lost to the Natural Gas Company.

Account No. 3444 - Public Street Lighting. We do not expect a substantial increase in this account because nearly all areas in the City are now served. Even with a rather large street light rehabilitation program planned, the rehabilitation will employ street lamps of much higher efficiency, consequently while lighting levels will be doubled the current consumption will not materially change.

Account No. 3448 - Interdepartmental Sales. This account will show a marked increase since the City has added the Public Safety Building, and will add the Water Filtration Plant.

ELECTRIC UTILITY FUND EXPENDITURES

<u>Code</u>		<u>Estimated 1961</u>	<u>Estimated 1962</u>
POWER PRODUCTION EXPENSES			
<u>DIESEL POWER GENERATION</u>			
Operation			
3546	Operation Supervision & Engineering	\$ 7,350	\$ 7,500
3547	Fuel	20,000	15,000
3548	Generation Expenses	20,250	15,600
3549	Misc. Other Power Generation Expenses	2,800	2,800
3550	Rents	30	120
	Total Operation Expenses	\$ 50,430	\$ 41,020
Maintenance			
3551	Maintenance Supervision & Engineering	\$ 7,350	\$ 7,500
3552	Maintenance of Structures	6,500	6,500
3553	Maintenance of Generating & Electric Plant	26,200	12,000
3554	Maintenance of Misc. Other Power Gen- eration Plant	2,800	4,500
	Total Maintenance Expenses	\$ 42,850	\$ 30,500
	TOTAL DIESEL POWER GENERATION EXPENSES	\$ 93,280	\$ 71,520
<u>OTHER POWER SUPPLY EXPENSES</u>			
3555	Purchased Power	\$ 972,240	\$ 1,076,840
3556	System Control & Load Dispatching	5,000	5,000
	TOTAL OTHER POWER SUPPLY EXPENSES	\$ 977,240	\$ 1,081,840
	TOTAL POWER PRODUCTION EXPENSES	\$ 1,070,520	\$ 1,153,360
	Estimated Kilowatt Hours	96,000,000	104,860,000
	Estimated Average Cost - Mills per Kwh	11.2	10.99

<u>Code</u>	<u>Estimated</u> <u>1961</u>	<u>Estimated</u> <u>1962</u>
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DISTRIBUTION EXPENSES

Operation

3580	Operation Supervision & Engineering	\$ 9,000	\$ 10,000
3582	Station Expense	2,200	2,500
3583	Overhead Line Expenses	30,000	30,000
3584	Underground Line Expenses	4,500	4,500
3585.1	Street Lighting System Expenses	900	5,000
3585.2	Signal System Expenses	6,000	7,000
3586	Meter Expenses	38,200	39,000
3587	Customer Installations Expenses	5,500	5,500
3588	Miscellaneous Distribution Expenses	22,500	23,000
3589	Rents	1,570	1,570
	Total Operation Expenses	\$ 120,370	\$ 128,070

Maintenance

3590	Maintenance Supervision & Engineering	\$ 9,000	\$ 10,000
3591	Maintenance of Structures	600	600
3592	Maintenance of Station Equipment	2,000	5,000
3593	Maintenance of Overhead Lines	33,000	33,000
3594	Maintenance of Underground Lines	2,000	2,500
3595	Maintenance of Line Transformers	7,000	7,000
3596.1	Maintenance of Street Lighting System	17,000	15,000
3596.2	Maintenance of Signal System	11,500	11,500
3597	Maintenance of Meters	500	600
3598	Maintenance of Misc. Distribution Plant	120	120
	Total Maintenance Expenses	\$ 82,720	\$ 85,320

TOTAL DISTRIBUTION EXPENSES	\$ 203,090	\$ 213,390
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CUSTOMER ACCOUNTS EXPENSES

Operation

3902	Meter Reading Expenses	\$ 31,000	\$ 39,600
3903	Customer Records & Collection Expenses	126,600	131,970
3904	Uncollectible Accounts	4,000	4,000
	TOTAL CUSTOMER ACCOUNTS EXPENSES	\$ 161,600	\$ 175,570

<u>Code</u>		<u>Estimated 1961</u>	<u>Estimated 1962</u>
<u>SALES EXPENSES</u>			
3913	Advertising Expenses	\$ 4,500	\$ 4,500
3914*	Revenues from Merchandising, Jobbing and Contract Work		
3915*	Cost & Expenses of Merchandising, Job- bing, and Contract Work		
3916	Miscellaneous Sales Expenses	<u>1,500</u>	<u>1,500</u>
	TOTAL SALES EXPENSES	\$ 6,000	\$ 6,000

\*These accounts are credit and debit and any credits are included in the Misc. Revenues.

ADMINISTRATION AND GENERAL EXPENSES

Operation

3920	Administrative & General Salaries	\$ 33,000	\$ 34,500
3921	Office Supplies & Expenses	7,000	9,000
3923.1	Outside Services Employed	12,000	12,000
3923.2	Legal Services	14,691	18,840
3924	Property Insurance	7,500	10,110
3925	Injuries and Damages	9,500	6,600
3926	Employee Pensions & Benefits	6,500	7,000
3928	Regulatory Commission Expenses	- -	- -
3930	Misc. General Expenses	1,000	1,000
3931	Rents	<u>16,920</u>	<u>16,920</u>
	Total Operation Expenses	\$ 108,111	\$ 115,970

Maintenance

3932.1	Maintenance of General Plant	\$ 700	\$ 700
3832.2	Maint. of Communication Equipment	<u>2,000</u>	<u>2,500</u>
	Total Maintenance Expenses	\$ 2,700	\$ 3,200

	TOTAL ADMINISTRATION & GENERAL EXPENSES	\$ 110,811	\$ 119,170
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<u>Code</u>		<u>Estimated 1961</u>	<u>Estimated 1962</u>
	<u>OTHER EXPENSES</u>		
3403	Depreciation	\$ 274,497	\$ 231,500
3408	Taxes	46,780	52,300
3427	Interest	- -	- -
	TOTAL OTHER EXPENSES	\$ 321,277	\$ 283,800
	TRANSFER TO GENERAL FUND	\$ 456,544	\$ 487,640
	CONSTRUCTION FUND	\$ 517,928	\$ 536,270
	TOTAL EXPENSES	\$ 2,847,770	\$ 2,975,200

1962 MAINTENANCE AND OPERATION:

Discussion of Expense Accounts by sections.

Power Production Expenses:

Diesel generation costs are reduced about 30% due to reduction in personnel and expected use of natural gas for heating and minor amounts of generation.

Other Power Supply Expenses, which consists mostly of purchased power, is increased about 10%, which essentially reflects a substantial amount of purchased power.

Two assumptions have been made, the first being that the Eklutna project will be able to supply about 90 million kilowatt hours at an average cost of 9.8 mills. Secondly, it is assumed that the contract for purchased power from Chugach Electric Association will receive the blessing of the Bureau of Reclamation and we will purchase in the order of 14 million kilowatt hours at 14 mills.

The City Diesel Plant will be kept maintained, and will generate only as needed or for economical reasons.

Distribution Expenses:

The accounts in this group have increased an average of 5%. This increase reflects the cost inherent with growth of the system and the scheduled 1% longevity pay increases of personnel.



Customer Accounts Expenses:

These accounts have been raised a little less than 3% due mainly to increased cost of operations within the department because of system expansion and scheduled longevity pay increases.

Sales Expenses:

There is no contemplated change in these accounts, which include Advertising and free services accounts.

Administration and General Expenses:

These accounts show an increase of about 4.6% due to scheduled salary increases. However, \$12,000 is budgeted for outside services. This will not be used unless services of a professional engineer or rate analyst are required, and this determination will be made by the City Council.

Maintenance expenses have been increased about \$500 to cover costs of increases in the radio communication networks of the City, which costs are not directly charged to the department involved.

Other Expenses:

These accounts show a decrease because of the application of more realistic depreciation rates which more than offset a 26% increase in electric revenue tax.

Transfer to General Fund:

Contribution to the General Fund shows an increase of 6.8%, and reflects the growth of the system gross plant value.

Construction Fund:

The Construction Fund shows an increase of 3.5%. This fund is made up of the total of 5% of the gross plant value plus the depreciation fund. The former increased 6.8% and the latter decreased some 18%, with a net increase of 3.5%. This fund is used for renewals and replacement of existing facilities and new construction to serve new customers and increased loads.

CONSTRUCTION FUND

Work  
Order

MINOR ITEMS

3368.001	Purchase and Install Transformers	\$	55,000
3370.002	Purchase and Install Meters		16,500
3369.003	Install New Services		13,500
3394.004	Purchase Tools and Equipment		1,300
3391.005	Purchase Office Equipment		2,300
3392.006	Transportation Equipment		-
3397.007	Communication Equipment		5,970
3373.008	Install Street Light & Signal Systems		71,900
3395.009	Purchase Laboratory Equipment		2,000
.010	Install Short Line Extensions		25,000
.011	Miscellaneous Plant Replacements		<u>28,000</u>
	Total Blanket Work Orders	\$	221,470

MAJOR ITEMS

Install 5000 KVA Substation	\$	60,000
Rebuild Street Light Circuits		54,000
Rebuild Distribution Feeder Ties		80,000
Install Substation, Westchester Urban Renewal		15,000
Install Underground Cable - H Street		15,000
Install Street Lights - College Village		9,500
Extensions to New Customers and Subdivisions		<u>81,300</u>
Total Major Items	\$	314,800

TOTAL CONSTRUCTION FUND . . . . . \$ 536,270

DETAIL OF MINOR CONSTRUCTION FUND

3368.001	Purchase and Install Transformers		\$ 55,000
3370.002	Purchase and Install Meters		16,500
3369.003	Install New Services		13,500
3394.004	Purchase Tools and Equipment		
	Hot Line Tools and Equipment		1,300
3391.005	Purchase Office Equipment		
	2 - 4 drawer filing cabinets	\$ 300	
	8 - room air conditioning units	<u>2,000</u>	2,300
3392.006	Transportation Equipment		- -
3397.007	Communication Equipment		
	Public Works		
	3 mobile units	\$ 1,950	
	Police Department		
	1 mobile unit	\$ 650	
	2 handy talkies	<u>1,320</u>	1,970
	Electric Department		
	2 mobile units	\$ 1,300	
	Laboratory Equip.	<u>750</u>	<u>2,050</u>
			5,970
3373.008	Install Street Lighting and Signal Systems		
	Street Lights		20,000
	Traffic Signals		
	First Ave. & C St. (new)	\$ 4,400	
	Ea. Fifth & Bragaw (replace)	10,800	
	Sixth & Gambell (new)	4,400	
	Fourth & Gambell (modernization)	4,400	
	Fifth & Gambell (modernization)	4,400	
	Ninth & Gambell (modernization)	4,200	
	27th & Spenard (modernization)	2,700	
	Northern Lights & Spenard (modernization)	5,200	
	15th & Gambell ('no left turn' signs)	600	
	Ea. Fifth & Airport Heights (replace)	<u>10,800</u>	51,900
3395.009	Purchase Laboratory Equipment		
	Clamp on volt-ammeter	\$ 150	
	Multi-amp relay tester	1,000	
	Recording Voltmeters	<u>850</u>	2,000
.010	Install Short Line Extensions		25,000
.011	Miscellaneous Plant Replacements		<u>28,000</u>
	TOTAL		\$ 221,470

MINOR ITEMS:

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

Work Order 3368.001 - Purchase and Install Transformers. No change from 1961.

Work Order 3370.002 - Purchase and Install Meters. No change from 1961.

Work Order 3369.003 - Install New Services. No Change from 1961.

Work Order 3394.004 - Purchase Tools and Equipment. Additional hot line tools and equipment are necessary to maintain safe working conditions on our 12,470 volt system.

Work Order 3391.005 - Purchase Office Equipment.

Additional cabinets are needed to keep department records.

Since the M. L. & P. building is not insulated, during the summer months it is unbearable to work in the building unless windows are opened and fans used to circulate the air. This condition of open windows and fans under normal conditions would be satisfactory, however, due to the dust from Third Avenue and the noise of trucks starting and traveling on Post Road, it is virtually impossible to keep desks and equipment clean, and to conduct normal conversation with customers on the telephone. The installation of room air conditioners would greatly increase office efficiency and reduce maintenance on office equipment.

Work Order 3392.006 - Transportation Equipment. Not used.

Work Order 3373.008 - Street Light and Signal Systems. There is no change in the street light estimate. The traffic signal estimate includes proposed installations as requested by the Traffic Engineer.

Work Order 3395.009 - Purchase Laboratory Equipment. This work order contemplates buying an additional clamp-on ammeter for testing, a relay tester for adjusting substation relays for proper operation, and two recording voltmeters for checking customer voltage complaints.

Work Order - - .010 - Install Short Line Extensions. No change from 1961.

Work Order - - .011 - Miscellaneous Plant Replacement. No change from 1961.

MAJOR ITEMS:

The installation of a new 5000 KVA substation at 7/8 alley and H Street is necessary to replace the existing 1500 KVA overloaded substation, which will be relocated to the Westchester Urban Renewal area to serve the increasing load in that area.

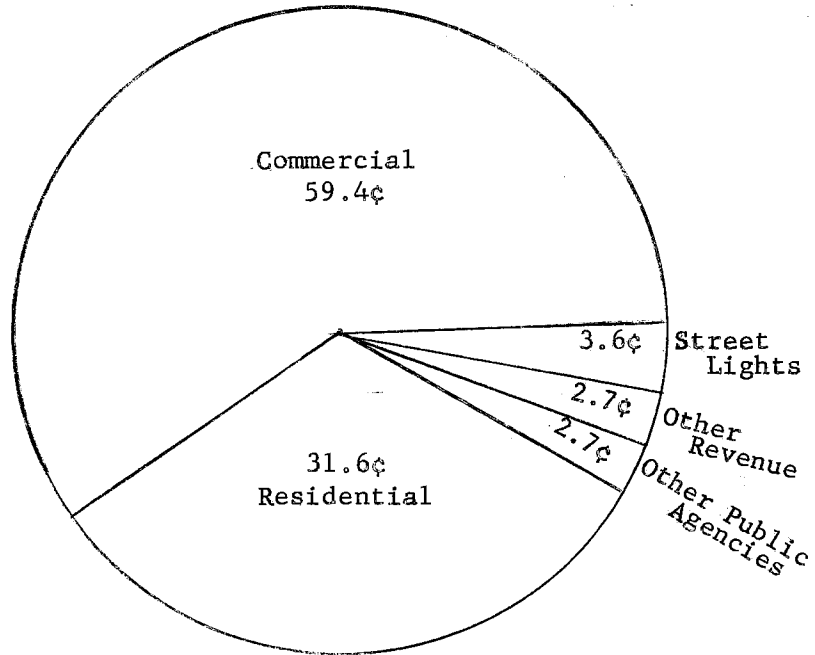
Rebuilding of the street light circuit is necessary since the addition of lights over the years is overloading the present system. This rebuild will allow more lights to be added without buying additional transformers. Also, better lighting distribution and easier maintenance will result.

Rebuilding distribution feeder ties is very necessary because of the increasing load in the central Anchorage area. The existing overhead feeder ties between substations are inadequate in size and are unable to carry the load if emergencies arise.

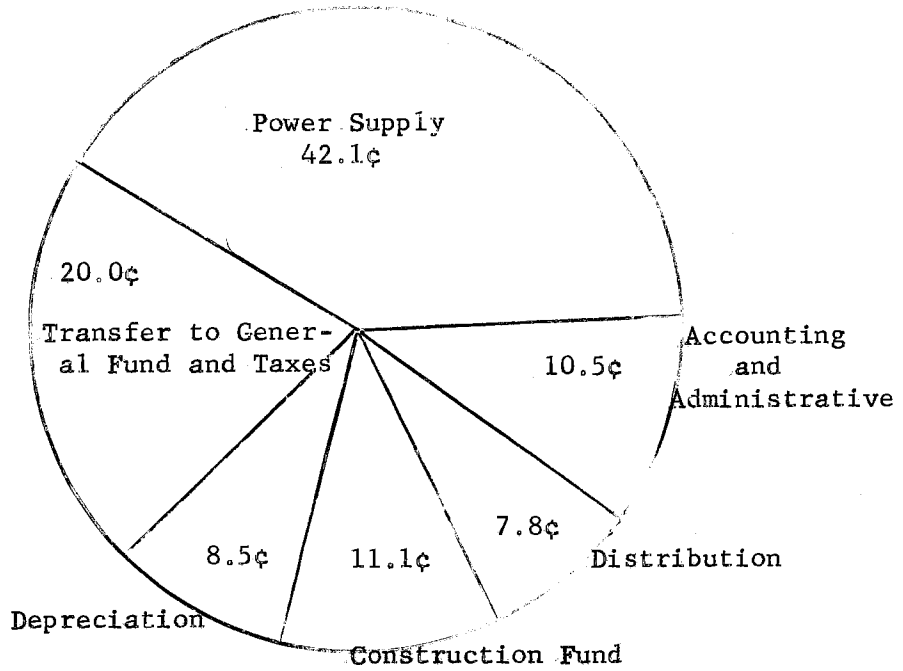
The installation of the underground cable on H Street will complete our present underground system and will connect the proposed 5000 KVA substation into the underground network, thus increasing reliability of service to the downtown area.

Extensions to new customers and subdivisions remains essentially the same as in the 1961 Budget.

ELECTRICAL DEPARTMENT REVENUES  
DOLLAR APPROPRIATIONS - 1962



ELECTRICAL DEPARTMENT EXPENSES  
DOLLAR APPROPRIATIONS - 1962



## CITY OF ANCHORAGE

### TEN YEAR LOAD FORECAST

On the basis of the first seven months of the year 1961 there is an apparent growth of 9.98% over the same period of 1960. This will bring the total purchased and generated kilowatt hours to about 96 million for 1961 which, needless to say, is an all time high.

It is further estimated that the availability of natural gas as a fuel in the locality will perhaps in the immediate future reduce this rapid growth. It is therefore assumed that the rate of growth will be a conservative 7%.

The City's service area is limited because the Electric Utility is surrounded by the Military on the north, the sea on the west, and by a rural cooperative on the south and east. Therefore, future growth must come from more concentrated use of the available land by business, institutions, and residences. We expect that there will be considerable vertical growth in coming years. That is, small, inadequate buildings will be replaced by multiple story structures. This trend is presently in evidence with several buildings newly completed, under construction, or strongly proposed.

The experience of growth during the ten years past is in the order of 9%, and varies by years from no increase to as high as 34% in peak load increase. The kilowatts purchased and generated increased at an average rate of 11%. We therefore feel that it is in order to use the conservative figure of 6% for peak demand and 7% for kilowatt hours generated and Purchased. Following is a tabulation of these values.

<u>Year</u>	<u>KW Peak</u>	<u>Kwh Purchased &amp; Generated (X 1000)</u>
1961	20,000	96,000
1962	21,200	104,000
1963	22,700	111,000
1964	24,300	119,000
1965	26,000	127,000
1966	27,800	136,000
1967	29,700	146,000
1968	31,800	156,000
1969	34,000	167,000
1970	36,400	179,000
1971	38,500	191,000

These figures indicate that additional source of supply will be required by December, 1962.

Existing capacity is now, from Eklutna 16,000 KW, and from the City Diesels 6,500 KW, a total of 22,500 KW. This indicates that we could possibly just 'squeak by' December, 1962, and possibly the whole winter of 1962-63, if we have no adverse weather, and if all facilities can perform to their maximum, or with some small overload. However, it is not a good gamble, and some reliable source should be built or contracted for to give a margin of at least 15% reserve. This should be a minimum of 3,500 KW, or more ideally, 5,000 KW.

We also have a short term contract with the Chugach Electric Association to furnish a substantial amount of power through September of 1964. There is, however, some unknowns in this since the interchange must be accomplished through the Bureau of Reclamation substation and therefore changes must be approved by the Bureau. These proposed changes have not been acted on as of September, 1961.

The Central Alaska Power Pool has retained the Ralph M. Parsons Company to make a complete Area Power Study. This report should be in our hands by the time this Budget is finalized, and should be the basis for decisions by the Council for future power supply.

#### FIVE YEAR FORECAST FUTURE DISTRIBUTION INSTALLATIONS

In 1962 we plan to install a 5000 KVA substation at 7/8 alley and H Street and relocate the existing 1500 KVA unit to the Westchester Urban Renewal Area.

The program of "heavying up" our distribution system to carry the additional load will continue and will take approximately three years to complete.

Within the next five years, two additional substations will be needed. One of these would replace the existing 1500 KVA unit at First Ave. and Sitka St. The second unit will be needed to replace the temporary 600 KVA station serving the Methodist University.

As the downtown area increases in load, additional substations will be needed, however the location of these units will depend on the size and location of new buildings.



