

# MUNICIPAL LIGHT & POWER UTILITY

## MUNICIPAL LIGHT AND POWER 1976-1981 C.I.P.

The Capital Improvement Program for the Municipal Light and Power Department reflects the goals of the Department to maintain continued reliable electric service and to provide for anticipated future load growth and demands upon the electric utility.

Based on current growth, studies indicate that no new generation after that proposed in the Capital Improvement Budget would be required until 1985; however, should growth increase or if present growth rates continue indefinitely, capacity in addition to that budgeted would be required in the early 1980's. It must be noted that these projections do not include provisions for new technology or radical increases in fuel costs which could mandate other sources of electric generation, such as hydroelectric power or geothermal generation.

In order to maintain long-term solvency, depreciation funds must be used to finance part of the Capital Improvement Program. The remainder of Capital Improvement funds will come from electric revenue bond sales. The actual distribution of depreciation would be determined based upon bond sales.

The following estimates are based upon known facts as they exist at the time; however, it must be noted that the dynamic changes occurring in the electric utility industry could, and may in fact, materially effect changes in the long-term projections as presented.

## FUNDING MUNICIPAL LIGHT & POWER C.I.P. (in thousands)

	<u>1976</u>	1977	1978	<u> 1979</u>	1980	1981	Total
Revenue Bonds Authorized Revenue Bonds Not Authorized	5,854	(8,347)					5,900 8,347
Depreciation Funds	1,504	1,590	1,310	2,056	1,303	1,344	9,107
TOTAL	<u>7,358</u>	9,983	1,310	2,056	1,303	1,344	23,353

#### CITY OF ANCHORAGE

DATE \_\_June 12, 1975

### DEPARTMENT OF <u>Municipal Light</u> (1) and Power CAPITAL IMPROVEMENT PROGRAM

SUMMARY OF CIP Projects (2) TO BE FUNDED 13 THOUSANDS (5) (6) (8) TOTAL (9) (11)(10)DESCRIPTION PROJECT 19:6 1977 PROJECT G/O COST (4) BONDS REVENUE BONDS FEDERAL STATE 1978 1979 1980 1981 OTHER GENERATION 3,355 3,355 Turbine 6 3,355 Engr Turbine 7 315 315 315 Turbine 7 6,000 6,000 6,000 Switch Yard P. 2 880 880 230 650 10,550 10,550 Generation TOTAL 3,900 6,650 SUBSTATIONS Transmission 1,150 400 350 100 100 100 100 Distribution 2,316 1,150 636 690 50 840 50 50 Telemetering 18 2,316 18 Substation TOTAL 3,484 1,004 18 1,090 150 940 150 150 115/34.5 kv Overhd 3,484 Circuits 1,230 30 1,200 500 530 50 50 50 50 Sectional Switches 51 51 0 51 115/34.5 kv TOTAL 1,281 81 1,200 551 530 50 50 50 50 7.2/12.5-2.4/4.16 OHD 240 120 120 70 50 30 30 30 30 RESIDENTIAL U.G. 360 120 240 60 60 60 60 60 60 COMMERCIAL U.G. 950 500 450 250 250 150 100 100 100 DOWNTOWN U.G. 2,074 1,054 1,020 854 200 220 240 270 290 TOTAL (13) SEE PAGE OTHER SOURCE OF FUNDS COMMENTS (13)

## CITY OF ANCHORAGE

DATE June 12, 1975

## DEFARTMENT OF Municipal Light (1) and Power CAPITAL IMPROVEMENT PROGRAM

SUMMARY OF	CIP	Р	rojects	(2)									
DESCRIPTION (3)	TOTAL			E FUNDED	i THOU	SANDS <sup>(5</sup>	)	(6)				(10)	(11)
32301111311	PROJECT COST (4)	G/O BONDS	REVENUE BONDS	FEDERAL	STATE	OTHER		19 <u>7-:</u>	19 <u>77</u>	19 <u>78</u>	19 <u>79</u>	19 <u>80-</u>	19 <u>81</u>
STREET LIGHTS  Downtown & Arter Residential & Mi			200 100			400 200		100 50	100 50	100 50	100 50	100 50	100 50
LAND & LAND RIGHT	<u>S</u> 150	4	50			100		25	25	25	25	25	25
TRANSFORMERS & CAPACITORS	1,310		442			868		229	213	215	216	218	219
METERS Std. Meters Automatic Meter	300		100			200		50	50	50	ŭ,	50	50
Reading Devices Meters TOTAL	250 550		250 350			0 200		50	250 300	50	50	50	50
NEW SERVICES	900		300			600		150	150	150	150	150	150
TOOLS, EQUIPMENT & FURNITURE	355		130			225		65	65	60	45	50	70
GENERAL PLANT	250		250			0			250				
	:												
TOTAL (**)	23,354		14,247			9,107		7,358	9,983	1,310	2,056	1,303	1,344
OTHER SOUR	CE OF FUNDS	0 %	COM	MENTS	<u> 1</u> 47		,						
SEE COMMENTS					1.5 to	\$2.0 mi	llion o	f depre	ci <b>a</b> tion	funds p	er year	would h	ce

			·····						
CAPITAL PROJECT ESTIMATE	(1) De	partment and	Division			(3) Priorit Number			
CAPITAL PROJECT ESTIMATE	Municipal	L Light &	Power	Generati	on				
	Estimated	Approp.	New Appro-	Estimated Requirments in Thousands					
Estimated Cost by Object	t by Object Total Cost Prio		priation 1976 (6)	19 <u>77</u> (7)	19 <u>78</u> (8)	1979	19 <u>80</u> (10)	19 <u>81</u> (11)	
<ul> <li>(12) Equip, (Noveable)</li> <li>(13) Land</li> <li>(14) Buildings</li> <li>(15) Other Improvements</li> <li>(16) Other</li> </ul>	11,200		4,550	6,650					
TOTAL	11,200		4,550	6,650					
(17) Estimate Cost by Source of Funds ode Fund Title ELECTRIC BOND	11,200		4,550	6,650					
TOTAL	11,200		4,550	6,650		Territoria de la constanta de			

(23) Estimated Start Dat		·		• •	Completion Date	
(25) Effect on Budget	Years	Man Years	Salaries & Wages	Other Objects	Total Cost	Revenues
List Programs(s) Affected	l biyer i	NO C				
	Full Year					

(26) Project Description and Justification (Continue on Additional Sheets, Same size)
Additional generating capacity to meet estimated 12% per year load growth and increase fuel economies of generation.

1976 - Erect and complete waste heat unit no. 6. \$3,355,000

1976 - Build electric switch yard for plant # 2. \$230,000

1976 - Engineering and write specifications for gas turbine # 7, plant # 2, to insure reliability of unit # 6 waste heat. \$315,000

1977 - Build and complete gas turbine # 7. \$600,000

1977 - Build and complete switch yard and substation at plant # 2. \$650,000

CAPITAL PROJECT ESTIMATE	(1) De	partment and	Division		(2) Project	Title	(3	) Priority Number	
om TIME TROUBET ESTIMATE	Municipa	l Light a	nd Power	Substatio	ons				
	Estimated	Approp.	New Appro- priation		Estimated Requirments in Thousar				
Estimated Cost by Object	Total Cost (4)	Prior Years (5)	1976	19 <u>77</u>	19 <u>78</u> (8)	19 <i>79</i> (9)	19 <u>80</u> (10)	19 <u>81</u> (11)	
(12) Equip. (Moveable) (13) Land (14) Buildings (15) Other Improvements (16) Other	3,484		1,004	1,090	150	940	150	150	
TOTAL	3,484		1,004	1,090	150	940	150	150	
(17) Estimate Cost by Source of Funds Code Fund Title  DEPRECIATION	3,484		1,004	1,090	150	940	150	150	
TOTAL	3,484		1,004	1,090	150	940	150	150	
. (18) Gross Floor Area (21) Architectural and E (23) Estimated Start Dat	ngineering Fees	. Ft. (19)	(2	Cost Per Sq. 1 22) Percent ( 24) Estimated	Ft. S of Building C d Completion	Cost	Project Sta	itus Code	
(25) Effect on Budget	Years Man	Salaries &	Wages Oti	ner Objects	Total (	`ost	n		
List Programs(s) Affected	First Year				10247	.03.L	Revenu	35	
	Full								

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

Expansion of facilities to meet estimated load growth.

Year

<sup>1976 -</sup> Addition of new transmission and distribution substations, telemetering.

<sup>1977 -</sup> Addition of new distribution substation.

<sup>1978 -</sup> Normal annual improvements to existing substations

<sup>1979 -</sup> Addition of new distribution substation.

<sup>1980 -</sup> Normal annual improvements to existing substations.

<sup>1981 -</sup> Normal annual improvements to existing substations.

IN THOUSANDS

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Additions to and improvement of 115/34.5 kv overhead system and conversion of 34.5 kv circuits to 115 kv to carry estimated future loads.

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

CAPITAL PROJECT ESTIMATE	(1) De	partment and	Division		(2) Project	: Title	(3	Priority Number
CAFTIAL PROJECT ESTIMATE	Municipa	l Light &	Power	7.2/12.5	-2.4/4.16	kv overh	ead sys.	- THEOPER
	Estimated	Approp.	New Appro-		Estimated R	eauirments i	n Thousands	
Estimated Cost by Object	Total Cost (4)	Prior Years (5)	priation 1976 (6)	19 <u>77</u>	1978	1979	1980	1931
(12) Equip. (Moveable) (13) Land				1	(8)	(9)	(10)	(11)
(14) Euildings (15) Other Improvements (16) Other	240		70	50	30	30	30	30
TOTAL	240		70	50	30	30	30	30
(17) Estimate Cost by Source of Funds Code Fund Title								
ELECTRIC BOND	120	To the state of th	70	50				
Depreciation	120				30	30	30	30
TOTAL	240		70	50	30	30	30	30
(18) Gross Floor Area (21) Architectural and Eng (23) Estimated Start Date	Sq gineering Fees	. Ft. (19)	Building (2 (2	ost Per Sq. 1 2) Percent ( 4) Estimated	Ft. \$ of Building of d Completion	Cost	Project Sta	atus Code
(25) Effect on Budget Y	Years   Man Years	Salaries &	Wages Oth	er Objects	Total	Cost	Dove	
List Programs(s) Affected	irst (ear				10001	<u> </u>	Revenu	25

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)
Continuing program to construct new feeders and upgrade existing feeders to meet estimated load growth.

Full Year

CAPITAL PROJECT ESTIMATE	(1) De	partment and	Division		(2) Project	: Title		B) Priority Number
	Municipa	l Light &	Power	Residential Underground				
	Estimated	Approp.	New Appro-		Estimated Re	equirments i	n Thousands	
Estimated Cost by Object	Total Cost (4)	Prior Years (5)	priation 1976 (6)	19 <u>77</u> (7)	19 <u>78</u> (8)	19 <u>79</u> (9)	19 <u>80</u> (10)	19 <u>81</u> (11)
(12) Equip. (Moveable) (13) Land (14) Euildings (15) Other Improvements (16) Other	360		60	60	60	60	60	60
TOTAL	360		60	60	60	60	60	60
(17) Estimate Cost by Source of Funds Code Fund Title								
ELEC. BOND DEPRECIATION TOTAL	120 240 3 <b>6</b> 0		60 60	60 60	<b>6</b> 0 60	60 60	60 60	60 60
(18) Gross Floor Area (21) Architectural and Eng (23) Estimated Start Date	Sq ineering Fees	. Ft. (19)	(2)	2) Percent (	Ft. \$_ of Building ( d Completion	Cost	Project St	atus Code
(25) Effect on Budget	ears Man Years	Salaries &	Wages Oth	er Objects	Total (	Cost	Revenu	
List Programs(s) Affected	irst 'ear				23307		KEVENIII	25
1	ull ear							

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

This program provides for furnishing underground distribution systems in new subdivisions, to existing residences and to underground conversions. These estimates are difficult to make with accuracy.

150

150

150

150

100

100

100

100

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100

100

100

100

100

100

100

	TOTAL		950		250	250	150	100	100	100
(18) (21) (23)	Gross Floor Area Architectural and E Estimated Start Dat	ngin <b>ee</b> r e	Sq ing Fees	. Ft. (19)	(	Cost Per Sq. 22) Percent 24) Estimate	of Building	Cost	Project Sta	itus Code
(25)	Effect on Budget	Years	Man Years	Salaries &	Wages Ot	her Objects	Total	Cost	D	**************************************
List Pr	rograms(s) Affected	First					1000	cust	Revenue	) Ç

250

250

250

250

250

250

250

250

IN THOUSANDS

Estimated

(4)

950

950

500

450

Full: Year 950

This program provides for furnishing underground services to new commercial establishments and to underground conversions.

CAPITAL PROJECT ESTIMATE

Estimated Cost by Object

(12) Equip. (Moveable)

(15) Other Improvements

(17) Estimate Cost by Source of Funds

Title

(13) Land (14) Eulldings

(16) Other

ELEC. BOND

DEPRECIATION

TOTAL

Code

TOTAL

Fund

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

Year

This program provides for increasing the capacity of the downtown underground system by converting existing circuits to higher voltage, by adding additional circuits by establishing an underground duct and vault system and by effecting other improvements necessary to meet estimated load growth.

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

This is a continuing program involving both City and State participation.

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

CAPITAL PROJECT ESTIMATE	(1) De <sub>l</sub>	(1) Department and Division			(2) Project	: Title	(3	) Priority Number
CAPITAL PROJECT ESTIMATE	Municipa	l Light &	Power	Resident	ial & Mis	c. Street	Lights	
	Estimated	Approp.	New Appro-		Estimated R	n Thousands		
Estimated Cost by Object		Prior Years (5)	priation 1976 (6)	19 <u>77</u> (7)	19 <u>78</u> (8)	1 <u>979</u> (9)	19 <u>80</u> (10)	19 <u>81</u> (11)
(12) Equip. (Noveable) (13) Land (14) Buildings								
(15) Other Improvements (16) Other	300		50	50	50	50	50	50
TOTAL	300		50	50	50	50	50	50
(17) Estimate Cost by Source of Funds Code Fund Title								·
ELEC. BOND DEPRECIATION TOTAL	100 200 300		50 50	50 50	50 50	50 50	50 50	50 50
(18) Gross Floor Area (21) Architectural and Eng (23) Estimated Start Date	Sc g <b>inee</b> ring Fees	ı. Ft. (19)	Building (	Cost Per Sq. 22) Percent 24) Estimate	Ft. \$ of Building d Completion	(20) Cost Date	Project Sta	tus Code
	Years Man Years	Salaries &	Wages Ot	her Objects	Total	Cost	Revenue	25
List Programs(s) Affected	irst Year							
3	Full Year							

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

The requirements for this continuing program are established, primarily, by the Traffic Engineer. It may be subject to participation by local improvement districts.

(2) Project Title

(1) Department and Division

Number

CALITAL PROJECT ESTIMATE	Municipa	l Light &	Power	Land and	Land Righ	nts		
•	Estimated	Approp.	New Appro-		Estimated Re	equirments i	n Thousands	
Estimated Cost by Object		Prior Years (5)	priation 1976 (6)	19 <u>77</u> (7)	19 <u>78</u> (8)	1979	19 <u>80</u> (10)	19 <u>81</u> (11)
(12) Equip. (Noveable) (13) Land (14) Buildings (15) Other Improvements (16) Other	150		25	25	<b>2</b> 5	25	<b>2</b> 5	25
TOTAL	150		25	25	25	25	25	25
(17) Estimate Cost by Source of Funds Code Fund Title  ELEC. BOND DEPRECIATION TOTAL	50 100 150		25 <b>2</b> 5	· 25 25	25 25	25 25	<b>2</b> 5 <b>2</b> 5	25 25
(18) Gross Floor Area Sq. Ft. (19) Building Cost Per Sq. Ft. S (20) Project Status Code (21) Architectural and Engineering Fees: (22) Percent of Building Cost % (23) Estimated Start Date (24) Estimated Completion Date								
(25) Effect on Budget	Years Man Years	Salaries &	Wages Oth	er Objects	Total	Cost	Revenue	<
List Programs(s) Affected	First Year						11-11-11-11-11-11-11-11-11-11-11-11-11-	

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

Full Year

This program covers the acquisition of easements, permits and miscellaneous small plots. It does not cover major land acquisitions for generating plants, substations, etc., which are included in the estimates applicable to those projects.

CAPITAL PROJECT ESTIMATE

IN THOUSANDS

Annual requirements for capacitors and distribution transformers needed to serve new customers and replace worn-out equipment.

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

CADITAL BROICCT ECTIMATE	(1) De	partment and	Division		(2) Project	Title		B) Priority Number
CAPITAL PROJECT ESTIMATE	Municipa	l Light &	Power	Meters				18.600=1
	Estimated	Approp.	New Appro-					
Estimated Cost by Object	Total Cost (4)	Prior Years (5)	priation 1976 (6)	19 <u>77</u>	19 <u>78</u> (8)	19 <u>79</u> (9)	19 <u>80</u> (10)	19 <u>81</u> (11)
<ul><li>(12) Equip. (Noveable)</li><li>(13) Land</li><li>(14) Euildings</li><li>(15) Other Improvements</li></ul>	550		50	300	50	50	50	50
(16) Other TOTAL	550		50	300	50	50	50	50
(17) Estimate Cost by Source of Funds Code Fund Title  ELEC. BOND DEPRECIATION TOTAL	350 200 550		50 50	- 300 300	50 50	50 50	50 50	50 50
(18) Gross Floor Area (21) Architectural and Eng (23) Estimated Start Date	gineering Fees	i. Ft. (19)	(2	ost Per Sq. 1 (2) Percent ( 4) Estimated		Cost	Project St	atus Code
(25) Effect on Budget	Years Han Years	Salaries &	Wages Oth	uer Objects	Total	Cost	Revenu	Q.C.
List Programs(s) Affected	First Year			<u> </u>		7 7 7 7	NEVERN	
	Full Year							

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

Annual requirements for meters to serve new customers and replace worn-out meters. In 1977 some automatic metering equipment will be installed on a pilot basis to establish criteria and costs for a future complete automatic metering system.

CAPITAL PROJECT ESTIMATE	(1) De	partment and	Division		(2) Project	Title		) Priority Number
CAPITAL PRODUCT ESTIMATE	Municipa	l Light &	Power	New Servi	ces			
	Estimated	Approp.	New Appro-		Estimated Re	equirments i	n Thousands	
Estimated Cost by Object		Prior Years (5)	priation 1976 (6)	19 <u>77</u>	19 <u>75</u> (8)	19 <u>79</u> (9)	19 <u>80</u> (10)	1981
(12) Equip. (Moveable) (13) Land (14) Euildings (15) Other Improvements	900		150	150	. 150	150	150	150
(16) Other	900		150	150	150	150	150	150
TOTAL	900		130	100	1.00	130	130	120
(17) Estimate Cost by Source of Funds								
Code Fund Title								
ELECT. BOND DEPRECIATION	300 600		150	150	150	150	150	150
TOTAL	900		150	150	150	150	150	150
(18) Gross Floor Area (21) Architectural and En (23) Estimated Start Date	gineering Fees	. Ft. (19)	(2)	ost Per Sq. 1 2) Percent o 4) Estimated	Ft. \$ of Building ( d Completion	Cost	Project Sta	itus Code
(25) Effect on Budget	Years Man Years	Salaries &	Wages Oth	er Objects	Total (	Cost	Revenue	a.c
List Programs(s) Affected	First Year						AEVEIIII	<u>.</u>
	Full Year							

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

Annual requirements to meet estimated growth in numbers of customers.

CAPITAL PROJECT ESTIMATE	(1) Dep	partment and	Division	(2) Project Title				Priority Number
	Municipal Light & Power			Tools, Equipment & Furniture				
	Estimated	Approp.	New Appro-		Estimated Requirments in Thousan			
Estimated Cost by Object	(4)	Prior Years (5)	priation 1976 (6)	19 <u>77</u> (7)	19 <u>78</u> (8)	1979 (9)	1 <u>980</u> (10)	19 <u>81</u> (11)
(12) Equip, (Moveable) (13) Land	205		25	35	35	25	40	45
(14) Buildings (15) Other Improvements (16) Other	150		40	30	25	20	10	25
TOTAL	355		65	65	60	45	50	70
(17) Estimate Cost by Source of Funds Code Fund Title  ELECTRIC BOND DEPRECIATION  TOTAL	130 225 355		65 <b>6</b> 5	65	60 60	<b>45</b> <b>4</b> 5	50 50	. 70 70
(18) Gross Floor Area (21) Architectural and Eng (23) Estimated Start Date	Sq i <b>nee</b> ring Fees	. Ft. (19)	Building (	Cost Per Sq. ( 22) Percent	Ft. \$	(20)	Project Sta	
(25) Effect on Budget	ears Man Years	Salaries &	Wages Ot	her Objects	Total	Cost	Poven	
List Programs(s) Affected	irst ear				.,,,,,,,	<u> </u>	Revenue	\$
	ull 'ear							

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

<sup>(12)</sup> Equipment (line trucks, backhoes, trenching equipment) for replacement of existing and new equipment for increased efficiency.

<sup>(15) 1976 -</sup> new map making machine.

<sup>(15) 1976 - 1981 -</sup> normal office equipment, radios, tools, etc.

(25) Effect on Budget		Man Years	Salaries & Wages	Other Objects	Total Cost	Revenues
List Programs(s) Affected	First Year					
	Full Year					

<sup>(26)</sup> Project Description and Justification (Continue on Additional Sheets, Same size)

<sup>1977 -</sup> Purchase of warehouse area and improvements of existing facilities.