

MUNICIPALITY OF ANCHORAGE – UCIP - 1  
UTILITY CAPITAL NEEDS ANALYSIS

Department	ENTERPRISE ACTIVITIES
Program Category	MUNICIPAL LIGHT AND POWER

POLICY GOALS

To provide the electrical energy requirements of present and future customers in the most economical manner, consistent with the requirements of safety, reliability, sound financial management, protection of the environment and reasonable regard for aesthetics.

SIX-YEAR DEPARTMENT GOALS AND STRATEGY

1. To develop or promote the development of long-term energy supplies which can be expected to yield minimal present and future energy cost.
2. To develop a reliable distribution system capable of safely supplying present and future needs consistent with stated Municipal aesthetic goals.
3. To achieve a sound financial position which will permit financing the required electric system on a continuing basis.
4. To achieve and maintain safety and reliability standards appropriate for our environment.
5. To continually review operating practices to insure they are conducive to the achievement of our goals.
6. To be responsive to our customers requirements in a fair and equitable manner.

MUNICIPALITY OF ANCHORAGE — UCIP - 2  
EXISTING CAPITAL BUDGET SUMMARY

Department  
ENTERPRISE ACTIVITIES  
Project Category  
GENERATION

## EXISTING CAPITAL IMPROVEMENT BUDGET

PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Boiler Maintenance Tools	50	50	In process of ordering per manufacturer recommendations
2. Spare Parts (Turbine & Boiler)	500	500	50 on order remainder to be ordered before end of 1979
3. Storage Fuel Tank Plant #2	350	350	Engineer Study in progress order in 1979
4. Gas Line and Oil Line Move Plant #2	35	35	Work commence July 1979
5. Security System (Elect- ric Gates and TV)	25	25	To be installed 1980
6. Micro Processor	25	25	To be installed 1980
7. Fuel Oil Heating Plant#2	25	25	Deferred to include fuel storage tank
8. Trends System (Machine Analyzer)	250	250	Deferred to 1980 for inclusion of Turbine #7 and revised technology
9. Building Tie between Unit #6 & Unit #5 Boiler Building Hydro or Coal Plant #1	100	100	Engineer to be complete 1979, construction 1980
	112,000	6,620	Deferred pending anticipated joint effort with Alaska Power Authority
10. Turbine & Boiler Unit #7	16,208	6,170	Purchase and installation of Turbine 1978. Boiler to be purchased and installed 1980
11. Elevator, Plant #2	50	50	Postponed to 1980 to coincide with new building between Turbine #6 Building and #5 Boiler Building
12. Oil Pipe Line - Port to Plant #1	225	225	Investigation continuing with oil companies anticipated late 1979.

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER

PROJECT CATEGORY: GENERATION

	THOUSANDS OF DOLLARS						FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
	1980	1981	1982	1983	1984	1985			
<b>CAPITAL INVESTMENT COSTS</b>									
PLANNING AND DESIGN	416	888	3,017	3,002	3,000	2,000	12,323		
LAND AND R.O.W.	0	145	0	0	0	0	145		
CONSTRUCTION	138	110	133	33	0	0	414		
EQUIPMENT	1,156	10,582	595	810	800	550	14,493		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	350	125	100	150	150	100	975		
<b>TOTAL</b>	<b>2,060</b>	<b>11,850</b>	<b>3,845</b>	<b>3,995</b>	<b>3,950</b>	<b>2,650</b>	<b>28,350</b>	<b>0</b>	<b>28,350</b>


SOURCE OF FUNDS							TOTAL FUNDS	REINBUR SABLES	NON-REIM BURSABLES
	1980	1981	1982	1983	1984	1985			
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	1,060	10,650	2,445	2,395	2,150	650	19,350		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	1,000	1,200	1,400	1,600	1,800	2,000	9,000		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>2,060</b>	<b>11,850</b>	<b>3,845</b>	<b>3,995</b>	<b>3,950</b>	<b>2,650</b>	<b>28,350</b>	<b>0</b>	<b>28,350</b>

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS

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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES				Account Code 0531-8004-8600					
Program Category MUNICIPAL LIGHT AND POWER				Project Category GENERATION					
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input checked="" type="checkbox"/> REV		
THOUSANDS OF DOLLARS									
Centralize Controls, Turbine #1, #2, #3, and #4 to Plant #2		75					75		
Gas Compressor, Plant #2		350					350		
Revision and Upgrade Electrical Monitoring and Metering Plant #1, and #2.		150					150		
Water Treatment - Reverse Osmosis Unit Plant #2			300				300		
Future Coal or Hydro	400	600	3,000	3,000	3,000	2,000	12,000		
<b>TOTALS</b> 	2,060	11,850	3,845	3,995	3,995	2,650	23,500	4,850	

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>																																													
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>GENERATION</b>																																													
PROJECT TITLE	SUMMARY OF PROJECT SCOPE																																														
Major Improvements and Parts Turbines and Boilers	<p>Reflect boiler spare parts \$50,000/year for 6 years</p> <p>Major improvement of turbines per following schedule to extend life and insure generation reliability:</p> <table border="0"> <tr> <td>1980 Turbine #3</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #4</td> <td>400,000</td> <td>(Blade Modification)</td> </tr> <tr> <td>                  #5</td> <td>500,000</td> <td>(Blade Modivication)</td> </tr> <tr> <td>1981 Turbine #4</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #7</td> <td>150,000</td> <td></td> </tr> <tr> <td>1982 Turbine #1</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #5</td> <td>300,000</td> <td></td> </tr> <tr> <td>1983 Turbine #2</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #5</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #6</td> <td>300,000</td> <td></td> </tr> <tr> <td>1984 Turbine #3</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #7</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #8</td> <td>300,000</td> <td></td> </tr> <tr> <td>1985 Turbine #1</td> <td>300,000</td> <td></td> </tr> <tr> <td>                  #4</td> <td>300,000</td> <td></td> </tr> </table>		1980 Turbine #3	300,000		#4	400,000	(Blade Modification)	#5	500,000	(Blade Modivication)	1981 Turbine #4	300,000		#7	150,000		1982 Turbine #1	300,000		#5	300,000		1983 Turbine #2	300,000		#5	300,000		#6	300,000		1984 Turbine #3	300,000		#7	300,000		#8	300,000		1985 Turbine #1	300,000		#4	300,000	
1980 Turbine #3	300,000																																														
#4	400,000	(Blade Modification)																																													
#5	500,000	(Blade Modivication)																																													
1981 Turbine #4	300,000																																														
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#5	300,000																																														
1983 Turbine #2	300,000																																														
#5	300,000																																														
#6	300,000																																														
1984 Turbine #3	300,000																																														
#7	300,000																																														
#8	300,000																																														
1985 Turbine #1	300,000																																														
#4	300,000																																														
Chemical Storage and Dispensing Facility	Bulk storage of hazardous chemicals (such as sulfuric acid and caustic) requires a safe dispensing facility for water and boiler treatment at Power Plant #2																																														
Painting Power Plant #2	Code requires identification of piping by color code; to be painted by Municipal Light and Power crews after construction terminated.																																														
Freeze Protection Plant #2 Cooling Tower and #5 Boiler	Equipment to assure cooling tower and #5 Boiler from freeze damage when units are not operating during winter shutdowns and save expensive contained chemically treated water in system (Power Plant #2)																																														

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>	
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>GENERATION</b>	
PROJECT TITLE		SUMMARY OF PROJECT SCOPE	
Fuel Oil Heating Plant #1		To insure a reliable source of alternate fuel during winter months. The fuel must be heated before turbines can operate if natural gas pressure is low or gas supply interrupted.	
Deicing System Turbine #1, #2, and #3		To insure reliability of adequate intake air to Turbine #1, #2, and #3 during ice fog and icing conditions heating must be instituted to insure continued operation.	
Centralize Control Turbine #5 to Main Control Room, Plant #2		To provide system control of Turbines from central station at new facilities Power Plant #2	
Plant #2 Lunchroom, Kitchen and Personnel Facilities		Provide personnel facilities per Union Agreement at Power Plant #2	
Insulate Exhaust Silencers Per OSHA, Turbine #1, #2 and #3.		Noise attenuation required by OSHA at Power Plant #1	
Gas Flow Meters, Turbine #1, #2, #3, #4 and #5		To determine machine efficiency, gas flow meters on each turbine would allow this capability plus measure usage.	
Oil Fired Peaker		Additional generation capacity to insure reliable service during peak usage periods.	
Paving, Grading and Landscaping Plant #2		Site paving for parking and preparation after construction	
Centralize Control of Plant #1, Turbines #1, #2, #3 and #4 to Power Plant #2.		Transfer of Turbines #1, #2, #3 and #4 machine control to new main control center Power Plant #2 for reliability and load management of Generation system.	
Gas Compressor Plant #2		Installation of gas compressor to insure reliable power loading of Turbines #5 and #7 at Power Plant #2 by maintaining adequate gas pressure.	
Revision and Upgrading Electrical Monitoring and Metering Plant #1 and Plant #2		Revamp of electrical monitoring and metering to reflect upgrading of grid system and insure reliable metering of system output.	

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>GENERATION</b>
PROJECT TITLE	SUMMARY OF PROJECT SCOPE	
Water Treatment - Reverse Osmosis Unit Plant #2	Unit to reclaim and save chemically treated water for reuse in steam cycle system.	
Future Generation - Hydro or Cooling	Load growth and reliable service requires future planning of engineering and design on a continuing basis for alternate power generation sources.	



MUNICIPALITY OF ANCHORAGE – UCIP - 2  
EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	TRANSMISSION PLANT

## EXISTING CAPITAL IMPROVEMENT BUDGET

PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
115KV Switchyard At APA Substation	290	240	Installation as Planned
Switchyards and SCADA at Generation Stations	3,641*	500	Installation delayed one year; design enhanced for improved reliability
115 KV, Generation Station to Pine Street	483	483	Installation as planned; cost inflated slightly.
			* \$940,000 budgeted in 1978 and \$500,000 in 1979 under Generation Project category

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER

PROJECT CATEGORY: TRANSMISSION

	THOUSANDS OF DOLLARS						FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
	1980	1981	1982	1983	1984	1985			
<b>CAPITAL INVESTMENT COSTS</b>									
PLANNING AND DESIGN	108	0	63	0	330	0	501		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	390	141	368	726	130	3,272	5,027		
EQUIPMENT	1,020	592	242	0	792	2,000	4,646		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>1,518</b>	<b>733</b>	<b>673</b>	<b>726</b>	<b>1,252</b>	<b>5,272</b>	<b>10,174</b>	<b>0</b>	<b>10,174</b>

SOURCE OF FUNDS							TOTAL FUNDS	REINBUR SABLES	NON-REIN BURSABLES
	G.O. BONDS AUTH								
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0		
REVENUE BONDS	1,518	733	673	726	1,252	5,272	10,174		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>1,518</b>	<b>733</b>	<b>673</b>	<b>726</b>	<b>1,252</b>	<b>5,272</b>	<b>10,174</b>	<b>0</b>	<b>10,174</b>

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS  
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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600							
Program Category MUNICIPAL LIGHT AND POWER		Project Category TRANSMISSION PLANT							
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input checked="" type="checkbox"/> REV		
THOUSANDS OF DOLLARS									
115 KV Switchyard at APA Substation	50						50		
Switchyards and SCADA at Generation Stations	1,468	733					2,201		
Reinsulate for 115 KV, Generation Station 1 to APA Via Substations 6 and 16			417	450			867		
115 KV, Generation Station 1 to Generation Station 2			256	276			532		
115 KV to Substation 17					252	272	524		
230 KV Transmission Line, Plant #1 to Potter					1,000	5,000	6,000		
<b>TOTALS</b>	1,518	733	673	726	1,252	5,272	10,174		

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600	
Program Category MUNICIPAL LIGHT AND POWER		Project Category TRANSMISSION PLANT	
PROJECT TITLE		SUMMARY OF PROJECT SCOPE	
115 KV Switchyard at APA Substation		Add 115 KV Switchgear at APA Substation to interconnect ML&P and APA/CEA Systems at 115KV to increase interchange capability	
Switchyards and SCADA at Generating Stations		115 KV Switchyards and SCADA at both Generating Stations to provide required capacity	
Reinsulate for 115 KV, Generating Station 1 to APA via Substation #6 and #16		Upgrades subtransmission system to 115 KV for capacity to handle growing load	
115 KV, Generating Station 1 to Generating Station 2		Provides capacity to transmit power from Generating Station #2 into system	
115 KV to Substation #17		To connect new distribution substation	
230 KV Transmission Line Plant #1 to Potter		Transmission line and receiving station to connect system to new generation	

MUNICIPALITY OF ANCHORAGE — UCIP - 2  
EXISTING CAPITAL BUDGET SUMMARY

Department  
ENTERPRISE ACTIVITIES  
Project Category  
DISTRIBUTION PLANT

## EXISTING CAPITAL IMPROVEMENT BUDGET

PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Substation 14	186	186	Installation as planned.
2. Substation 11	852	657	Installation postponed to 1982/1983. Load growth rate now slower than originally planned.
3. Substations 6 to 14 Via 5th Avenue	84	84	Originally planned for overhead construction; now must be underground, carrying over into 1980. Additional funds will be required.
4. Substations 6 to 11 via No. Lts. Blvd.	304	304	Installation delayed, carrying over into 1980
5. Distribution lines	260	260	Extention of overhead and underground distribution system as required by customers.

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER

PROJECT CATEGORY: DISTRIBUTION

	THOUSANDS OF DOLLARS						FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
	1980	1981	1982	1983	1984	1985			
CAPITAL INVESTMENT COSTS									
PLANNING AND DESIGN	23	30	61	27	103	31	275		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	460	271	222	489	277	838	2,557		
EQUIPMENT	90	130	898	117	1,275	171	2,681		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		

TOTAL 573 431 1,181 633 1,655 1,040 5,513 0 5,513

SOURCE OF FUNDS

							TOTAL FUNDS	REINBUR SABLES	NON-REIN BURSABLES
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	573	431	1,181	633	1,655	1,040	5,513		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		

TOTAL 573 431 1,181 633 1,655 1,040 5,513 0 5,513

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS

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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES				Account Code 0531-8004-8600					
Program Category MUNICIPAL LIGHT AND POWER				Project Category DISTRIBUTION PLANT					
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input checked="" type="checkbox"/> REV		
THOUSANDS OF DOLLARS									
SUBSTATION 11			828	241			1,069		
SUBSTATION 17					965	281	1,246		
SUBSTATIONS 6 to 14 via 5th Avenue	250						250		
SUBSTATIONS 6 to 11 via Northern Lights Blvd	27						27		
SUBSTATIONS 6, 14, 15, to 17					253	273	526		
DISTRIBUTION LINES	296	431	353	392	437	486	2,395		
<b>TOTALS</b>	573	431	1,181	633	1,655	1,040	5,513		

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600	
Program Category MUNICIPAL LIGHT AND POWER		Project Category DISTRIBUTION PLANT	
PROJECT TITLE		SUMMARY OF PROJECT SCOPE	
SUBSTATION 11		Replaces existing 5 MVA 35 KV substation with 25 MVA 115 KV Substation required by load growth.	
SUBSTATION 17		New 25 MVA 115 KV substation required by load growth.	
SUBSTATIONS 6 to 14 VIA 5th AVENUE		Provides distribution system capacity required by growing load.	
SUBSTATIONS 6 to 11 VIA NORTHERN LIGHTS BLVD.		Provides distribution system capacity required by growing load.	
SUBSTATIONS 6, 14, 15, to 17		Connects new substation into 12 KV distribution system.	
DISTRIBUTION LINES		Distribution lines required to serve new customers and to convert existing customers to the new 35 KV system to keep the load on the old 4KV system within it's capacity.	



MUNICIPALITY OF ANCHORAGE – UCIP - 2  
 EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	DISTRIBUTION TRANSFORMERS AND CAPACITORS

EXISTING CAPITAL IMPROVEMENT BUDGET

PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Transformers	322	322	Expenditures as required
2. Capacitors	17	17	Expenditures as required

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER		PROJECT CATEGORY: TRANSFORMERS & CAPACITORS								
=====										
THOUSANDS OF DOLLARS										
	1980	1981	1982	1983	1984	1985	FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST	
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CAPITAL INVESTMENT COSTS										
PLANNING AND DESIGN	0	0	0	0	0	0	0			
LAND AND R.O.W.	0	0	0	0	0	0	0			
CONSTRUCTION	0	0	0	0	0	0	0			
EQUIPMENT	380	426	477	534	598	670	3,085			
INTERFUND CHARGES	0	0	0	0	0	0	0			
OTHER	0	0	0	0	0	0	0			
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TOTAL	380	426	477	534	598	670	3,085	0	3,085	
=====										
							TOTAL FUNDS	REIMBUR SABLES	NON-REIN BURSABLES	
SOURCE OF FUNDS										
G.O. BONDS AUTH										
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0		
REVENUE BONDS	380	426	477	534	598	670	3,085			
FEDERAL GRANT	0	0	0	0	0	0	0	0		
STATE GRANT	0	0	0	0	0	0	0	0		
CONTRIBUTIONS	0	0	0	0	0	0	0			
OPERATING REV	0	0	0	0	0	0	0			
OTHER	0	0	0	0	0	0	0			
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TOTAL	380	426	477	534	598	670	3,085	0	3,085	
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THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS

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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES				Account Code 0531-8004-8600					
Program Category MUNICIPAL LIGHT AND POWER				Project Category DISTRIBUTION TRANSFORMERS AND CAPACITORS					
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input type="checkbox"/> REV		
THOUSANDS OF DOLLARS									
TRANSFORMERS	361	405	453	507	568	636			
CAPACITORS	19	21	24	27	30	34			
<b>TOTALS</b>	380	426	477	534	598	670			

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600	
Program Category MUNICIPAL LIGHT AND POWER		Project Category DISTRIBUTION TRANSFORMERS AND CAPACITORS	
PROJECT TITLE		SUMMARY OF PROJECT SCOPE	
TRANSFORMERS		<p>Purchase and initial installation of distribution transformers to serve new customers and upgrade service to existing customers. Installation of distribution capacitors to control power factor and voltage.</p> <p>The amount of distribution transformers required is closely related to load growth because additional transformers are required to serve new customers. As the load increases the average size of the transformers required tends to increase, thus the decreased unit cost tends to offset the effect of inflation</p>	
CAPACITORS		<p>Capacitors are required to reduce losses and maintain system voltage. Approximately 5% of the yearly amount will be expended for capacitors to help maintain a proper power factor. Should planned transmission and distribution system improvements be delayed the future amounts for capacitors will have to be significantly increased.</p>	

MUNICIPALITY OF ANCHORAGE – UCIP - 2  
 EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	METERS AND SERVICES

EXISTING CAPITAL IMPROVEMENT BUDGET			
PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Meters	196	196	Expenditures as required
2. Services	219	219	Expenditures as required

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT &amp; POWER

PROJECT CATEGORY: METERS AND SERVICES

	THOUSANDS OF DOLLARS						FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
	1980	1981	1982	1983	1984	1985			
<b>CAPITAL INVESTMENT COSTS</b>									
PLANNING AND DESIGN	11	11	12	13	14	15	76		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	202	210	235	253	273	295	1,476		
EQUIPMENT	228	240	252	266	280	294	1,560		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>441</b>	<b>469</b>	<b>499</b>	<b>532</b>	<b>567</b>	<b>604</b>	<b>3,112</b>	<b>0</b>	<b>3,112</b>
<b>SOURCE OF FUNDS</b>									
							<b>TOTAL FUNDS</b>	<b>REINBUR SABLES</b>	<b>NON-REIM BURSABLES</b>
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	441	469	499	532	567	604	3,112		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>441</b>	<b>469</b>	<b>499</b>	<b>532</b>	<b>567</b>	<b>604</b>	<b>3,112</b>	<b>0</b>	<b>3,112</b>

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS

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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600							
Program Category MUNICIPAL LIGHT AND POWER		Project Category METERS AND SERVICES							
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input type="checkbox"/> REV		
THOUSANDS OF DOLLARS									
METERS	205	215	225	237	249	261			
SERVICES	236	254	274	295	318	343			
<b>TOTALS</b>	441	469	499	532	567	604			

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>METERS AND SERVICES</b>
PROJECT TITLE	SUMMARY OF PROJECT SCOPE	
METERS	<p>Revenue metering equipment reflects projected historical growth plus consideration for inflation. Also included is \$125,000 per year for automatic meter reading equipment which will allow ML&amp;P to read meters via telephone lines from an office location by modifying existing meters. Meters will be converted each year to reduce the cost of meter reading, service connects and disconnects, and problems of trying to read meters during weather and traffic restrictions.</p>	
SERVICES	<p>Services to new customers and to upgrade service to existing customers. This project covers the cost of service lines, both overhead and underground, from the utilities' distribution system to the customers meters. The increasing amounts shown reflect anticipated growth and inflation.</p>	



MUNICIPALITY OF ANCHORAGE – UCIP - 2  
 EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	STREET LIGHTING

EXISTING CAPITAL IMPROVEMENT BUDGET			
PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Street Lighting	171	171	Expenditures as required

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER PROJECT CATEGORY: STREET LIGHTING

	THOUSANDS OF DOLLARS						FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
	1980	1981	1982	1983	1984	1985			
<b>CAPITAL INVESTMENT COSTS</b>									
PLANNING AND DESIGN	12	12	12	12	12	12	72		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	108	108	108	108	108	108	648		
EQUIPMENT	50	50	50	50	50	50	300		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>1,020</b>	<b>0</b>	<b>1,020</b>
<b>SOURCE OF FUNDS</b>									
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	170	170	170	170	170	170	1,020		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>170</b>	<b>1,020</b>	<b>0</b>	<b>1,020</b>

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS

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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600							
Program Category MUNICIPAL LIGHT AND POWER		Project Category STREET LIGHTING							
PROJECT TITLE	TOTAL PROJECT COST						BONDS <input type="checkbox"/> G.O. <input type="checkbox"/> REV	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985			
THOUSANDS OF DOLLARS									
STREET LIGHTING	170	170	170	170	170	170	1,020		
<b>TOTALS</b>	170	170	170	170	170	170	1,020		

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>STREET LIGHTING</b>
PROJECT TITLE	SUMMARY OF PROJECT SCOPE	
STREET LIGHTING	<p>A continuing program to improve lighting of arterials and streets in the Central Business District, in new residential subdivisions and to improve lighting elsewhere. The continuing annual amount projected reflects consideration of inflation, saturation of service, and conversion to high pressure sodium vapor at a measured rate. If major lighting projects should be undertaken, additional amounts will be required.</p>	

MUNICIPALITY OF ANCHORAGE – UCIP - 2  
 EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	LAND AND LAND RIGHTS

EXISTING CAPITAL IMPROVEMENT BUDGET			
PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Land and Land Rights	41	41	Acquisitions as required
2. Generation Plant Site	1,180	1,180	Deferred pending anticipated joint effort with the Alaska Power Authority

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER		PROJECT CATEGORY: LAND AND LAND RIGHTS							
=====									
THOUSANDS OF DOLLARS									
	1980	1981	1982	1983	1984	1985	FUTURE PROJECT COST	PRIOR YEARS APPROP	TOTAL PROJECT COST
-----									
CAPITAL INVESTMENT COSTS									
PLANNING AND DESIGN	61	74	87	617	120	141	1,100		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	0	0	0	0	0	0	0		
EQUIPMENT	0	0	0	0	0	0	0		
INTERFUND CHARGES	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
-----									
TOTAL	61	74	87	617	120	141	1,100	0	1,100
=====									
SOURCE OF FUNDS							TOTAL FUNDS	REIMBUR SABLES	NON-REIM BURSABLES
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	61	74	87	617	120	141	1,100		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
-----									
TOTAL	61	74	87	617	120	141	1,100	0	1,100
=====									

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS  
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MUNICIPALITY OF ANCHORAGE – UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES				Account Code 0531-8004-8600					
Program Category MUNICIPAL LIGHT AND POWER				Project Category LAND AND LAND RIGHTS					
PROJECT TITLE	TOTAL PROJECT COST						BONDS <input type="checkbox"/> G.O. <input type="checkbox"/> REV	OTHER LOCAL	STATE OR FEDERAL FUNDS
	1980	1981	1982	1983	1984	1985			
THOUSANDS OF DOLLARS									
Land and Land Rights	61	74	87	617	120	141			
<b>TOTALS</b>	61	74	87	617	120	141			

MUNICIPALITY OF ANCHORAGE -- UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600
Program Category MUNICIPAL LIGHT AND POWER		Project Category LAND AND LAND RIGHTS
PROJECT TITLE	SUMMARY OF PROJECT SCOPE	
Land and Land Rights	<p>To cover the acquisition of easements, permits and miscellaneous small plots as required by system growth.</p> <p>Purchase of substation site in 1983.</p>	



MUNICIPALITY OF ANCHORAGE – UCIP - 2  
EXISTING CAPITAL BUDGET SUMMARY

Department	ENTERPRISE ACTIVITIES
Project Category	GENERAL PLANT

## EXISTING CAPITAL IMPROVEMENT BUDGET

PROJECT TITLE	Original CIB Cost Est.	Total Current Funding	EXPLANATION/STATUS
1. Second Floor Addition 1200 East First Avenue	1,000	100	Design in Mid 1980 with construction delayed until 1982
2. Office, Laboratory and Shop, Plant #2	460	250	Design to be completed in 1979 with construction to be completed in 1981
3. Parking Lot Expansion	55	55	To be completed in 1979
4. Tools, Equipment and Furniture	150	150	1979 Acquisition as required
5. Vehicle Replacement	220	220	To be ordered in 1979 for delivery in 1980
6. Continuing Property Records, Load Management, Billing, Cost of Service and MUSA Systems	480	480	<p>The Continuing Property Records project currently on schedule with the property survey portion to be completed by October of this year, with the Load Management System to follow early in 1980</p> <p>The Billing System is anticipated to be completed prior to year end, evaluation of existing systems at other utilities is currently in progress.</p> <p>The cost of service and MSA system development is scheduled for mid-to late 1980</p>

MUNICIPALITY OF ANCHORAGE  
CAPITAL PROJECT CATEGORY SUMMARY

DEPARTMENT-UTILITY: MUNICIPAL LIGHT & POWER		PROJECT CATEGORY: GENERAL PLANT							
THOUSANDS OF DOLLARS							FUTURE	PRIOR	TOTAL
	1980	1981	1982	1983	1984	1985	PROJECT	YEARS	PROJECT
							COST	APPROP	COST
CAPITAL INVESTMENT COSTS									
PLANNING AND DESIGN	60	30	20	10	10	10	140		
LAND AND R.O.W.	0	0	0	0	0	0	0		
CONSTRUCTION	485	145	890	90	80	80	1,770		
EQUIPMENT	303	210	300	200	200	200	1,413		
INTERFUND CHARGES	55	25	20	20	20	10	150		
OTHER	10	10	10	10	10	10	60		
<b>TOTAL</b>	<b>913</b>	<b>420</b>	<b>1,240</b>	<b>330</b>	<b>320</b>	<b>310</b>	<b>3,533</b>	<b>0</b>	<b>3,533</b>
							TOTAL	REIMBUR	NON-REIN
							FUNDS	SABLES	BURSABLES
SOURCE OF FUNDS									
G.O. BONDS AUTH									
G.O. BONDS UNAUTH.	0	0	0	0	0	0	0	0	
REVENUE BONDS	913	420	1,240	330	320	310	3,533		
FEDERAL GRANT	0	0	0	0	0	0	0	0	
STATE GRANT	0	0	0	0	0	0	0	0	
CONTRIBUTIONS	0	0	0	0	0	0	0		
OPERATING REV	0	0	0	0	0	0	0		
OTHER	0	0	0	0	0	0	0		
<b>TOTAL</b>	<b>913</b>	<b>420</b>	<b>1,240</b>	<b>330</b>	<b>320</b>	<b>310</b>	<b>3,533</b>	<b>0</b>	<b>3,533</b>

THIS CATEGORY CAUSES NO SIGNIFICANT INCREASE IN TAX SUPPORTED OPERATING COSTS  
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MUNICIPALITY OF ANCHORAGE — UCIP - 4  
 CAPITAL IMPROVEMENT PROJECT FINANCIAL SUMMARY

Department ENTERPRISE ACTIVITIES		Account Code 0531-8004-8600								
Program Category MUNICIPAL LIGHT AND POWER		Project Category GENERAL PLANT								
PROJECT TITLE	TOTAL PROJECT COST						BONDS	OTHER LOCAL	STATE OR FEDERAL FUNDS	
	1980	1981	1982	1983	1984	1985	<input type="checkbox"/> G.O. <input type="checkbox"/> REV			
THOUSANDS OF DOLLARS										
Second Floor Addition 1200 East First Avenue			900						900	
Office, Laboratory and Shop - Plant #2	150	60							210	
Unidentified Plant Additions		50	50	50	50	50			250	
Tools, Equipment and Furniture	150	100	100	100	100	100			650	
Vehicles	73	100	100	100	100	100			573	
Electronic Bill Calculation	80	10							90	
Continuing Property Records	150								150	
Load Management System	80								80	
Rate Base & MUSA Systems	155								155	
Miscellaneous Enhancements	75	100	90	80	70	60			475	
<b>TOTALS</b>	<b>913</b>	<b>420</b>	<b>1,240</b>	<b>330</b>	<b>320</b>	<b>310</b>			<b>3,533</b>	

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>											
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>GENERAL PLANT</b>											
PROJECT TITLE		SUMMARY OF PROJECT SCOPE											
Second Floor Addition 1200 East First Avenue		If the proposed move of Traffic Engineer Electronics and Data Processing is accomplished in 1979, the increased staff at ML&P will not require additional working space before 1982. Due to our location a second floor addition is the economical way to insure adequate working area for ML&P staff. Building design to be initiated in mid 1980.											
Office, Laboratory and Shop - Plant #2		As Generating Station #2 develops, it will become the headquarters for the generating function. Generation Station #1 will become a satellite, probably operating by remote control from Generating Station #2. This project covers the building and facilities to establish the Generating Headquarters at Generating Station #2. Design and start of construction in 1979.											
Unidentified Plant Additions		To plant for possible plant additions or renovations negotiated by load growth and expansion of ML&P staff.											
Tool, Equipment and Furniture		This project covers the anticipated routine addition and replacement of small tools, furniture and similar equipment.											
Vehicles		<table> <tr> <td>Fork Lift Truck, 13,000 LB. Capacity</td> <td>40,000</td> </tr> <tr> <td>4 x 4 Manhaul Vehicle</td> <td>10,000</td> </tr> <tr> <td>2157 - 4 x 4 3/4 Ton Pick-up</td> <td>10,000</td> </tr> <tr> <td>1711 - 4 door sedan</td> <td>6,500</td> </tr> <tr> <td>1712 - 4 door sedan</td> <td>6,500</td> </tr> </table>		Fork Lift Truck, 13,000 LB. Capacity	40,000	4 x 4 Manhaul Vehicle	10,000	2157 - 4 x 4 3/4 Ton Pick-up	10,000	1711 - 4 door sedan	6,500	1712 - 4 door sedan	6,500
Fork Lift Truck, 13,000 LB. Capacity	40,000												
4 x 4 Manhaul Vehicle	10,000												
2157 - 4 x 4 3/4 Ton Pick-up	10,000												
1711 - 4 door sedan	6,500												
1712 - 4 door sedan	6,500												
Electronic Bill Calculation System		Involves the development and implementation of an in-house billing calculation system with state-of-the art meter read data entry, verification of read accuracy, estimating procedure and customer history retention. Cost benefit analysis indicates a payback period of less than three years as a result of this system development.											
Continuing Property Records System		Involves the implementation of previously defined system for the retention of Continuing Property Records as required by Alaska Statute. Includes an automated work order processing system which maintains current property records based on construction accomplishment.											
Load Management System		This system, operating off of the data contained in the above two systems, will assist the Engineering Section in the proper, most cost effective, transformers for power distribution. Direct savings from use of this system will more than pay for the entire CPRMS development costs.											

MUNICIPALITY OF ANCHORAGE – UCIP - 5  
 CAPITAL IMPROVEMENT PROJECT SCOPE SUMMARY

Department <b>ENTERPRISE ACTIVITIES</b>		Account Code <b>0531-8004-8600</b>	
Program Category <b>MUNICIPAL LIGHT AND POWER</b>		Project Category <b>GENERAL PLANT</b>	
PROJECT TITLE		SUMMARY OF PROJECT SCOPE	
Rate Base & MUSA Systems		The rate base system will provide an automated method of equitable allocation of distribution plant retirement unit values to customer classes. The MUSA system will provide an automated method of accurately placing a current value on all installed plants by each service area.	
Miscellaneous System Enhancements		Development of in-house systems for financial management. Engineering applications and related computer information systems is anticipated to be an on-going process and will offset costs of time share or Municipal D.P. charges.	