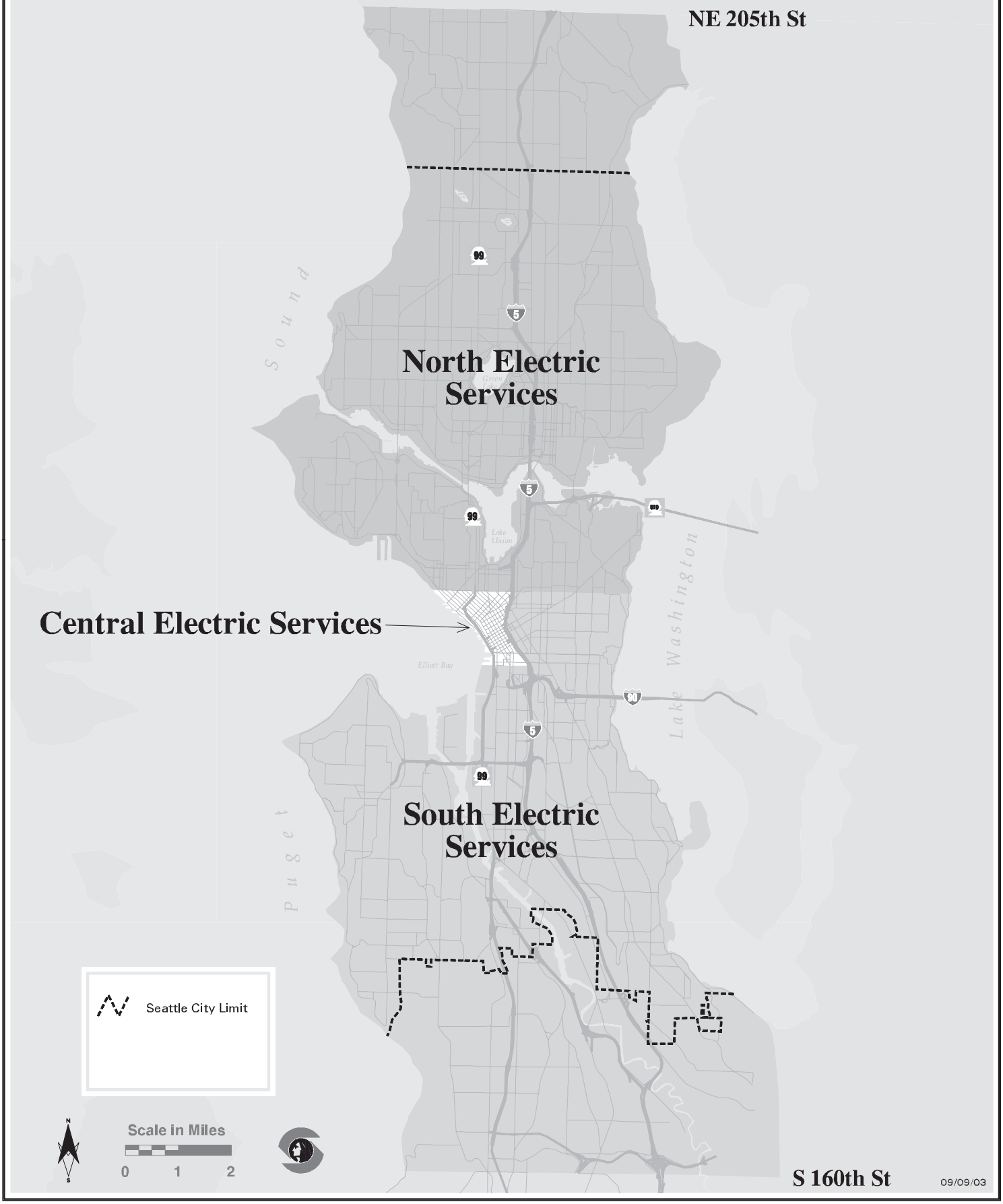
CITY LIGHT

Seattle City Light
2004-2009 Capital Improvement Project Area



Overview of Facilities and Programs

Seattle City Light (City Light) is a municipal electric utility, owned by the residents of Seattle and run by the City's elected officials. The utility serves a population of almost 700,000 people living in a 130 square mile area, including the City of Seattle and several adjoining jurisdictions. To serve these customers, Seattle owns, and City Light maintains and operates, a multi-billion-dollar physical plant. The physical plant includes:

- A distribution system with 14 major substations and more than 2,500 miles of overhead and underground cable;
- A generation system comprising seven major hydroelectric plants on the Skagit, Cedar, Tolt, and Pend Oreille Rivers with a combined capacity of almost 2,000 megawatts;
- 650 miles of high-voltage transmission lines linking these plants to Seattle;
- A state-of-the-art System Control Center to coordinate these activities; and
- Billing and metering equipment to track almost 350,000 accounts.

City Light's Capital Improvement Program (CIP) is the vehicle for upgrading and expanding this infrastructure. Because this work is labor and cash intensive, and because it may have significant environmental effects, the CIP also funds a variety of safety and mitigation activities. The overriding goal of the CIP is to assure that the facilities required to serve City Light customers with low-cost, reliable power are in place when and where the power is requested.

City Light still is on track to fulfill the requirements of the financial recovery plan it developed to offset the effects of the Western Power Crisis in 2000 and 2001, in spite of subnormal water conditions in the 2002-2003 water year and retail sales that have lagged behind its forecast. To offset the impact of low water and lagging sales, the Department made significant reductions in its operating and maintenance (O&M) expenses and deferred portions of its CIP for 2003 and 2004. This mid-course correction should make it possible for the Department to pay off all of its short-term debt by mid-2004 and to generate an operating cash balance of $30 million. When that point is reached, the Department will conduct its first general rate review since 1999, using the new financial policies adopted by the Council in December 2001.

City Light's 2004-2009 Proposed CIP reflects these reductions in planned spending for 2003 and 2004, which may result in the deferral of some projects until 2005 or beyond. The funds shown in this document are expressed as total project costs, including both direct costs and overheads. This makes the funds comparable to other City department funds and estimates the amounts to be capitalized upon completion of the project. The total project cost combines the direct project charges shown in the operating budget under CIP with the applicable intra-departmental expenses, commonly referred to as overhead costs or loadings. As is the case with direct cost, the project overhead costs are included in the operating budget, but overhead costs are not necessarily in the line of business where the direct cost of the project is incurred. City Light only applies overhead costs to the CIP project expenses as they occur.

Highlights

- In 2004, the $88 million CIP for the Distribution Branch provides resources to connect new customers and perform major maintenance on the transmission and distribution system throughout the City Light service area. Work continues on rehabilitation of the downtown network and ensuring reliable service for all City Light customers. There are 48 capital projects that support Distribution infrastructure work. This program includes design and planning support for Sound Transit Light Rail system and the Seattle Monorail Project.

- Telecommunications projects include continued construction of the fiber optic network connecting substations and other City Light facilities; improvements to City Light's radio system to allow better communication between field crews and dispatch facilities; and replacing obsolete telephone switch equipment. Fiber ring construction extends the communications backbone system of command and control to the level of distribution feeders and ultimately down to individual distribution transformers and customer

meters. Replacement of the obsolete analog microwave radio system serving the Transmission and Generation facilities supports vital communications systems mandated by the Federal Energy Regulatory Commission and the safety of field employees.

- The $11.6 million CIP for the Finance and Administration Branch includes program expenditures for Information Technology and Facilities Management. The $1.2 million budget for Facilities Management includes $0.5 million for substation improvements. The $10.4 million budget for the Information Technology program consists of seven continuing projects. City Light's largest information system, the Consolidated Customer Service System (CCSS) project, handles all City utility billing and customer records and replaces the City's two existing utility billing systems. Funding in 2004 is for system enhancements and upgrades. Seattle Public Utilities (SPU) is sharing the cost for this project.

- The $1.0 million CIP in 2004 for the Executive Branch level comprises Environment & Safety program expenditures. These include capital portions of license-required mitigation expenses on the Skagit and Tolt Rivers and enable the City to meet its commitments for habitat protection and restoration for Chinook salmon under the Endangered Species Act (ESA). Skagit mitigation projects include creating interpretive displays for visitors to the Skagit and acquiring additional wildlife lands in the Skagit Basin. On the Tolt River, City Light continues to monitor, maintain and enhance salmon spawning habitat. ESA projects include acquiring and restoring critical Chinook habitat in the Skagit and Tolt basins.

- In 2004, the $15.2 million CIP for the Generation Branch is allocated over some 80 active projects. Of these, 11 are multi-year projects continuing from 2003. Twenty-nine projects begin after 2004 and four others do not have budget authority in 2004. Nineteen projects from the previous biennium have been substantially completed. The Boundary Rehabilitation project, a major multi-year project, is one of the projects due for completion in 2004.

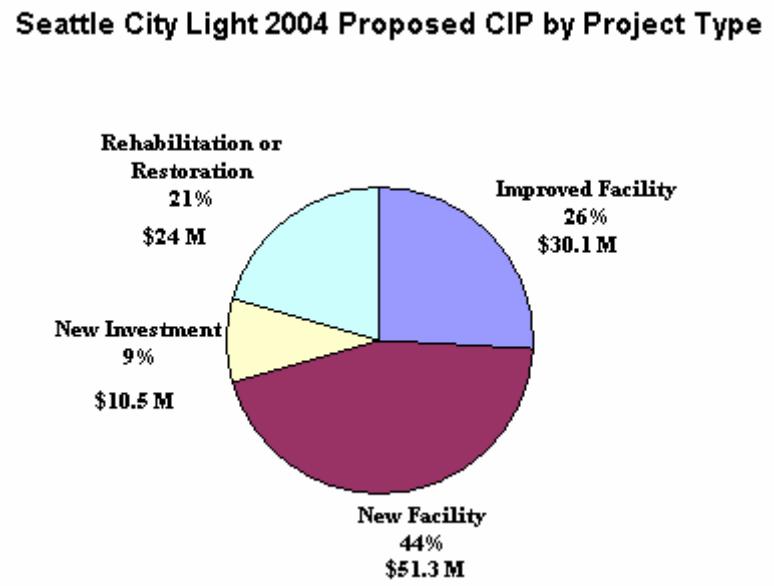
Project Selection Process

In making capital investments in its infrastructure, the City tries to balance three goals:

- Rehabilitation of existing facilities to avoid the higher costs of deferred maintenance;
- Improvement of existing facilities to meet growing demand, and
- Development of new facilities to provide additional services.

City Light also has a fourth goal for new investment to maximize the productive use of technology.

The chart on the following page shows how City Light's 2004 Adopted CIP allocates funding to these types of projects:



The following narrative summarizes the selection process City Light uses to develop its CIP:

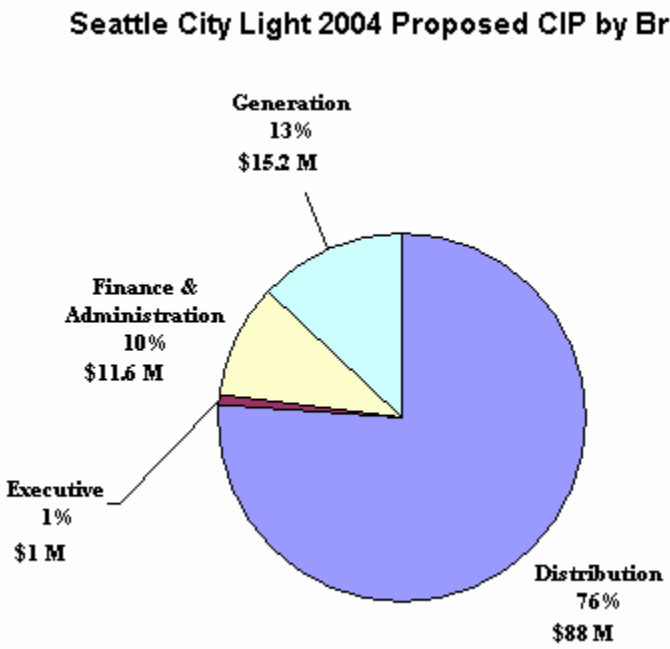
Project Identification: City Light staff throughout the Department identify potential projects using several criteria, including economics, environmental impact, reliability, customer service, regulations, and safety. Existing strategic plans are a primary source of capital projects. Staff working in the field also provide input based on their understanding of customer demands. A master list of projects is then developed in the capital budgeting system.

Project Selection: To refine the list of projects that meet the criteria listed above, City Light management and staff, with the help of the Department of Finance, evaluate projects further using the results of studies, load forecasts, and rate forecasting estimates. Following this review, City Light refines the list of potential projects to those that can be accomplished with available revenue.

Project Scheduling and Budgeting: After the project list is refined, City Light staff enter detailed information about the selected projects into the capital project scheduling system. The scheduling system tracks and refines labor hours and non-labor costs and allows staff to cross-check projects against Mayor and Council priorities.

CIP Budget Control Levels

City Light's Capital Improvement Program consists of the capital budgets of its branches and overhead costs associated with their projects. The chart on the following page shows the appropriation amounts for 2004 followed by brief descriptions of the branches with capital improvement programs. A detailed list of all projects in City Light's CIP follows this overview.



Distribution: The CIP for this branch supports fundamental electric utility service. It covers City Light's design, construction, and major maintenance of the distribution system. This system includes 14 principal substations, 650 miles of transmission, 1,800 miles of overhead feeder circuits, 600 miles of underground feeder cables, 53,000 transformers, and 100,000 poles. The Distribution branch includes an array of projects spanning six major areas: Services, Capacity, Reliability, Interagency, Streetlights, and Ancillary. The dollar figure reflected in this CIP document represents fully loaded cost of projects.

Executive: The CIP for this branch includes projects to mitigate the environmental effects of City Light's hydroelectric projects, to meet the City's commitments to provide wildlife habitat protection and restoration, and to provide for utility-wide safety improvements. Projects include purchasing and setting aside critical habitat for wildlife in the Skagit and Nooksack river basins; constructing additional salmon spawning and rearing areas; habitat acquisition and restoration for threatened Chinook salmon. The dollar figure reflected in this CIP document represents fully loaded cost of projects.

Finance and Administration: The CIP for this branch consists of Facilities Management and Information Technology projects. Facilities Management includes projects to keep City Light's buildings and grounds functional, safe, and up-to-date. City Light owns 1.4 million square feet of building space in four counties with an aggregate value of approximately $525 million. These include service centers, substations, switchgear buildings, training centers, communications buildings, office buildings, warehouses, construction and maintenance shops, garages, remote employee housing, and tourist facilities. The Information Technology category includes projects that provide modern and efficient information systems and related services to meet City Light's business objectives. The dollar figure reflected in this CIP document represents fully loaded cost of projects.

Generation: The CIP for this branch includes projects to improve and enhance Seattle's hydroelectric generating facilities. These facilities include seven major plants on the Skagit, Pend Oreille, Cedar, and Tolt Rivers, which, on average, supply 70% of Seattle's annual electrical power demands. The remainder comes from long-term contracts and spot market purchases. The dollar figure reflected in this CIP document represents fully loaded cost of projects.

Anticipated Operating Expenses Associated with Capital Facilities Projects

Operations and maintenance costs, where identified, are included in the Department's operating budget. In some projects City Light has identified operations and maintenance costs of zero, or has not calculated a number (N/C). In these cases**,** the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects.

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Distribution										
800Mhz Radio Simulcast System - Seattle Area	9308	3,054	83	0	0	0	0	0	0	**3,137**
Alaskan Way Viaduct - City Light	8307	151	397	522	7,704	8,765	7,139	7,018	7,103	**38,799**
Broad St. Substation Networks	8203	5,891	4,756	4,707	4,620	4,722	4,846	4,984	5,052	**39,578**
Central Arterial Streetlights Major Maintenance	8212	808	1,263	742	776	794	815	838	850	**6,886**
Communications Improvements	9009	285	240	236	201	205	210	216	218	**1,811**
Distribution Area Communications Networks	9307	1,219	555	633	656	668	685	704	714	**5,834**
Downtown Substation - Preliminary Engineering	7754	35	24	1	3	3	3	3	3	**75**
Electrical Services Replacement	8997	0	0	0	0	0	0	0	271	**271**
First Hill Network	8301	64	1,868	1,070	1,096	1,121	1,150	1,183	1,200	**8,752**
Interbay Substation	7756	2,352	78	1	3	3	3	3	3	**2,446**
Maple Valley Sno-King 230 kV Line Restoration	7054	3,590	8	0	0	0	0	0	0	**3,598**
Massachusetts St. Substation Networks	8202	720	307	491	453	463	475	488	495	**3,892**
Meter Additions	8054	2,741	2,882	2,929	2,665	2,726	2,798	2,877	2,916	**22,534**
Metro Direct Current Cables	8144	28	5	6	5	6	6	6	6	**68**
Mobile Equipment	9101	618	1,280	737	1,026	1,055	1,082	1,111	1,125	**8,034**
Neighborhood Planning	8207	75	671	422	555	570	584	600	608	**4,085**
Neighborhood Undergrounding	8206	10	0	0	169	175	180	185	187	**906**
Network Additions and Services	8057	8,457	8,746	10,221	10,791	11,061	11,360	11,685	11,846	**84,167**
Network Hazeltine Upgrade	8129	540	392	301	314	322	331	340	345	**2,885**
Network Maintenance Hole and Vault Rebuild	8130	15,504	2,280	2,730	3,068	3,148	3,232	3,323	3,368	**36,653**
North 26kV Conversion	8124	60,814	1,030	999	1,520	1,563	1,604	1,648	1,670	**70,848**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Distribution										
North Arterial Streetlights Major Maintenance	8211	(3)	194	199	218	223	228	234	238	**1,531**
North Capacity Additions	8122	8,081	11,170	11,103	10,858	11,111	11,407	11,731	11,893	**87,354**
North New Street and Flood Lighting	8134	90	38	39	68	69	71	74	75	**524**
North Outage Replacements	8302	55	117	111	109	112	114	118	119	**855**
North Relocations	8304	2,888	2,238	1,271	1,565	1,601	1,643	1,689	1,712	**14,607**
North Residential Streetlight Improvements	8136	24	84	86	4	4	4	5	5	**216**
North Services - Overhead and Underground	8120	6,763	7,898	8,407	7,865	8,048	8,262	8,497	8,615	**64,355**
Power Stations Demand Driven Improvements	7755	235	1,355	1,391	1,118	1,142	1,174	1,208	1,225	**8,848**
Relaying Improvements	7753	149	1,074	1,007	976	1,000	1,027	1,058	1,072	**7,363**
Seattle Monorail Project - City Light	8306	50	345	460	2,155	2,213	870	1,227	1,245	**8,565**
Skagit Telephone System Upgrade	9311	15	673	136	0	0	0	0	0	**824**
Sound Transit Light Rail - City Light	8204	701	4,284	3,810	10,308	12,318	711	558	524	**33,214**
South 26kV Conversion	8125	51,508	1,093	992	1,175	1,206	1,239	1,276	1,294	**59,783**
South Arterial Streetlights Major Maintenance	8210	109	200	199	182	186	191	196	199	**1,462**
South Capacity Additions	8123	7,232	4,741	4,715	4,345	4,437	4,552	4,681	4,745	**39,448**
South Lake Union - Power Supply	8308	113	341	130	0	0	0	0	0	**584**
South Lake Union - Substation Development	8309	0	406	0	5,159	0	0	0	0	**5,565**
South New Street and Flood Lighting	8133	139	221	213	189	193	198	204	207	**1,564**
South Outage Replacements	8303	450	1,126	1,162	1,080	1,105	1,135	1,167	1,184	**8,409**
South Relocations	8305	3,056	9,592	10,522	9,756	9,984	10,252	10,545	10,691	**74,398**
South Residential Streetlight Improvements	8135	71	199	180	167	170	175	179	182	**1,323**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Distribution										
South Services - Overhead and Underground	8121	5,510	4,612	4,725	4,400	4,501	4,621	4,752	4,817	**37,938**
Special Work Equipment - Other Plant	9102	158	452	452	545	560	574	589	597	**3,927**
Special Work Equipment - Substation Plant	7902	50	151	60	85	87	89	92	94	**708**
Substation Capacity Additions	7751	2,215	1,392	784	725	743	763	785	796	**8,203**
Substation Equipment Improvements	7752	7,556	4,531	5,036	5,256	5,398	5,547	5,705	5,782	**44,811**
Substation Plant Improvements	7750	142	1,740	1,151	971	991	1,018	1,048	1,063	**8,124**
Transmission & Generation Radio Systems	9108	4,031	993	1,546	1,611	1,647	1,687	1,733	1,756	**15,004**
Transmission Capacity	7011	288	1,012	693	700	717	737	758	768	**5,673**
Transmission Inter-Agency	7105	138	201	171	172	176	181	186	188	**1,413**
Transmission Reliability	7104	6	233	117	122	125	129	132	134	**998**
Union St. Substation Networks	8201	2,044	333	351	302	304	310	319	323	**4,286**
Distribution Total		**210,820**	**89,904**	**87,967**	**107,811**	**107,741**	**95,412**	**97,958**	**99,523**	**897,136**
Executive										
Endangered Species Act Mitigation	6990	2,649	1,498	706	578	699	614	744	758	**8,246**
Newhalem Creek Mitigation	6175	1,023	0	0	60	9	0	0	0	**1,092**
Safety Modifications	9006	101	193	164	186	190	190	195	198	**1,417**
Skagit Licensing Mitigation	6991	32,907	179	31	489	427	555	454	459	**35,501**
South Fork Tolt River Mitigation	6046	536	618	97	79	81	83	85	88	**1,667**
Executive Total		**37,216**	**2,488**	**998**	**1,392**	**1,406**	**1,442**	**1,478**	**1,503**	**47,923**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Finance & Administration										
Consolidated Customer Service System	9910	48,984	3,631	3,203	0	0	0	0	0	**55,818**
Customer Data Services (CMart)	9926	5,797	1,492	1,392	0	0	0	0	0	**8,681**
Disaster Recovery/Business Continuity	9925	293	49	122	447	977	240	0	0	**2,128**
Distribution Automated Mapping System	9905	21,434	1,164	1,199	1,331	1,405	1,482	1,562	1,587	**31,164**
Drawing Conversions - Seattle City Light	9909	6,071	43	0	0	0	0	0	0	**6,114**
Facilities ADA and Regulatory Compliance	9151	8	0	0	90	93	95	97	100	**483**
Facilities Environmental Remediation	9152	642	67	0	150	156	160	164	167	**1,506**
Facility Security	9154	161	0	0	122	127	131	134	136	**811**
Information Technology Infrastructure	9915	19,385	2,677	2,171	3,354	4,096	4,501	4,897	4,980	**46,061**
Mechanical Improvements	9156	881	96	0	236	245	252	258	263	**2,231**
Miscellaneous Building Improvements	9007	279	150	249	485	497	0	0	0	**1,660**
North and South Service Center Improvements	9107	21,620	80	110	0	0	0	0	0	**21,810**
Office Furniture and Equipment Purchase	9103	4	0	296	0	0	0	0	0	**300**
Roof Replacements	9072	31	1,125	0	226	234	241	247	251	**2,355**
Seismic Mitigation	9134	4,567	0	0	120	125	128	131	133	**5,204**
Space Consolidation	9159	145	9	9	0	0	0	0	0	**163**
Substation Comprehensive Improvements	9161	122	367	488	0	0	0	0	0	**977**
Work Process Management System	9927	1,779	2,466	2,387	2,120	2,220	2,470	2,298	2,331	**18,071**
Finance & Administration Total		**132,203**	**13,416**	**11,626**	**8,681**	**10,175**	**9,700**	**9,788**	**9,948**	**205,537**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Generation										
Boundary Dam - Elevator Improvements	6355	0	37	601	150	0	0	0	0	**788**
Boundary Dam - Emergency Lighting Improvements	6342	0	0	71	84	3	0	0	0	**158**
Boundary Dam - Forebay Recreation Area Improvements	6345	0	0	0	43	671	27	0	0	**741**
Boundary Dam - Network Control System & Control	6344	0	0	220	1,355	322	2	0	0	**1,899**
Boundary Dam - Powerhouse Elevator Improvements	6356	0	44	651	98	0	0	0	0	**793**
Boundary Dam - Rehabilitation	6186	46,717	9,277	1,593	0	0	0	0	0	**57,587**
Boundary Dam - Safety Improvements	6161	10,434	1,212	241	0	0	0	0	0	**11,887**
Boundary Dam - Service Area Improvements	6347	0	0	359	1,310	18	0	0	0	**1,687**
Boundary Dam - Sluice Maintenance Gate Overhaul	6348	0	1	129	0	0	0	0	0	**130**
Boundary Dam - Spillgate Hoist House Rehab & Oil Control	6349	0	0	582	0	0	0	0	0	**582**
Boundary Dam - Tailrace Recreation Area Improvement	6346	0	0	0	214	707	118	0	0	**1,039**
Boundary Dam - Transformer Bay Rockfall Mitigation	6357	0	169	207	145	0	0	0	0	**521**
Boundary Dam - Trashrake System	6338	0	59	69	1,434	19	0	0	0	**1,581**
Boundary Dam - Unit 51 Turbine Runner	6124	3,771	2,062	26	0	0	0	0	0	**5,859**
Boundary Dam - Unit 53 Turbine Runner	6126	4,952	273	0	0	0	0	0	0	**5,225**
Boundary Dam - Unit 55 Generator Rebuild	6303	0	0	0	0	0	6,386	773	94	**7,253**
Boundary Dam - Unit 56 Generator Rebuild	6354	0	0	0	0	0	0	0	6,690	**6,690**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Generation										
Boundary Dam - Units 51-54 Turbine Pit Cranes	6350	0	0	0	0	0	0	0	0	**0**
Boundary Dam - Units 51-56 Control Board Upgrade	6343	0	0	181	1,310	181	46	0	0	**1,718**
Boundary Dam - Units 51-56 Governor Controls Upgrade	6340	0	0	0	368	1,278	162	55	0	**1,863**
Boundary Dam - Units 51-56 Penstock Flow Monitoring	6383	0	0	181	0	0	0	0	0	**181**
Boundary Vista House Recreation Area Improvements	6384	0	0	128	13	0	0	0	0	**141**
Cedar Falls - Habitat Conservation Plan	6214	4,409	981	44	0	0	0	0	0	**5,434**
Cedar Falls - Intake Gate Replacement	6171	5,824	201	0	0	0	0	0	0	**6,025**
Cedar Falls - Rehab/Reline Penstocks	6358	0	0	0	0	565	3,768	3,903	70	**8,306**
Dam Safety Program	6389	0	118	83	132	137	139	142	145	**896**
Diablo Dam - Automate Spillgates	6359	0	0	0	82	587	0	0	0	**669**
Diablo Dam - Spillgate Control Improvements	6238	43	272	10	0	0	0	0	0	**325**
Diablo Powerhouse - Replace 5 kV Switchgear	6364	0	0	0	0	513	529	0	0	**1,042**
Diablo Powerhouse - Replace Control and Power	6363	0	0	0	0	0	363	375	0	**738**
Diablo Powerhouse - Replace Units 31-32 Governors	6366	0	0	0	0	0	0	265	274	**539**
Diablo Powerhouse - Upgrade Annunciator System	6367	0	0	0	343	0	0	0	0	**343**
Diablo Powerhouse DC Lighting Systems Upgrade	6365	0	0	119	217	0	0	0	0	**336**
Diablo Sewer System Improvement	6232	1	0	0	0	94	845	9	0	**949**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Generation										
Diablo Switchyard Resurfacing	6361	0	0	0	374	0	0	0	0	**374**
Diablo Water System Improvements	6304	0	45	204	24	0	0	0	0	**273**
Environmental Learning Center	6988	4,342	11,278	304	19	0	0	0	0	**15,943**
Fire Protection Systems Modification	6166	1,378	0	846	32	0	0	0	0	**2,256**
Generation - Civil-Mechanical Modification	6005	778	1,258	1,007	1,244	1,277	1,310	1,343	1,365	**9,582**
Generation - Electrical Enhancements	6087	143	858	938	907	928	950	975	992	**6,691**
Generation Replacement	6999	0	0	0	0	0	0	0	5,715	**5,715**
Gorge Dam - Spillgate Control Improvements	6222	90	150	35	0	0	0	0	0	**275**
Gorge Dam - Spillgate Rehabilitation	6221	0	0	0	0	0	1,461	46	0	**1,507**
Gorge Dam - Unit 24 Turbine-Runner Overhaul	6219	43	48	1,741	1,150	2,737	555	0	0	**6,274**
Gorge Powerhouse - 240 kV Oil-filled Circuit Breakers	6226	767	334	605	0	0	0	0	0	**1,706**
Gorge Powerhouse - AC/DC Distribution System	6207	291	236	26	0	0	0	0	0	**553**
Gorge Powerhouse - Control and Power Cabling Replacement	6328	0	0	0	0	194	201	306	0	**701**
Gorge Powerhouse - Generator Hall and High Room Lighting	6330	0	0	0	0	247	255	0	0	**502**
Gorge Powerhouse - Programmable Logic Controllers	6369	0	0	0	0	229	0	0	0	**229**
Gorge Powerhouse - Transformer Bank 10 Replacement	6224	24	0	345	19	0	0	0	0	**388**
Gorge Powerhouse - Transformer Bank 22 Replacement	6370	0	0	0	2,186	871	0	0	0	**3,057**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Generation										
Gorge Powerhouse - Transformer Bank 24 Replacement	6371	0	0	0	0	3,324	897	45	0	**4,266**
Gorge Switchyard - Resurfacing	6362	0	0	0	249	0	0	0	0	**249**
Ladder Creek Water System	6234	7	0	191	213	0	0	0	0	**411**
Newhalem Garage - Revisions	6231	0	0	0	171	261	0	0	0	**432**
Newhalem Powerhouse - Governor Replacement	6392	0	0	0	0	0	59	61	0	**120**
Newhalem Powerhouse - Station Battery & Charger Replacement	6301	0	154	0	0	0	0	0	0	**154**
Ross Dam - Abutment Rock Stabilization	6241	94	49	0	0	0	0	0	0	**143**
Ross Dam - AC/DC Distribution System Upgrade	6373	0	0	61	260	178	0	0	0	**499**
Ross Dam - Install Fiber Optic Cable Powerhouse to Dam	6372	0	0	0	242	0	0	0	0	**242**
Ross Powerhouse - Controller Upgrade	6376	0	0	59	355	104	0	0	0	**518**
Ross Powerhouse - Batteries Replacement	6375	0	148	102	34	0	0	0	0	**284**
Ross Powerhouse - Governors Replacement	6205	555	0	0	0	0	697	695	175	**2,122**
Ross Powerhouse - Replace Generator Breakers	6374	0	0	0	0	0	1,482	1,538	28	**3,048**
Ross Powerhouse - Replace Governor Oil Pumps	6377	0	0	0	77	193	0	0	0	**270**
Ross Powerhouse - Unit 41 Generator Rebuild	6382	0	0	0	0	0	0	5,205	1,357	**6,562**
Ross Powerhouse - Unit 42 Generator Rebuild	6379	0	4,608	1,057	0	0	0	0	0	**5,665**
Ross Powerhouse - Unit 43 Generator Rebuild	6380	0	0	0	4,849	1,261	0	0	0	**6,110**

Amounts in thousands of dollars

Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Generation										
Ross Powerhouse - Unit 44 Generator Rebuild	6381	0	0	0	0	4,966	1,292	0	0	**6,258**
Ross Powerhouse - Units 41-44 Scanners	6215	26	42	519	445	459	525	10	0	**2,026**
Skagit Security Systems	6388	0	644	504	0	0	0	0	0	**1,148**
Special Work Equipment - Generation Plant	6102	281	1,118	785	438	444	453	464	471	**4,454**
Tolt - Penstock Crossover Connection	6360	0	0	366	38	0	0	0	0	**404**
Generation Total		**84,970**	**35,676**	**15,190**	**20,624**	**22,768**	**22,522**	**16,210**	**17,376**	**235,336**
Sequestered Savings										
Budget Savings	9999	0	6,132	0	0	0	0	0	0	**6,132**
Sequestered Savings Total		**0**	**6,132**	**0**	**0**	**0**	**0**	**0**	**0**	**6,132**
Department Total		**465,209**	**147,616**	**115,781**	**138,508**	**142,090**	**129,076**	**125,434**	**128,350**	**1,392,064**

Amounts in thousands of dollars

Fund Source Summary

Funding Source	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	465,209	147,616	115,781	138,508	142,090	129,076	125,434	128,350	**1,392,064**
Department Total	**465,209**	**147,616**	**115,781**	**138,508**	**142,090**	**129,076**	**125,434**	**128,350**	**1,392,064**

Amounts in thousands of dollars

800Mhz Radio Simulcast System - Seattle Area

Program: Distribution
Type: Improved Facility
Project ID: 9308
Start Date: 1st Quarter 2000
End Date: 4th Quarter 2003

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

City Light's existing 800MHZ radio system is unreliable and has a number of "dead" spots in the Rainer Valley, West Seattle, Madison Park, Richmond Beach and Lake City areas. Unreliability and dead spots present a safety hazard and impede efficiency. This project replaces the existing system with one that provides a coverage standard of 90% (the industry standard). The project includes finding repeater sites, purchasing equipment, and installing the simulcast system, which transmits from all transmitters at the same time.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**3,054**	**83**	**0**	**0**	**0**	**0**	**0**	**0**	**3,137**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Alaskan Way Viaduct - City Light

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8307
Start Date: 1st Quarter 2002
End Date: 4th Quarter 2009

Location: Various

This project designs and constructs relocations of City Light's extensive electrical distribution and transmission systems affected by Alaskan Way Viaduct construction. This project preserves the integrity of City Light's electrical system for all of its customers and, for public safety, maintains required electrical clearances during construction. The project's future (the extent and timing of City Light work on this project) is contingent on the way that it is included in the investment package to be developed by the Regional Transportation Investment District (RTID), and approval of the package by the Region's voters in an as yet unscheduled election in 2004.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**151**	**397**	**522**	**7,704**	**8,765**	**7,139**	**7,018**	**7,103**	**38,799**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Elevator Improvements

Program: Generation
Type: Improved Facility
Project ID: 6355
Start Date: 3rd Quarter 2003
End Date: 2nd Quarter 2005

Location: 10382 Boundary Rd

This project provides funding for a purchase and install contract to repair and/or upgrade the elevator at the Boundary Dam. Upgrades improve the elevator's reliability, ability to transport maintenance materials, and access to various levels at the dam.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**37**	**601**	**150**	**0**	**0**	**0**	**0**	**788**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Emergency Lighting Improvements

Program: Generation
Start Date: 2nd Quarter 2004
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2006
Project ID: 6342

Location: 10382 Boundary Rd

This project assesses emergency lighting and cable/wiring conditions throughout the Boundary Dam facility and upgrades, replaces, or repairs lighting where necessary.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**71**	**84**	**3**	**0**	**0**	**0**	**158**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Forebay Recreation Area Improvements

Program: Generation
Start Date: 1st Quarter 2005
Type: Improved Facility
End Date: 2nd Quarter 2007
Project ID: 6345

Location: 10382 Boundary Rd

When the Boundary Dam was constructed in the 1960s, the Federal Energy Regulatory Commission (FERC) licensed Generators 51, 52, 53 and 54. When Generators 55 and 56 were added to the plant in the 1980s, FERC amended the license. Although the amendment required that City Light add more recreational facilities, to date none have been added due to water and sewer issues. City Light plans to clarify with FERC whether or not further work is necessary in the Forebay Recreation Area prior to re-licensing negotiations. If work is required, this project implements the conceptual plan developed during the Boundary Rehabilitation Project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**43**	**671**	**27**	**0**	**0**	**741**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Network Control System & Control

Program: Generation
Start Date: 1st Quarter 2004
Type: Improved Facility
End Date: 1st Quarter 2007
Project ID: 6344

Location: 10382 Boundary Rd

This project implements the conceptual design for a network-based control system at Boundary Dam. Security system improvements (installed separately) are designed to interface with this system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**220**	**1,355**	**322**	**2**	**0**	**0**	**1,899**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Powerhouse Elevator Improvements

Program: Generation
Type: Improved Facility
Project ID: 6356
Location: 10382 Boundary Rd

Start Date: 3rd Quarter 2003
End Date: 2nd Quarter 2005

This project provides funding for a purchase and install contract for repairs to and/or upgrades of the powerhouse elevator to improve its functionality and/or restore its reliability.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**44**	**651**	**98**	**0**	**0**	**0**	**0**	**793**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Rehabilitation

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6186
Location: 10382 Boundary Rd

Start Date: 1st Quarter 1995
End Date: 4th Quarter 2004

The Boundary Dam Rehabilitation project provides comprehensive programmatic rehabilitation of major equipment, auxiliary systems, support features, and recreational facilities at the Boundary Hydroelectric Facility. These measures improve plant reliability, increase its operating life, provide consistency with current industry practice and technology, and strategically position the facility for upcoming re-licensing negotiations with the Federal Energy Regulatory Commission (FERC).

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**46,717**	**9,277**	**1,593**	**0**	**0**	**0**	**0**	**0**	**57,587**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Safety Improvements

Program: Generation
Type: Improved Facility
Project ID: 6161
Location: 10382 Boundary Rd

Start Date: 1st Quarter 1991
End Date: 4th Quarter 2004

The Boundary Dam Safety Improvements project implements corrective actions required by the Federal Energy Regulatory Commission (FERC) to reduce dam failure risk. This is part of a special dam safety review that began in 1990. Projects completed to date include installing a drainage system to reduce foundation water pressures, installing an anchoring system to strengthen the left spillway abutment rock, strengthening the dam elevator tower to resist earthquakes, and reviewing dam safety instrument data to make sure that the dam and foundation are stable. The work to be completed in 2003 and 2004 includes designing and installing an improved dam safety monitoring system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**10,434**	**1,212**	**241**	**0**	**0**	**0**	**0**	**0**	**11,887**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Service Area Improvements

Program: Generation
Type: Improved Facility
Project ID: 6347
Start Date: 1st Quarter 2004
End Date: 1st Quarter 2006

Location: 10382 Boundary Rd

This project implements the conceptual design for service area improvements and an inventory control system at the Boundary Dam. The service area is located at the northernmost area of the site, from the powerhouse access road to the Canadian Border, and contains facilities that support power generation operations. Facilities in the service area include the oil house, garage, shipping/receiving building, warehouse, and storage yards.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**359**	**1,310**	**18**	**0**	**0**	**0**	**1,687**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Sluice Maintenance Gate Overhaul

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6348
Start Date: 1st Quarter 2003
End Date: 4th Quarter 2004

Location: 10382 Boundary Rd

Overhaul of the sluice maintenance gate is recommended every 15 to 20 years. The gate is located underwater, so the extent of the work cannot be determined until it is floated ashore. This project designs a method for "floating" the maintenance gate to the shore, effects necessary repairs, and replaces or refurbishes worn hoist system components.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**1**	**129**	**0**	**0**	**0**	**0**	**0**	**130**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Spillgate Hoist House Rehab & Oil Control

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6349
Start Date: 1st Quarter 2004
End Date: 4th Quarter 2004

Location: 10382 Boundary Rd

This project replaces the spillgate hoist houses to provide better weather protection, adequate lighting, and prevention of "critter" intrusions. It also includes designing and installing a method to contain oil spills. The spillgates at Boundary are approximately 40 feet wide and 45 feet high. There are two spillgates, one on either side of the dam. The gates are raised to let water pass through when there is more coming down the river than can be used for generation. The machinery that lifts the gates is contained in the spillgate hoist houses, which are small metal enclosures located on the dam, adjacent to each spillgate. To prevent oil used to lubricate the hoist gear box from ending up in the river, oil containment devices are designed and installed.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**582**	**0**	**0**	**0**	**0**	**0**	**582**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Tailrace Recreation Area Improvement

Program: Generation
Type: Improved Facility
Project ID: 6346
Start Date: 1st Quarter 2005
End Date: 4th Quarter 2007

Location: 10382 Boundary Rd

When Boundary Dam was constructed in the 1960s, the FERC licensed Generators 51, 52, 53 and 54. When Generators 55 and 56 were added to the plant in the 1980s, FERC amended the license. Although the amendment required that City Light add more recreational facilities, none have been added due to water and sewer issues. City Light plans to clarify with FERC whether or not further work is necessary in the Tailrace Recreation Area prior to re-licensing negotiations. If work is required, this project implements the conceptual plan developed during the Boundary Rehabilitation Project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**214**	**707**	**118**	**0**	**0**	**1,039**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Transformer Bay Rockfall Mitigation

Program: Generation
Type: Improved Facility
Project ID: 6357
Start Date: 1st Quarter 2003
End Date: 3rd Quarter 2005

Location: 10382 Boundary Rd

This project provides funding for a construction contract to perform rock drilling, as necessary, to run conductor cables from the top of the cliff over the transformer bay or directly into the transformer bays at the Boundary Dam, to avoid exposure to rocks falling from the rockface. If this solution is cost prohibitive, City Light intends to determine and implement an alternative mitigation method, such as using spare outriggers or transformers for emergency repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**169**	**207**	**145**	**0**	**0**	**0**	**0**	**521**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Trashrake System

Program: Generation
Type: Improved Facility
Project ID: 6338
Start Date: 1st Quarter 2003
End Date: 1st Quarter 2006

Location: 10382 Boundary Rd

The trashrack (a fixed element which keeps debris out of a generator) was installed when the Boundary Dam was built, to prevent debris from going into the penstocks. This project funds the addition of a trashrake, to remove debris that accumulates in the trashrack. This project performs a thorough underwater inspection of the trashrack and repairs any damage found. It also designs and installs trashrake equipment to keep the racks clear of debris on a regular basis.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**59**	**69**	**1,434**	**19**	**0**	**0**	**0**	**1,581**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Unit 51 Turbine Runner

Program: Generation
Start Date: 1st Quarter 1996
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2004
Project ID: 6124

Location: 10382 Boundary Rd

The Boundary Dam Unit 51 Turbine Runner overhaul refurbishes the dam's turbine to "as new" condition. This is accomplished by replacing or refurbishing worn turbine components and by installing a new turbine runner. The goals of the project are improved turbine efficiency, increased operational flexibility, and increased overall generating reliability. Major activities include the purchase of a new runner (same design as Units 52, 53 and 54); the purchase of additional turbine components such as self-lubricating bushings; disassembly of the turbine/generator; evaluation of the condition of parts; refurbishment, replacement, or modification of parts; and reassembly with the new, refurbished, or modified parts.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**3,771**	**2,062**	**26**	**0**	**0**	**0**	**0**	**0**	**5,859**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Unit 53 Turbine Runner

Program: Generation
Start Date: 1st Quarter 1996
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2003
Project ID: 6126

Location: 10382 Boundary Rd

The Boundary Dam Unit 53 Turbine Runner overhaul refurbishes the Dam's turbine to "as new" condition. This is accomplished by replacing or refurbishing worn turbine components and by installing a new turbine runner. The goals for this project are improved turbine efficiency, increased operational flexibility, and increased overall generating reliability. Major activities include the purchase of a new runner (same design as Units 51, 52 and 54); the purchase of additional turbine components such as self lubricating bushings; disassembly of the turbine/generator; evaluation of the condition of parts; refurbishment, replacement, or modification of parts; and reassembly with the new, refurbished, or modified parts.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4,952**	**273**	**0**	**0**	**0**	**0**	**0**	**0**	**5,225**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Unit 55 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2007
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2009
Project ID: 6303

Location: 10382 Boundary Rd

This project is part of the Utility's Generator Rebuild Program. The program rebuilds ten generators (accounting for 70% of City Light's generating capability) by the end of 2013. This project repairs the stator of the Unit 55 Generator, which has been damaged by long-term exposure to excessive vibration inherent in the original generator design. (The stator is the stationary hollow cylinder in which the magnet rotates to generate electricity.) Although the vibration problem was resolved in the mid-1990s, the life of the stator was reduced by exposure to more than 15 years of severe vibration.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**6,386**	**773**	**94**	**7,253**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Unit 56 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2009
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2010
Project ID: 6354

Location: 10382 Boundary Rd

As part of a programmatic series of rehabilitation projects for 10 aging generators located at Ross, Diablo, and Boundary Powerhouses, this project issues a purchase and install contract for rewinding and refurbishment of the generator. A share of this project's expenditures are anticipated to occur after 2009.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,690**	**6,690**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Units 51-54 Turbine Pit Cranes

Program: Generation
Start Date: On hold
Type: Improved Facility
End Date: On hold
Project ID: 6350

Location: 10382 Boundary Rd

This project installs monorail hoist systems in the Units 51-54 turbine pits. Units 55 and 56 currently have monorail hoists, which facilitate maintenance and assembly of wicket gate linkages and other components in the turbine pits. Plant personnel have found that the monorail hoist systems in Units 55 and 56 have reduced the difficulty of and time required for maintenance. Similar advantages are realized by installing monorail hoists in the other four turbine pits. This project has been deferred from 2003; the new schedule has not yet been determined.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Dam - Units 51-56 Control Board Upgrade

Program: Generation
Type: Improved Facility
Project ID: 6343
Start Date: 1st Quarter 2004
End Date: 3rd Quarter 2007

Location: 10382 Boundary Rd

This project provides funding for a purchase and install contract with an electrical contractor or supplier for the upgrade and/or replacement of Unit 51-56 unit control boards, as necessary, to provide full interface with a new network-based control system. Located on the powerhouse floor at each turbine/generator unit, Unit Control Boards control the operation of the units.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**181**	**1,310**	**181**	**46**	**0**	**0**	**1,718**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Units 51-56 Governor Controls Upgrade

Program: Generation
Type: Improved Facility
Project ID: 6340
Start Date: 1st Quarter 2005
End Date: 3rd Quarter 2008

Location: 10382 Boundary Rd

This project provides funding for a purchase and install contract with an electrical contractor or supplier to upgrade and/or replace Units 51-56 governor controls. This work maintains reliability and availability, and interfaces with a new network-based control system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**368**	**1,278**	**162**	**55**	**0**	**1,863**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Boundary Dam - Units 51-56 Penstock Flow Monitoring

Program: Generation
Type: Improved Facility
Project ID: 6383
Start Date: 1st Quarter 2004
End Date: 2nd Quarter 2004

Location: 10382 Boundary Rd

This project installs a permanent means of monitoring water flow in the turbines, either by installing acoustic flow meters or by providing accurate calibration and appropriate instrumentation to support the use of the existing differential pressure monitoring method.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**181**	**0**	**0**	**0**	**0**	**0**	**181**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Boundary Vista House Recreation Area Improvements

Program: Generation
Start Date: 1st Quarter 2004
Type: Improved Facility
End Date: 1st Quarter 2005
Project ID: 6384

Location: 10382 Boundary Rd

City Light plans to clarify with Federal Energy Regulatory Commission (FERC) whether or not further work is necessary in the Vista House Recreation Area prior to re-licensing negotiations. If work is required, this project implements the conceptual plan developed during the Boundary Rehabilitation Project. If the work is not required, City Light intends to reprioritize its work plan and reallocate the funds to similar projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**128**	**13**	**0**	**0**	**0**	**0**	**141**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Broad St. Substation Networks

Program: Distribution
Start Date: 1st Quarter 1999
Type: Improved Facility
End Date: 4th Quarter 2009
Project ID: 8203

Location: 6th AV N
Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The Broad St. Substation Networks project provides added capacity and improved electrical system reliability to City Light customers in the Broad St. Substation service area. The project ensures that existing customers have reliable electric service and new customers can be connected to the system. Work may include installing new civil facilities (vaults and conduits), reconductoring and relocating primary feeders, upgrading network transformers, adding and separating secondary bus ties, installing fire wrap on cables, transferring load between networks (cuts and taps), installing real time ampacity equipment, installing primary switches for load transfer or sectionalizing, installing or replacing network protectors, installing fire protection systems, and rebalancing feeders.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**5,891**	**4,756**	**4,707**	**4,620**	**4,722**	**4,846**	**4,984**	**5,052**	**39,578**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Cedar Falls - Habitat Conservation Plan

Program: Generation
Start Date: 1st Quarter 2000
Type: Improved Facility
End Date: 4th Quarter 2004
Project ID: 6214

Location: 19901 Cedar Falls Rd SE

The Cedar Falls Habitat Conservation Plan project implements environmental mitigation measures for the Cedar Falls Hydroelectric Project. This action is required to meet City Light's contribution to the Cedar River Habitat Conservation Plan. City Light's efforts combine with mitigation and enhancement projects funded by Seattle Public Utilities.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4,409**	**981**	**44**	**0**	**0**	**0**	**0**	**0**	**5,434**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Cedar Falls - Intake Gate Replacement

Program: Generation
Type: New Facility
Project ID: 6171
Start Date: 1st Quarter 1993
End Date: 4th Quarter 2003

Location: 19901 Cedar Falls Rd SE

The Cedar Falls Intake Gate Replacement project provides a new intake gate at the Cedar Falls Masonry Dam. The project's major activities (installing and testing the intake gate) occurred in 1999-2000. A Dam Failure Emergency Warning System remains to be installed in 2003.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**5,824**	**201**	**0**	**0**	**0**	**0**	**0**	**0**	**6,025**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Cedar Falls - Rehab/Reline Penstocks

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6358
Start Date: 1st Quarter 2006
End Date: 4th Quarter 2009

Location: 19901 Cedar Falls Rd SE

This project repairs the two penstocks at Cedar Falls. A penstock is a conduit or pipeline through which water travels to run the turbines and generate power. The project includes relining the upper portions of the penstocks, performing a seismic upgrade of penstock bridges, repairing sagging or broken penstock support saddles, and touching up exterior paint.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**565**	**3,768**	**3,903**	**70**	**8,306**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Central Arterial Streetlights Major Maintenance

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8212
Start Date: 1st Quarter 2000
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Central Arterial Streetlights Major Maintenance project provides necessary capital improvements and replacements to the City of Seattle's arterial streetlights in the downtown streetlight system in order to maintain right-of-way illumination in street rights-of-way. The City transferred ownership of 18,600 arterial streetlights to City Light at the end of 1999. Of those 18,600 streetlights, 5,000-6,000 lights are on poles installed exclusively for streetlighting. Many of these are fed underground. Projects include streetlight pole and foundation work and installation of streetlights.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**808**	**1,263**	**742**	**776**	**794**	**815**	**838**	**850**	**6,886**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Communications Improvements

Program: Distribution
Start Date: Ongoing
Type: Improved Facility
End Date: Ongoing
Project ID: 9009

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Communications Improvements project provides for unforeseen emergency work on City Light's communications systems. This ongoing program provides funding to replace critical communications components required due to failure, changing regulatory requirements, or requirements for upgrades.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**285**	**240**	**236**	**201**	**205**	**210**	**216**	**218**	**1,811**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Consolidated Customer Service System

Program: Finance & Administration
Start Date: 1st Quarter 1995
Type: New Investment
End Date: 4th Quarter 2004
Project ID: 9910

Location: 700 5TH AV
Neighborhood District: Downtown **Neighborhood Plan:** Not in a Neighborhood Plan

The Consolidated Customer Service System (CCSS) is a single customer information system supporting both City Light and Seattle Public Utilities' billing and customer support functions. The system was built using the Banner commercial software package, with some custom modifications.

Plans for CCSS include the system's first major upgrade to a new version of the Banner product. The newer version of Banner offers improvements that directly address the challenges the City has faced using CCSS in its first year. These improvements include better tools for performing billing adjustments, better account processes, easier navigation within the system, improved displays of account information, and enhanced management reporting. In addition, this version is built with newer database and hardware components that are better supported by their respective vendors, Oracle and IBM. City Light is negotiating with the vendor to include many of the City's modifications as part of the baseline product in this upgrade release. This avoids both programming and future operations costs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**48,984**	**3,631**	**3,203**	**0**	**0**	**0**	**0**	**0**	**55,818**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Customer Data Services (CMart)

Program: Finance & Administration
Type: New Investment
Project ID: 9926
Start Date: 1st Quarter 2001
End Date: 4th Quarter 2004

Location: 700 5th Avenue

Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The Customer Data Services (CMart) project provides a data repository to support query, ad hoc reporting, and data extract demands of City Light staff. The system provides premise, meter, consumption, billing, technical metering, and meter reading data by extracting and centralizing data from various systems including the Consolidated Customer Service System (CCSS), Itron, City Light Advanced Meter System (CLAMS), and the Industrial and Commercial Subsidiary Billing (ICSB). This allows City Light staff to quickly respond to customer inquiries, identify future marketing areas, and resolve customer billing and service issues in a proactive and timely manner by providing high level summary reporting as well as more detailed reports.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**5,797**	**1,492**	**1,392**	**0**	**0**	**0**	**0**	**0**	**8,681**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Dam Safety Program

Program: Generation
Type: Improved Facility
Project ID: 6389
Start Date: Ongoing
End Date: Ongoing

Location: Various

This ongoing program provides capital improvements to upgrade the safety requirements of all of the dams in the City Light system as required by the Federal Energy Regulatory Commission (FERC).

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**118**	**83**	**132**	**137**	**139**	**142**	**145**	**896**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Dam - Automate Spillgates

Program: Generation
Type: Improved Facility
Project ID: 6359
Start Date: 1st Quarter 2005
End Date: 4th Quarter 2006

Location: Milepost 126 State Highway 20

This project installs automatic hoists for Gates 17, 18, and 19 at Diablo Dam, similar to those for Gates 1, 2, and 3. The project also includes purchase of a second mule hoist, a portable winch that is manually moved from gate to gate and used for raising and lowering the spillway gates.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**82**	**587**	**0**	**0**	**0**	**669**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Diablo Dam - Spillgate Control Improvements

Program: Generation
Start Date: 1st Quarter 2001
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2004
Project ID: 6238

Location: Milepost 126 State Highway 20

The Diablo Dam Spillgate Control Improvements project replaces the motor starters and controls for the three Diablo Dam motorized spillgates. This project includes gate-status and opening-height transducers and analog data transponders. Safety disconnect switches and motor-current limiters also are installed.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**43**	**272**	**10**	**0**	**0**	**0**	**0**	**0**	**325**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Powerhouse - Replace 5 kV Switchgear

Program: Generation
Start Date: 1st Quarter 2006
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2007
Project ID: 6364

Location: Milepost 126 State Highway 20

This project replaces the existing 5 kilovolt (kV) switchgear in the Diablo Powerhouse with a new 5 kV switchgear system. This project enhances switching capability, provides protective relaying, and replaces aging high-voltage circuit breakers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**513**	**529**	**0**	**0**	**1,042**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Powerhouse - Replace Control and Power

Program: Generation
Start Date: 1st Quarter 2007
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2008
Project ID: 6363

Location: Milepost 126 State Highway 20

This project replaces aging control and power cables in the Diablo Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**363**	**375**	**0**	**738**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Diablo Powerhouse - Replace Units 31-32 Governors

Program: Generation
Start Date: 1st Quarter 2008
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2009
Project ID: 6366

Location: Milepost 126 State Highway 20

This project replaces the governors on Generator Units 31 and 32. The governor is the part of the turbine/generator that controls the amount of water going through the turbine, and thereby controls the amount of power generated.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**265**	**274**	**539**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Powerhouse - Upgrade Annunciator System

Program: Generation
Start Date: 1st Quarter 2005
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2005
Project ID: 6367

Location: Milepost 126 State Highway 20

This project replaces and upgrades the annunciator system at Diablo Powerhouse. The annunciator system monitors various portions of the generating system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**343**	**0**	**0**	**0**	**0**	**343**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Powerhouse DC Lighting Systems Upgrade

Program: Generation
Start Date: 1st Quarter 2004
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2005
Project ID: 6365

Location: Milepost 126 State Highway 20

This project replaces out-of-date AC/DC lighting systems at Diablo Powerhouse with more energy-efficient systems.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**119**	**217**	**0**	**0**	**0**	**0**	**336**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Diablo Sewer System Improvement

Program: Generation
Start Date: 1st Quarter 2000
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2008
Project ID: 6232

Location: Milepost 126 State Highway 20

The Diablo Sewer System Improvement project repairs numerous sewer pipe breaks, leaks, and sags in the combined Diablo sewer/drainage collection system. This project eliminates overloads in the sewage treatment plant, pollution of Skagit River, and contamination of soil.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**1**	**0**	**0**	**0**	**94**	**845**	**9**	**0**	**949**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Switchyard Resurfacing

Program: Generation
Start Date: 1st Quarter 2005
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2005
Project ID: 6361

Location: 502 Diablo St

This project resurfaces the Diablo Switchyard.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**374**	**0**	**0**	**0**	**0**	**374**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Diablo Water System Improvements

Program: Generation
Start Date: 1st Quarter 2003
Type: Improved Facility
End Date: 2nd Quarter 2005
Project ID: 6304

Location: Milepost 126 State Highway 20

This project improves provision of water supply for the town of Diablo. Four subprojects provide a booster pump, backflow protection, a new well, and an upgraded tailrace pipe.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**45**	**204**	**24**	**0**	**0**	**0**	**0**	**273**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Disaster Recovery/Business Continuity

Program: Finance & Administration
Type: New Investment
Project ID: 9925
Start Date: 1st Quarter 2001
End Date: 4th Quarter 2007

Location: 700 5TH AV

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Disaster Recovery/Business Continuity Planning project minimizes damage to City Light, its employees, and customers, in the event of a disaster. This project involves acquiring and utilizing software, hardware and services to analyze risks; developing recovery and continuity mechanisms and infrastructure; and exercising disaster test scenarios.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**293**	**49**	**122**	**447**	**977**	**240**	**0**	**0**	**2,128**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Distribution Area Communications Networks

Program: Distribution
Type: Improved Facility
Project ID: 9307
Start Date: 1st Quarter 1999
End Date: 4th Quarter 2009

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project provides fiber rings to City Light facilities to create a secure digital communications network for Distribution system operations and control. The fiber infrastructure provides a secure path for power distribution system control and dispatch, Energy Management System data, and other City Light communications that support Substation Automation, Distribution Automation, Distributed Generation, and automated meter reading.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**1,219**	**555**	**633**	**656**	**668**	**685**	**704**	**714**	**5,834**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Distribution Automated Mapping System

Program: Finance & Administration
Type: New Investment
Project ID: 9905
Start Date: 2nd Quarter 1992
End Date: 4th Quarter 2009

Location: 700 5TH AV
Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The Distribution Automated Mapping System project provides electronic geographic mapping data to model City Light's distribution system. This application provides timely and accurate information about City Light's distribution system to help facilitate the uninterrupted delivery of power to customers. The system supports automated mapping and analytical tools for system maintenance and operation. Integration work with the utilities work management, facilities management, and the customer information system is planned. Funding allows the project to leverage its initial investment by using the Geographical Information System (GIS) for service and operational purposes. A technology refresh of the system is planned to ensure continued system stability.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**21,434**	**1,164**	**1,199**	**1,331**	**1,405**	**1,482**	**1,562**	**1,587**	**31,164**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Downtown Substation - Preliminary Engineering

Program: Distribution
Type: New Facility
Project ID: 7754
Start Date: 1st Quarter 2002
End Date: 4th Quarter 2009

Location: Citywide
Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The Downtown Substation - Preliminary Engineering project researches property acquisition options and performs preliminary engineering to determine timing of construction of a new substation. A new substation ensures that adequate capacity to serve Downtown and First Hill customers is maintained.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**35**	**24**	**1**	**3**	**3**	**3**	**3**	**3**	**75**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Drawing Conversions - Seattle City Light

Program: Finance & Administration
Type: New Investment
Project ID: 9909
Start Date: 1st Quarter 1995
End Date: 2nd Quarter 2003

Location: 700 5th Avenue
Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The Drawing Conversions project converts City Light's paper engineering drawings to electronic computer format. Computer technology updates and maintains drawings to provide engineers and field crews with more accurate documents. The multi-year proposal directly supports the generation system rehabilitation projects, the recommendations from the CIP Review performed by R.W. Beck, and the Information Technology Strategic Plan. An upgrade of the drawing and document management occurred in 2002. The remaining items for this CIP are closeout tasks associated with the organization, business processes, and production use of engineering drawings for Power Stations and Generation.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**6,071**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**6,114**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Electrical Services Replacement

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8997
Start Date: 1st Quarter 2009
End Date: 4th Quarter 2009

Location: Various
Neighborhood District: In more than one district
Neighborhood Plan: Not in a Neighborhood Plan

This project plans for future years' Distribution System capital project budgets. The intent is to assist the rates staff in making projections for future revenue requirements and to allow future rate planning.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**271**	**271**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Endangered Species Act Mitigation

Program: Executive
Type: New Facility
Project ID: 6990
Start Date: 1st Quarter 2000
End Date: 4th Quarter 2009

Location: Various

The purpose of the Endangered Species Act (ESA) Mitigation project is to provide habitat protection and restoration benefits to Chinook salmon so that the City meets its ESA commitments under the Early Action Proposal (EAP) adopted by City Council in March 1999. The EAP includes habitat acquisition and protection in the four Puget Sound watersheds where the City has primary operational interests (Skagit, Snohomish, Cedar/Lake Washington, and the Green/Duwamish) and a research and monitoring program.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,649**	**1,498**	**706**	**578**	**699**	**614**	**744**	**758**	**8,246**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Environmental Learning Center

Program: Generation
Type: New Facility
Project ID: 6988
Start Date: 1st Quarter 2001
End Date: 1st Quarter 2005

Location: Milepost 128 State Highway 20

The North Cascades Environmental Learning Center (NCELC) is one of several environmental mitigation projects that City Light is required by the Federal Energy Regulatory Commission (FERC) to provide for 30 more years of continued Skagit River Hydroelectric Project operation. This project constructs 16 new one-story, wood-frame buildings and remodels one existing building (for a total of approximately 33,400 square feet). The project includes a new commercial kitchen; a new propane fuel system; the removal of old kitchen equipment in the dining hall and some fire hydrants; a parking area and access roads; shoreline restoration; landscaping and revegetation, including pathways, planting and seeding, rock retaining walls, irrigation and exterior lighting; a new floating dock; a new amphitheater; modifying the water supply system, including installing a new water tank, well pump, and chlorination system; modifying the sanitary sewer system; trenching and conduit for new underground utilities; conduit for data communications; new signage; an entry gate structure and outdoor seating areas; and fire sprinkler system. The Memorandum of Agreement between the City of Seattle (City Light), the US Department of the Interior National Park Service (North Cascades National Park), and the North Cascades Institute provides that the National Park Service is responsible for the sewer and water system and City Light is responsible for other construction costs, plus certain operation and maintenance costs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4,342**	**11,278**	**304**	**19**	**0**	**0**	**0**	**0**	**15,943**
O&M Costs (Savings)			49	50	52	53	54	54	**312**

Facilities ADA and Regulatory Compliance

Program: Finance & Administration
Type: Improved Facility
Project ID: 9151
Start Date: 1st Quarter 1998
End Date: 4th Quarter 2009

Location: Various

The Facilities ADA and Regulatory Compliance project provides barrier-free, code-compliant facilities for employees and customers to preserve and reinforce City Light's leadership position on environmental and accessibility initiatives. Many of the public facilities at the Skagit Hydroelectric Site support recreational activities within the National Park and also serve the Skagit Tours program. All of these public areas are subject to the regulations outlined in the Americans with Disabilities Act (ADA). Many modifications have already been made by the Skagit Facilities staff, with special focus on tourist facilities. Continued efforts to achieve equal access require modification to building entrances and ramps, dining accommodations, restrooms, and parking.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**8**	**0**	**0**	**90**	**93**	**95**	**97**	**100**	**483**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Facilities Environmental Remediation

Program: Finance & Administration
Start Date: 1st Quarter 1997
Type: Improved Facility
End Date: 3rd Quarter 2009
Project ID: 9152

Location: Various

The Facilities Environmental Remediation project prevents air and water pollution at City Light facilities and improves hazardous material handling. This project implements cost-appropriate solutions for environmental problems, when identified, and provides facilities to meet environmental and remediation concerns. Typical projects include providing ventilation for painting and sandblasting operations and providing storage for toxic materials.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**642**	**67**	**0**	**150**	**156**	**160**	**164**	**167**	**1,506**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Facility Security

Program: Finance & Administration
Start Date: 1st Quarter 1998
Type: Improved Facility
End Date: 4th Quarter 2009
Project ID: 9154

Location: Various

The Facility Security project provides personal safety and protection for buildings and equipment at locations such as service centers, substations, and power generation sites. These improvements provide a safe workplace for employees and protect assets to assure uninterrupted power delivery to City Light's customers. This project involves designing and installing effective intrusion alarm systems and implementing procedures to improve security at powerhouses. The program of improvements is based on a security study performed in 1998. Intrusion deterrent hardware may include improved doors and locks to prevent access, motion detectors to reduce false alarms, and audio/light devices activated upon intrusion. Central station monitoring is included.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**161**	**0**	**0**	**122**	**127**	**131**	**134**	**136**	**811**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Fire Protection Systems Modification

Program: Generation
Start Date: 1st Quarter 1993
Type: Improved Facility
End Date: 1st Quarter 2005
Project ID: 6166

Location: Various

The Fire Protection Systems Modification project procures and installs a refrigerated carbon dioxide storage tank, operating at 300 pounds per square inch. This system protects generators, oil rooms, and the station service room at Ross and Diablo dams. An advanced smoke detection system for early warning is installed for the control, relay, and communications rooms.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**1,378**	**0**	**846**	**32**	**0**	**0**	**0**	**0**	**2,256**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

First Hill Network

Program: Distribution
Type: Improved Facility
Project ID: 8301
Start Date: 1st Quarter 2002
End Date: 4th Quarter 2009

Location: 1100 MADISON ST

Neighborhood District: Downtown
Neighborhood Plan: Not in a Neighborhood Plan

The First Hill Network project provides added capacity and improved electrical system reliability to City Light customers in the First Hill service area. Existing customers have reliable electric service and new customers are connected to the system. Work includes installation of new civil facilities (vaults and conduits) and reconductoring and relocation of primary feeders. Other work includes installation of fire wrap on cables, replacement of non-submersible network protectors, and rebalancing network feeders (cuts and taps). Future work includes upgrades to network transformers, additions and separations of secondary bus ties, installation of bus tie switches, replacement of failed cables, and related work.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**64**	**1,868**	**1,070**	**1,096**	**1,121**	**1,150**	**1,183**	**1,200**	**8,752**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Generation - Civil-Mechanical Modification

Program: Generation
Type: Improved Facility
Project ID: 6005
Start Date: Ongoing
End Date: Ongoing

Location: Various

The purpose of the Generation - Civil-Mechanical Modification project is to provide a financial placeholder for unscheduled capital work. This project covers miscellaneous and small unscheduled improvements.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**778**	**1,258**	**1,007**	**1,244**	**1,277**	**1,310**	**1,343**	**1,365**	**9,582**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Generation - Electrical Enhancements

Program: Generation
Type: Improved Facility
Project ID: 6087
Start Date: Ongoing
End Date: Ongoing

Location: Various

The purpose of the Generation Electrical Enhancements project is to provide a financial placeholder for unscheduled capital projects. This project covers miscellaneous and small unscheduled improvements.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**143**	**858**	**938**	**907**	**928**	**950**	**975**	**992**	**6,691**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Generation Replacement

Program: Generation
Start Date: 1st Quarter 2009
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2009
Project ID: 6999

Location: Citywide

This project provides long-term planning funds for as yet unidentified capital replacements in City Light's Generation plant. This financial capacity allows the utility's rates staff to make projections of future revenue requirements and allow for future rate planning.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5,715**	**5,715**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Dam - Spillgate Control Improvements

Program: Generation
Start Date: 1st Quarter 2001
Type: Improved Facility
End Date: 2nd Quarter 2004
Project ID: 6222

Location: Milepost 121 State Highway 20

The Gorge Dam Spillgate Control Improvements project replaces the motor starters and controls for the two Gorge Dam spillgates. Included for replacement are the gate-status and opening-height transducers and related telecommunications equipment.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**90**	**150**	**35**	**0**	**0**	**0**	**0**	**0**	**275**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Dam - Spillgate Rehabilitation

Program: Generation
Start Date: 1st Quarter 2002
Type: Rehabilitation or Restoration
End Date: 1st Quarter 2008
Project ID: 6221

Location: Milepost 121 State Highway 20

The Gorge Dam Spillgate Rehabilitation project provides inspection and repairs to two dam spillgates to prevent loss of structural integrity. The Gorge Dam contains two 47- by 50-foot vertical-lift spillgates which regulate the river flow during floods and increase the capability to generate electricity during normal flows. The project replaces deteriorated bolts, a condition observed in 1997 during seal-replacement work on gate #1. The same condition is assumed to exist on gate #2.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**1,461**	**46**	**0**	**1,507**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Gorge Dam - Unit 24 Turbine-Runner Overhaul

Program: Generation
Start Date: 1st Quarter 1999
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2007
Project ID: 6219

Location: Milepost 121 State Highway 20

The Gorge Dam - Unit 24 Turbine-Runner Overhaul project refurbishes the turbine to "as-new" condition. Work includes replacing or refurbishing worn turbine components and installing a new turbine runner. This project is part of the programmatic turbine rehabilitation program to overhaul and upgrade City Light's aging hydroelectric turbines. Along with the runner replacement, new seal rings, self-lubricating bushings, and wicket-gate refurbishment are provided.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**43**	**48**	**1,741**	**1,150**	**2,737**	**555**	**0**	**0**	**6,274**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - 240 kV Oil-filled Circuit Breakers

Program: Generation
Start Date: 1st Quarter 1999
Type: Improved Facility
End Date: 4th Quarter 2004
Project ID: 6226

Location: Milepost 121 State Highway 20

The Gorge Powerhouse - 240 kV Oil-filled Circuit Breakers (OCB) project replaces out-of-date circuit breakers at the Gorge Powerhouse with SF-6 gas circuit breakers. The project replaces the four oil-filled circuit breakers at the Gorge Switchyard.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**767**	**334**	**605**	**0**	**0**	**0**	**0**	**0**	**1,706**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - AC/DC Distribution System

Program: Generation
Start Date: 1st Quarter 2000
Type: Rehabilitation or Restoration
End Date: 2nd Quarter 2004
Project ID: 6207

Location: Milepost 121 State Highway 20

The Gorge Powerhouse AC/DC Distribution System project replaces DC distribution panels, unitizes DC control and alarm circuits to individual generators, provides AC station service grounding, and replaces AC distribution panels and branch circuits in Gorge Powerhouse to improve efficiency and reliability.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**291**	**236**	**26**	**0**	**0**	**0**	**0**	**0**	**553**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Gorge Powerhouse - Control and Power Cabling Replacement

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6328
Location: Milepost 121 State Highway 20

Start Date: 1st Quarter 2006
End Date: 4th Quarter 2008

This project replaces deteriorating control and power cabling within the Gorge Powerhouse. Work reduces troubleshooting time spent tracing ground faults, eases installation of future projects, and increases generator availability.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**194**	**201**	**306**	**0**	**701**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - Generator Hall and High Room Lighting

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6330
Location: Milepost 121 State Highway 20

Start Date: 1st Quarter 2006
End Date: 4th Quarter 2007

This project replaces the lighting fixtures and wiring in the main generator hall and high room at the Gorge Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**247**	**255**	**0**	**0**	**502**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - Programmable Logic Controllers

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6369
Location: Milepost 121 State Highway 20

Start Date: 1st Quarter 2006
End Date: 4th Quarter 2006

This project replaces the relays at the Gorge Powerhouse with programmable-logic controllers (PLCs). The relays to be replaced are part of the Gorge Powerhouse annunciator system. PLCs are the current electrical devices used in place of the old relay system. This project is part of the comprehensive Skagit Relay Improvement effort that is providing modern protective relaying for the Ross, Gorge, Diablo, and Newhalem Powerhouses.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**229**	**0**	**0**	**0**	**229**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Gorge Powerhouse - Transformer Bank 10 Replacement

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6224
Start Date: 3rd Quarter 2000
End Date: 1st Quarter 2005

Location: Milepost 121 State Highway 20

The Gorge Powerhouse Transformer Bank 10 Replacement project removes the oil transformer and its conductors and provides a dry transformer and conductors to the Gorge Powerhouse to ensure reliability and prevent environmental exposure hazard.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**24**	**0**	**345**	**19**	**0**	**0**	**0**	**0**	**388**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - Transformer Bank 22 Replacement

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6370
Start Date: 1st Quarter 2005
End Date: 4th Quarter 2006

Location: Milepost 121 State Highway 20

This project replaces Transformer Bank 22 at the Gorge Powerhouse with a new bank of transformers; the existing transformers are near the end of their useful life.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**2,186**	**871**	**0**	**0**	**0**	**3,057**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Gorge Powerhouse - Transformer Bank 24 Replacement

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6371
Start Date: 1st Quarter 2006
End Date: 4th Quarter 2008

Location: Milepost 121 State Highway 20

This project replaces Transformer Bank 24 and purchases a spare transformer for the Diablo and Gorge Powerhouses. The spare transformer can be used to minimize loss of generation in the event of an unexpected failure of one of the existing transformers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**3,324**	**897**	**45**	**0**	**4,266**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Gorge Switchyard - Resurfacing

Program: Generation
Start Date: 1st Quarter 2005
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2005
Project ID: 6362

Location: Milepost 121 State Highway 20

This project resurfaces the Gorge Switchyard.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**249**	**0**	**0**	**0**	**0**	**249**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Information Technology Infrastructure

Program: Finance & Administration
Start Date: Ongoing
Type: New Investment
End Date: Ongoing
Project ID: 9915

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Information Technology Infrastructure project replaces aging and obsolete hardware and software that supports City Light's information technology infrastructure and operating environment. Infrastructure is upgraded to address an ever-increasing and sophisticated application base, network load, and new office automation technologies. This project is necessary to maintain a stable computing environment allowing employees to accomplish work requiring automated technology without interruption or loss of productivity. Components purchased and maintained include servers, network and data communications equipment, high speed laser printers and application/OS software. These components are required to meet basic business requirements for City Light's information technologies.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**19,385**	**2,677**	**2,171**	**3,354**	**4,096**	**4,501**	**4,897**	**4,980**	**46,061**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Interbay Substation

Program: Distribution
Start Date: 4th Quarter 2000
Type: New Facility
End Date: 4th Quarter 2009
Project ID: 7756

Location: 3240 17TH AV W
Neighborhood District: Magnolia/Queen Anne **Neighborhood Plan:** Not in a Neighborhood Plan

This project plans, designs, and constructs a 26-kV substation in the Interbay area. Land was acquired in 2001 and design work was underway in 2003. Additional funding is to be sought for building the substation.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,352**	**78**	**1**	**3**	**3**	**3**	**3**	**3**	**2,446**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Ladder Creek Water System

Program: Generation
Start Date: 3rd Quarter 2001
Type: Rehabilitation or Restoration
End Date: 3rd Quarter 2005
Project ID: 6234

Location: Milepost 126 State Highway 20

The Ladder Creek Water System project provides an assured supply of irrigation water to Ladder Creek Gardens behind Gorge Powerhouse to provide the historic gardens with sufficient water.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**7**	**0**	**191**	**213**	**0**	**0**	**0**	**0**	**411**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Maple Valley Sno-King 230 kV Line Restoration

Program: Distribution
Start Date: 1st Quarter 1998
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2003
Project ID: 7054

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project restores the Maple Valley to Sno-King 230 kV transmission line consistent with ratings assumed by the Western Systems Coordinating Council (WSCC). Work includes vegetation clearing along right-of-way and line work, including replacement of a tower with a pole, and raising certain conductors to obtain necessary line clearance heights.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**3,590**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**3,598**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Massachusetts St. Substation Networks

Program: Distribution
Start Date: 1st Quarter 1999
Type: Improved Facility
End Date: 4th Quarter 2009
Project ID: 8202

Location: 1555 UTAH AV S
Neighborhood District: Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

The Massachusetts St. Substation Networks project adds capacity and improves reliability of the electrical system for City Light customers in the Massachusetts St. Substation service area. Existing customers continue to have reliable electric service and new customers are connected to the system. Work may include installation of new civil facilities (vaults and conduits), reconductoring and relocation of primary feeders, upgrading network transformers, additions and separations to secondary bus ties, installation of fire wrap on cables, transferring load between networks (cuts and taps), installation of real time ampacity equipment, installation of primary switches for load transfer or sectionalizing, installation or replacement of network protectors, installation of fire protection systems, and rebalancing feeders.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**720**	**307**	**491**	**453**	**463**	**475**	**488**	**495**	**3,892**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Mechanical Improvements

Program: Finance & Administration
Type: Improved Facility
Project ID: 9156
Start Date: 1st Quarter 1997
End Date: 4th Quarter 2009

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Mechanical Improvements project provides funding for design, materials, and construction for a variety of heating, ventilation, and air conditioning improvement and replacement projects. This is an essential part of maintaining City Light facilities. Examples of projects include installing heat pumps to increase cooling in computer server rooms when equipment additions increase heat loads.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**881**	**96**	**0**	**236**	**245**	**252**	**258**	**263**	**2,231**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Meter Additions

Program: Distribution
Type: New Facility
Project ID: 8054
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Meter Additions project is to provide new or replacement meters to enable City Light to generate customer bills. There are three types of work in this project: New Services, installation of approximately 5,000 meters annually for new or upgraded commercial and residential customer electrical services; Obsolete Meter Exchanges, which is an exchange of approximately 12,500 (out of 370,000 in the distribution system) obsolete meters annually; and New Technology and Automated Metering Options, pilot projects to demonstrate new metering devices and systems, including study of micro-turbines, fuel cells, and solar cells to determine the impact on the distribution system and the requirements for net metering.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,741**	**2,882**	**2,929**	**2,665**	**2,726**	**2,798**	**2,877**	**2,916**	**22,534**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Metro Direct Current Cables

Program: Distribution
Type: Improved Facility
Project ID: 8144
Start Date: 1st Quarter 1996
End Date: 4th Quarter 2009

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Metro Direct Current Cables project relocates King County Metro DC cables out of City Light maintenance holes and vaults. This improves network reliability by separating and isolating the two electric systems, which have uncoordinated protection schemes. King County has already relocated some cables at their own expense.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**28**	**5**	**6**	**5**	**6**	**6**	**6**	**6**	**68**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Miscellaneous Building Improvements

Program: Finance & Administration
Type: Improved Facility
Project ID: 9007
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Miscellaneous Building Improvements project provides funds for design, materials, and construction of a variety of small projects that are not large enough to merit separate capital projects. The project also provides funds for urgent, unscheduled improvements associated with City Light's general plant. Typical projects include plumbing, air quality improvements, remodeling and demolition.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**279**	**150**	**249**	**485**	**497**	**0**	**0**	**0**	**1,660**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Mobile Equipment

Program: Distribution
Type: New Facility
Project ID: 9101
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Mobile Equipment project budgets funds to replace and expand, when required, City Light's heavy duty mobile equipment fleet. It also funds gradual replacement of light duty vehicles that were previously leased from the Fleets & Facilities Department and are now owned by City Light.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**618**	**1,280**	**737**	**1,026**	**1,055**	**1,082**	**1,111**	**1,125**	**8,034**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Neighborhood Planning

Program: Distribution
Type: New Facility
Project ID: 8207
Start Date: 1st Quarter 1999
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project implements pedestrian and safety lighting projects that are neighborhood plan priorities. The Department of Neighborhoods, with City Light's technical assistance, coordinates outreach activities with the community to set these priorities.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**75**	**671**	**422**	**555**	**570**	**584**	**600**	**608**	**4,085**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Neighborhood Undergrounding

Program: Distribution
Type: New Facility
Project ID: 8206
Start Date: 1st Quarter 1999
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

During the 2000 budget process, the City Council adopted a Statement of Legislative Intent directing City Light not to expend or divert any funds from this project until the Council has established clear policies and guidelines for responding to neighborhood plan requests for undergrounding utilities, and has by Resolution, restored City Light's authority to use these funds. This prohibition is intended to apply whether the undergrounding is on residential streets or on arterial streets.

It is not the intent of this legislation to hinder the legitimate use of utility funds to assist neighborhoods with planning and feasibility assessment, or the implementation of non-undergrounding projects already approved; that activity is funded separately in City Light's CIP as project #8207 Neighborhood Planning.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**10**	**0**	**0**	**169**	**175**	**180**	**185**	**187**	**906**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Network Additions and Services

Program: Distribution
Type: New Facility
Project ID: 8057
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Network Additions and Services project is to provide electrical service connections and related improvements in response to requests for service from customers in the Downtown, First Hill and University network areas. Capacity additions associated with service connections are included in this project. This project also includes replacement of failed network transformers, network protectors, and specialty transformers; short-duration system improvements identified during operations; and retrofitting in-building vaults in the First Hill network with fire detection systems. This program fluctuates with land use development. Approximately 20 properties are projected to receive service in the 2003-2004 budget cycle, including condominiums, office buildings, hotels, and apartment buildings.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**8,457**	**8,746**	**10,221**	**10,791**	**11,061**	**11,360**	**11,685**	**11,846**	**84,167**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Network Hazeltine Upgrade

Program: Distribution
Type: Improved Facility
Project ID: 8129
Start Date: 1st Quarter 1995
End Date: 4th Quarter 2009

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Network Hazeltine Upgrade project installs upgraded equipment in the existing network transformer monitoring system to better monitor the network vaults and transformers and take advantage of new capabilities in this system to maintain network reliability. A Nextgen unit is installed for new transformers and out-of-date Hazeltine units are replaced to continue real time monitoring of the system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**540**	**392**	**301**	**314**	**322**	**331**	**340**	**345**	**2,885**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Network Maintenance Hole and Vault Rebuild

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8130
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Network Maintenance Hole and Vault Rebuild project is to repair or replace damaged or degraded maintenance holes and vaults to prevent future unsafe working conditions and avoid public hazards. Field surveys of Network vaults and maintenance holes are performed in the downtown and First Hill areas, and repairs are designed and completed for facilities requiring capital replacement. Repairs are prioritized by the results of the field surveys, in coordination with other City projects. In 2003, three manholes and three manhole roofs were rebuilt. In 2004, five manholes and four manhole roofs are rebuilt, and facility civil surveys are completed.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**15,504**	**2,280**	**2,730**	**3,068**	**3,148**	**3,232**	**3,323**	**3,368**	**36,653**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Newhalem Creek Mitigation

Program: Executive
Type: Improved Facility
Project ID: 6175
Start Date: 1st Quarter 1997
End Date: 1st Quarter 2006

Location: 500 Newhalem St

The Newhalem Creek Mitigation project provides environmental mitigation to the natural environment allowing City Light to fulfill its federal license requirements and minimize adverse project impacts. This project covers environmental mitigation, enhancement and rehabilitation projects required by the February 1997 Federal Energy Regulatory Commission license for City Light's Newhalem Creek Hydroelectric Project. This project provides for the implementation of the following seven license-required capital improvement projects: constructing a tailrace fish barrier; modifying the intake system to provide for higher instream flows; reimbursing the North Cascades National Park Service for constructing a recreation trail; modifying the service road bridge to provide a trail crossing; modifying the Newhalem Powerhouse viewing platform; installing interpretive markers; and improving the Trail of the Cedars. The first six projects are complete; the seventh is scheduled to begin in 2005.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**1,023**	**0**	**0**	**60**	**9**	**0**	**0**	**0**	**1,092**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Newhalem Garage - Revisions

Program: Generation
Start Date: 1st Quarter 2005
Type: Improved Facility
End Date: 2nd Quarter 2006
Project ID: 6231
Location: 500 Newhalem St

The Newhalem Garage Revisions project modifies the existing garage arrangement and design in order to adapt them to current use requirements. These requirements include increasing size, installing concrete floors, and adding 115V interior lighting and outlets. In addition, access to the garages is changed, adapting to the new landscape improvements built in 2000, consistent with the Master Landscape Plan required by City Light's Federal Energy Regulatory Commission license.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**171**	**261**	**0**	**0**	**0**	**432**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Newhalem Powerhouse - Governor Replacement

Program: Generation
Start Date: 1st Quarter 2007
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2008
Project ID: 6392
Location: 500 Newhalem St

This project replaces the Newhalem Powerhouse governor, which is the part of the turbine/generator that controls the amount of water going through the turbine, and thereby controls the amount of power generated.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**59**	**61**	**0**	**120**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Newhalem Powerhouse - Station Battery & Charger Replacement

Program: Generation
Start Date: 1st Quarter 2003
Type: Rehabilitation or Restoration
End Date: 3rd Quarter 2003
Project ID: 6301
Location: 500 Newhalem St

The Newhalem Station Battery and Charger Replacement project replaces the 130-volt DC station battery and charger at Newhalem Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**154**	**0**	**0**	**0**	**0**	**0**	**0**	**154**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

North 26kV Conversion

Program: Distribution
Type: Improved Facility
Project ID: 8124
Start Date: 1st Quarter 1981
End Date: 4th Quarter 2009

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The North 26kV (kilovolt) Conversion project replaces all old 4kV electrical equipment remaining in the distribution system with new more efficient and reliable 26kV electrical equipment.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**60,814**	**1,030**	**999**	**1,520**	**1,563**	**1,604**	**1,648**	**1,670**	**70,848**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

North and South Service Center Improvements

Program: Finance & Administration
Type: Improved Facility
Project ID: 9107
Start Date: 1st Quarter 1991
End Date: 4th Quarter 2004

Location: Various

The North and South Service Center Improvements project provides efficient, well-designed work areas in service centers to provide City Light personnel with optimal locations, thereby providing responsive, integrated services to ratepayers in each distribution area. Major facility improvements are requested by branch customers and screened by a comprehensive facilities planning process. Construction takes place without interrupting business activities on site. The completed South Service Center Addition/Remodel subproject consisted of a new two-story office addition plus remodeled space at the north end of building A. Reconfiguring the main North Service Center building to consolidate all off-site office functions has also been completed. This work follows remodeling of the warehouse and construction of locker rooms in 1998.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**21,620**	**80**	**110**	**0**	**0**	**0**	**0**	**0**	**21,810**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

North Arterial Streetlights Major Maintenance

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8211
Start Date: 1st Quarter 2000
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The North Arterial Streetlights Major Maintenance project provides capital improvements and replacements to the City of Seattle's arterial streetlights in the northern half of the service area to provide proper light on street rights-of-way. The City transferred ownership of 18,600 arterial streetlights to City Light at the end of 1999. Of those 18,600 streetlights, 5,000-6,000 lights are on poles installed exclusively for streetlighting. Many of these are fed from underground.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**(3)**	**194**	**199**	**218**	**223**	**228**	**234**	**238**	**1,531**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

North Capacity Additions

Program: Distribution
Type: New Facility
Project ID: 8122
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the North Capacity Additions project is to provide electrical lines from substations to customers' property lines so that City Light has sufficient capacity to serve its customers and maintain reliability. This project builds new and replaces old line segments, replaces rotten and damaged poles, and adds or renovates underground facilities to the distribution system in the northern half of the service area. Some subprojects are paid for by City Light customers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**8,081**	**11,170**	**11,103**	**10,858**	**11,111**	**11,407**	**11,731**	**11,893**	**87,354**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

North New Street and Flood Lighting

Program: Distribution
Type: New Facility
Project ID: 8134
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

Seattle City Light's north service area includes Shoreline, Lake Forest Park, and unincorporated areas of King County. These areas have no provision for publicly funded street lighting. As a result, the customers in these areas that desire additional streetlighting must pay for it as individuals or small neighborhood groups. The North New Street and Flood Lighting project provides requesting customers in City Light's north service area with rental streetlights and floodlights attached to City Light poles. This service is provided to customers pursuant to City Light Rate Ordinance #116619.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**90**	**38**	**39**	**68**	**69**	**71**	**74**	**75**	**524**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

North Outage Replacements

Program: Distribution **Start Date:** 1st Quarter 2001
Type: Rehabilitation or Restoration **End Date:** Ongoing
Project ID: 8302

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The North Outage Replacements project supports the capitalized portion of work resulting from unplanned outages, to ensure customers' electric power is restored as quickly as possible. This project covers outage replacement work in the northern half of the service area. Unplanned outages result from events such as storms, accidents, and equipment failures.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**55**	**117**	**111**	**109**	**112**	**114**	**118**	**119**	**855**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

North Relocations

Program: Distribution **Start Date:** 1st Quarter 2002
Type: Rehabilitation or Restoration **End Date:** Ongoing
Project ID: 8304

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The North Relocations project relocates electrical lines from substations to customers' property lines to ensure City Light has sufficient capacity to serve its customers and maintain reliability. This project builds new and replaces old line segments, installs and replaces poles, and adds or renovates underground facilities to the distribution system in the northern half of the service area, as necessary, to relocate distribution systems for transportation projects, street vacations, and large industrial, commercial, and residential developments. Some of the subprojects are paid for by City Light customers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,888**	**2,238**	**1,271**	**1,565**	**1,601**	**1,643**	**1,689**	**1,712**	**14,607**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

North Residential Streetlight Improvements

Program: Distribution
Type: New Facility
Project ID: 8136
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The North Residential Streetlight Improvements project improves public safety by installing additional residential streetlights, initially prioritizing high crime and low income locations, within the north service territory and within the Seattle city limits. The additional lights double the light levels to comply with the standard currently recommended by the Illumination Engineering Society and the American National Standards Institute. The annual scope of this program is planned with input from community and neighborhood groups.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**24**	**84**	**86**	**4**	**4**	**4**	**5**	**5**	**216**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

North Services - Overhead and Underground

Program: Distribution
Type: New Facility
Project ID: 8120
Start Date: Ongoing
End Date: Ongoing

Location: 1300 N 97TH ST

Neighborhood District: Northwest **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the North Services - Overhead and Underground project is to provide electrical power from the street right-of-way to the customer in response to customer requests for power. The number of requests fluctuates with land use development and customer demand. The scope of this project is to design, install, and energize new or enlarged electrical services to serve the electrical demands of the industrial, commercial, and residential customers in the northern half of the service area. This includes labor and/or materials to remove the old services, renovate the existing services, and install the new services. Requests for voluntary underground projects are also accomplished in this project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**6,763**	**7,898**	**8,407**	**7,865**	**8,048**	**8,262**	**8,497**	**8,615**	**64,355**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Office Furniture and Equipment Purchase

Program: Finance & Administration
Type: New Facility
Project ID: 9103
Start Date: 1st Quarter 1997
End Date: 4th Quarter 2004

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Office Furniture and Equipment Purchase project purchases office furniture and equipment costing more than $5,000 for all City Light branches. Capital furniture purchases are reserved for major relocation/remodeling projects involving systems and conference/training room furniture, seating, and ergonomic items to support specific personnel requirements. In 2004, City Light intends to purchase automated envelope insertion equipment to process customer billing for City Light and other departments.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4**	**0**	**296**	**0**	**0**	**0**	**0**	**0**	**300**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Power Stations Demand Driven Improvements

Program: Distribution
Type: Improved Facility
Project ID: 7755
Start Date: 1st Quarter 2002
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Power Stations Demand Driven Improvements project is to provide bulk power to the City's service area as demand for electrical services changes and grows.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**235**	**1,355**	**1,391**	**1,118**	**1,142**	**1,174**	**1,208**	**1,225**	**8,848**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Relaying Improvements

Program: Distribution
Type: Improved Facility
Project ID: 7753
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

Relaying is a key element in controlling and maintaining a safe and reliable electrical system. The Relaying Improvements project improves general metering, control, and relaying between substations and the transmission and distribution systems. Maintaining and improving system reliability are emphasized.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**149**	**1,074**	**1,007**	**976**	**1,000**	**1,027**	**1,058**	**1,072**	**7,363**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Roof Replacements

Program: Finance & Administration
Start Date: Ongoing
Type: Rehabilitation or Restoration
End Date: Ongoing
Project ID: 9072

Location: 500 Newhalem St

The Roof Replacements project replaces roofing and weatherproofing systems on all City Light structures. Current roofing systems utilize a foam thermal barrier to improve thermal protection. The result is decreased energy consumption for heating, thus conforming to the LEED silver standard. Replacement and maintenance schedules, based on historic records and periodic inspections, keep weather barriers in good condition and minimize costly structural damage and disruption of business operations. Work on the Ross Powerhouse roof, funded by this project in 2003, continues in 2004.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**31**	**1,125**	**0**	**226**	**234**	**241**	**247**	**251**	**2,355**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Dam - Abutment Rock Stabilization

Program: Generation
Start Date: 3rd Quarter 2001
Type: Rehabilitation or Restoration
End Date: 3rd Quarter 2003
Project ID: 6241

Location: Milepost 128 State Highway 20

The Ross Dam Abutment Rock Stabilization project constructs a wire fence to prevent minor rockfall from the promontory above the right abutment of Ross Dam from reaching the dam.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**94**	**49**	**0**	**0**	**0**	**0**	**0**	**0**	**143**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Dam - AC/DC Distribution System Upgrade

Program: Generation
Start Date: 3rd Quarter 2004
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2006
Project ID: 6373

Location: Milepost 128 State Highway 20

This project replaces the aging AC electrical distribution system at Ross Dam with a new AC electrical distribution system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**61**	**260**	**178**	**0**	**0**	**0**	**499**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Ross Dam - Install Fiber Optic Cable Powerhouse to Dam

Program: Generation
Type: Improved Facility
Project ID: 6372
Start Date: 1st Quarter 2005
End Date: 4th Quarter 2005

Location: Milepost 128 State Highway 20

This project installs a fiberoptic link from Ross Powerhouse to Ross Dam. This link provides capacity for communication equipment, dam monitoring, and control of gates, valves, and electrical systems.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**242**	**0**	**0**	**0**	**0**	**242**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Controller Upgrade

Program: Generation
Type: Improved Facility
Project ID: 6376
Start Date: 3rd Quarter 2004
End Date: 3rd Quarter 2006

Location: Milepost 128 State Highway 20

This project replaces some of the existing programmable-logic controllers at Ross Powerhouse with a more advanced type.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**59**	**355**	**104**	**0**	**0**	**0**	**518**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Batteries Replacement

Program: Generation
Type: Rehabilitation or Restoration
Project ID: 6375
Start Date: 1st Quarter 2003
End Date: 4th Quarter 2005

Location: Milepost 128 State Highway 20

This project replaces Ross Powerhouse communication and station batteries.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**148**	**102**	**34**	**0**	**0**	**0**	**0**	**284**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Ross Powerhouse - Governors Replacement

Program: Generation
Start Date: 1st Quarter 1998
Type: Improved Facility
End Date: 4th Quarter 2009
Project ID: 6205

Location: Milepost 128 State Highway 20

The Ross Powerhouse Governors Replacement project provides improved automatic signal processing and information management to Powerhouse operators and the Power Management Branch to reduce downtime and maximize power generation. The new digital technology also provides networking compatibility to support future information management objectives. The generator control upgrade work is scheduled for 2007. Small amounts were spent from this project from 1999 to 2001 to replace the annunciators.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**555**	**0**	**0**	**0**	**0**	**697**	**695**	**175**	**2,122**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Replace Generator Breakers

Program: Generation
Start Date: 1st Quarter 2007
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2009
Project ID: 6374

Location: Milepost 128 State Highway 20

This project replaces the breakers for Generators 41, 42, 43, and 44 at the Ross Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**1,482**	**1,538**	**28**	**3,048**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Replace Governor Oil Pumps

Program: Generation
Start Date: 1st Quarter 2005
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2006
Project ID: 6377

Location: Milepost 128 State Highway 20

This project replaces the governor oil pump systems on all four Ross Powerhouse generator units. Included are two pumps with motors, valves, switches, and control circuits for each unit.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**77**	**193**	**0**	**0**	**0**	**270**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Ross Powerhouse - Unit 41 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2008
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2009
Project ID: 6382

Location: Milepost 128 State Highway 20

This project is part of the Utility's Generator Rebuild Program. The program rebuilds 10 generators (accounting for 70% of City Light's generating capability) by the end of 2013. This project rebuilds Generator 41 at Ross Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**0**	**0**	**5,205**	**1,357**	**6,562**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Unit 42 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2003
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2004
Project ID: 6379

Location: Milepost 128 State Highway 20

This project is part of the Utility's Generator Rebuild Program. The program rebuilds 10 generators (accounting for 70% of City Light's generating capability) by the end of 2013. This project rebuilds Generator 42 at Ross Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**4,608**	**1,057**	**0**	**0**	**0**	**0**	**0**	**5,665**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Unit 43 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2005
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2006
Project ID: 6380

Location: Milepost 128 State Highway 20

This project is part of the Utility's Generator Rebuild Program. The program rebuilds 10 generators (accounting for 70% of City Light's generating capability) by the end of 2013. This project rebuilds Generator 43 at Ross Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**4,849**	**1,261**	**0**	**0**	**0**	**6,110**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Ross Powerhouse - Unit 44 Generator Rebuild

Program: Generation
Start Date: 1st Quarter 2006
Type: Rehabilitation or Restoration
End Date: 4th Quarter 2007
Project ID: 6381

Location: Milepost 128 State Highway 20

This project is part of the Utility's Generator Rebuild Program. The program rebuilds 10 generators (accounting for 70% of City Light's generating capability) by the end of 2013. This project rebuilds Generator 44 at Ross Powerhouse.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**0**	**0**	**4,966**	**1,292**	**0**	**0**	**6,258**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Ross Powerhouse - Units 41-44 Scanners

Program: Generation
Start Date: 2nd Quarter 2000
Type: Improved Facility
End Date: 2nd Quarter 2008
Project ID: 6215

Location: Milepost 128 State Highway 20

The Ross Powerhouse - Generator Rewind Program provides electronic scanners for generator Units 41-44 at Ross Powerhouse to obtain more accurate data about generator condition, thereby enabling a more timely determination of when to proceed with rewind projects. One scanner is installed each year between 2004 and 2007.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**26**	**42**	**519**	**445**	**459**	**525**	**10**	**0**	**2,026**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Safety Modifications

Program: Executive
Start Date: Ongoing
Type: Improved Facility
End Date: Ongoing
Project ID: 9006

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Safety Modifications project provides a financial placeholder for unscheduled safety projects. Unscheduled work typically involves small safety improvements costing less than $50,000.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**101**	**193**	**164**	**186**	**190**	**190**	**195**	**198**	**1,417**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Seattle Monorail Project - City Light

Program: Distribution
Type: New Facility
Project ID: 8306
Start Date: 1st Quarter 2002
End Date: 4th Quarter 2009

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Seattle Monorail Project (SMP) is planning an initial 14-mile monorail route between Ballard and West Seattle that would travel through downtown Seattle. A preferred alignment and financing plan were approved by Seattle voters in November 2002. This project designs relocations of City Light's electrical distribution and transmission systems affected by monorail construction. Electrical service connection planning and design are also included in budgeted work. The project CIP budget does not include funding for any City Light construction-related costs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**50**	**345**	**460**	**2,155**	**2,213**	**870**	**1,227**	**1,245**	**8,565**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Seismic Mitigation

Program: Finance & Administration
Type: Improved Facility
Project ID: 9134
Start Date: 1st Quarter 1997
End Date: 4th Quarter 2009

Location: Various

The Seismic Mitigation project provides seismic structural upgrades to buildings. Facility seismic improvements protect City Light's assets, employees, customers, visitors, equipment, and materials. The scope of improvements is linked to the business conducted at designated sites and requirements during emergency conditions. Examples of seismic projects include seismic bracing to correct significant deficiencies identified in a structural survey (E Pine); designing and constructing previously identified seismic upgrades concurrent with the North Service Center remodel project; and seismically upgrading storage areas at the South Service Center while increasing storage density and reducing overall space requirements.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4,567**	**0**	**0**	**120**	**125**	**128**	**131**	**133**	**5,204**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Skagit Licensing Mitigation

Program: Executive
Type: Improved Facility
Project ID: 6991
Location: 500 Newhalem St

Start Date: 1st Quarter 1991
End Date: 4th Quarter 2009

The purpose of the Skagit Licensing Mitigation project is to provide environmental mitigation to the natural environment and the general public to fulfill City Light's federal license requirements and minimize adverse project impacts. Projects include purchasing wildlife lands and creating interior and exterior interpretive displays for visitors to the Skagit. Operations and maintenance costs cover monitoring this undeveloped land to ensure trees are not cut down, boundaries are respected, and illegal dumping does not occur.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**32,907**	**179**	**31**	**489**	**427**	**555**	**454**	**459**	**35,501**
O&M Costs (Savings)			35	35	35	35	35	35	**210**

Skagit Security Systems

Program: Generation
Type: Improved Facility
Project ID: 6388
Location: 500 Newhalem St

Start Date: 1st Quarter 2003
End Date: 4th Quarter 2004

This project provides security systems at Skagit camps and generating facilities. Project elements include installation of automated gates, surveillance, and detection system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**644**	**504**	**0**	**0**	**0**	**0**	**0**	**1,148**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Skagit Telephone System Upgrade

Program: Distribution
Type: Improved Facility
Project ID: 9311
Location: 500 Newhalem St

Start Date: 3rd Quarter 2001
End Date: 4th Quarter 2004

The purpose of the Skagit Telephone System Upgrade project is to replace existing analog telephone switches at Diablo with two new digital switches and related equipment. The new switches provide additional capacity for Diablo, including the Federal Energy Regulatory Commission-mandated North Cascades Environmental Learning Center. The new switches utilize the fiber now being installed between Bothell and the Skagit. In 2004 the project is completed and closed out.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**15**	**673**	**136**	**0**	**0**	**0**	**0**	**0**	**824**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Sound Transit Light Rail - City Light

Program: Distribution
Type: New Facility
Project ID: 8204
Start Date: 3rd Quarter 1998
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project provides services necessary to design and build the Sound Transit's light rail project, including relocation of City Light's electrical distribution and transmission systems affected by Sound Transit's construction, service connections to power Sound Transit's stations, and additional capacity for those services. Sound Transit proposes to construct and operate this electrical light rail transit system, which includes more than 14 miles of alignment. The first phase of Sound Transit's project constructs a light rail segment from the Convention Place Station to S 154 St. near Seattle/Tacoma Airport. The City of Seattle has an ongoing agreement for reimbursement from Sound Transit. During construction, Sound Transit is responsible for preserving the integrity of the electrical system for all customers and maintaining required electrical clearances necessary for public safety. City Light, through its CIP, supports these efforts. Sound Transit's schedule indicates that project work continues beyond 2009. See also Sound Transit projects in the Drainage and Wastewater, Water, and SDOT CIPs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**701**	**4,284**	**3,810**	**10,308**	**12,318**	**711**	**558**	**524**	**33,214**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South 26kV Conversion

Program: Distribution
Type: Improved Facility
Project ID: 8125
Start Date: 1st Quarter 1981
End Date: 4th Quarter 2009

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South 26kV Conversion project replaces all old 4kV electrical equipment remaining in the electrical distribution system with new efficient and reliable 26kV distribution equipment.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**51,508**	**1,093**	**992**	**1,175**	**1,206**	**1,239**	**1,276**	**1,294**	**59,783**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

South Arterial Streetlights Major Maintenance

Program: Distribution
Start Date: 1st Quarter 2000
Type: Rehabilitation or Restoration
End Date: Ongoing
Project ID: 8210

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Arterial Streetlights Major Maintenance project provides necessary capital improvements and replacements to the City of Seattle's arterial streetlights in the southern half of the service area to provide proper light for street rights-of-way. The City transferred ownership of 18,600 Arterial Streetlights to City Light at the end of 1999. Of those 18,600 streetlights, 5,000-6,000 lights are on poles installed exclusively for streetlighting. Many of these lights are fed from underground.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**109**	**200**	**199**	**182**	**186**	**191**	**196**	**199**	**1,462**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South Capacity Additions

Program: Distribution
Start Date: Ongoing
Type: New Facility
End Date: Ongoing
Project ID: 8123

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Capacity Additions project provides electrical lines from the substations to the customers' property lines to ensure City Light has sufficient capacity to serve customers and maintain reliability. This project builds new and replaces old line segments, replaces rotten and damaged poles, and adds or renovates underground facilities to the distribution system in the southern half of the service area. Some of the subprojects are paid for by customers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**7,232**	**4,741**	**4,715**	**4,345**	**4,437**	**4,552**	**4,681**	**4,745**	**39,448**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

South Fork Tolt River Mitigation

Program: Executive
Type: Improved Facility
Project ID: 6046
Start Date: Ongoing
End Date: Ongoing

Location: South Fork Tolt River

The purpose of the South Fork Tolt River Mitigation project is to provide environmental mitigation to the natural environment and the general public to fulfill City Light's federal license requirements and minimize adverse project impacts. The South Fork Tolt River Hydroelectric Project uses the hydroelectric potential of the existing SPU Tolt River municipal/industrial water supply system located northeast of Carnation, Washington. The Federal Energy Regulatory Commission (FERC) license and 1988 Settlement Agreement stipulate mitigation and enhancement requirements for City Light's operation of the South Fork Tolt Hydroelectric Project. These include responsibilities in the areas of recreation, water quality, wetlands, and fisheries resources.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**536**	**618**	**97**	**79**	**81**	**83**	**85**	**88**	**1,667**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South Lake Union - Power Supply

Program: Distribution
Type: Improved Facility
Project ID: 8308
Start Date: 1st Quarter 2002
End Date: 4th Quarter 2004

Location: Various
Neighborhood District: Lake Union
Neighborhood Plan: South Lake Union

This project develops a strategy to supply power from outlying substations prior to tapping power from a newly built South Lake Union Substation. A surge of development in the South Lake Union area has caused increased power demands that must be met before a new substation is built.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**113**	**341**	**130**	**0**	**0**	**0**	**0**	**0**	**584**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South Lake Union - Substation Development

Program: Distribution
Type: New Facility
Project ID: 8309
Start Date: 3rd Quarter 2003
End Date: 4th Quarter 2005

Location: 802 ROY ST
Neighborhood District: Lake Union
Neighborhood Plan: South Lake Union

This project supports temporary acquisition of property at 802 Roy St., in order to assure access to a site should development of a South Lake Union Substation be authorized. A surge of development in the South Lake Union area has caused increased power demands that must be met by increasing distribution capacity.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**406**	**0**	**5,159**	**0**	**0**	**0**	**0**	**5,565**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

South New Street and Flood Lighting

Program: Distribution
Type: New Facility
Project ID: 8133
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

Seattle City Light's service area includes cities and areas of unincorporated King County south of the Seattle city limit. Some of these areas have no provision for publicly funded street lighting. As a result, the customers in these areas that desire additional streetlighting must pay for it as individuals or small neighborhood groups. The South New Street and Flood Lighting project provides requesting customers with rental streetlights and floodlights attached to City Light poles. This service is provided to customers pursuant to City Light Rate Ordinance #116619.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**139**	**221**	**213**	**189**	**193**	**198**	**204**	**207**	**1,564**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South Outage Replacements

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 8303
Start Date: 1st Quarter 2001
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Outage Replacements project supports the capitalized portion of work resulting from unplanned outages to ensure electric power is restored as quickly as possible. This project covers outage replacement work in the southern half of the service area. Unplanned outages result from events such as storms, accidents, and equipment failures. Pole and transformer replacements required to restore power are among the elements capitalized during such repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**450**	**1,126**	**1,162**	**1,080**	**1,105**	**1,135**	**1,167**	**1,184**	**8,409**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

South Relocations

Program: Distribution
Start Date: 1st Quarter 2002
Type: Rehabilitation or Restoration
End Date: Ongoing
Project ID: 8305

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Relocations project relocates electrical lines from the substations to customers' property lines to ensure sufficient capacity to serve City Light customers and maintain reliability. This project builds new and replaces old line segments, installs and replaces poles, and adds or renovates underground facilities to the distribution system in the southern half of the service area as necessary to relocate distribution systems for transportation projects, street vacations, and large industrial, commercial, and residential developments. Some of the subprojects are paid for by customers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**3,056**	**9,592**	**10,522**	**9,756**	**9,984**	**10,252**	**10,545**	**10,691**	**74,398**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

South Residential Streetlight Improvements

Program: Distribution
Start Date: Ongoing
Type: New Facility
End Date: Ongoing
Project ID: 8135

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Residential Streetlight Improvements project improves public safety by installing additional residential streetlights, initially prioritizing high crime and low income locations, within the south service territory and within the Seattle city limits. The additional lights double the light levels to comply with the standard currently recommended by the Illumination Engineering Society and the American National Standards Institute. The annual scope of this program is planned with input from community and neighborhood groups.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**71**	**199**	**180**	**167**	**170**	**175**	**179**	**182**	**1,323**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

South Services - Overhead and Underground

Program: Distribution
Type: New Facility
Project ID: 8121
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The South Services - Overhead and Underground project provides electrical power from the street right-of-way to the customer in response to power requests. The number of requests fluctuates with land use development and customer demand. The scope of this project is to design, install, and energize new or enlarged electrical services to serve the electrical demands of the industrial, commercial, and residential customers in the southern half of the service area. This includes labor and/or materials to remove the old services, renovate the existing services, and install the new services. Requests for voluntary underground projects also are accomplished in this project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**5,510**	**4,612**	**4,725**	**4,400**	**4,501**	**4,621**	**4,752**	**4,817**	**37,938**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Space Consolidation

Program: Finance & Administration
Type: Improved Facility
Project ID: 9159
Start Date: 1st Quarter 2000
End Date: 4th Quarter 2004

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Space Consolidation project improves space efficiency in City Light facilities. This includes capital improvements in existing buildings and sites, to better use available assets, providing space for functions now residing in leased space and co-locating activities to improve customer service. Examples of planned projects include additional storage racks and material handling equipment for the North Service Center warehouse in order to accommodate material stored in a nearby building scheduled for demolition, and additional shelving, cabinets, and related equipment for the North Service Center tool room to increase capacity and operational efficiency. A mezzanine structure is also considered to better utilize the available upper level space.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**145**	**9**	**9**	**0**	**0**	**0**	**0**	**0**	**163**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Special Work Equipment - Generation Plant

Program: Generation
Type: New Facility
Project ID: 6102
Start Date: Ongoing
End Date: Ongoing

Location: Various

The purpose of the Special Work Equipment - Generation Plant project is to provide special work equipment, machinery, and tools to be used for the workload activities or operations of the Generation Branch. This ongoing project provides for purchase of tools and equipment required for operations at the Skagit, Boundary, Tolt, and Cedar Falls facilities. City Light bases its purchases on a five-year plan, updated for technological improvements.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**281**	**1,118**	**785**	**438**	**444**	**453**	**464**	**471**	**4,454**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Special Work Equipment - Other Plant

Program: Distribution
Type: Rehabilitation or Restoration
Project ID: 9102
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Tool and Work Equipment - Other Plant project is to provide new tools and work equipment to replace old or broken tools or work equipment to ensure field crews and other employees may accomplish their work assignments. This ongoing procurement project provides capitalized tools and work equipment required by all individual City Light units, except those required at the generation plants or substations (which have their own capital projects for special work equipment).

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**158**	**452**	**452**	**545**	**560**	**574**	**589**	**597**	**3,927**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Special Work Equipment - Substation Plant

Program: Distribution
Type: New Facility
Project ID: 7902
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Special Work Equipment - Substation Plant project provides funding to purchase tools and special work equipment that can be capitalized. New equipment allows crews to accomplish their work in a safe, timely, and efficient manner. This project is ongoing and provides essential tools to accomplish high voltage electrical and crafts work. The project covers equipment costing more than $5,000 per unit.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**50**	**151**	**60**	**85**	**87**	**89**	**92**	**94**	**708**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Substation Capacity Additions

Program: Distribution
Type: Improved Facility
Project ID: 7751
Start Date: Ongoing
End Date: Ongoing

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Substation Capacity Additions project adds new infrastructure to existing substations and systems. This work differs from Project 7752 (Substation Equipment Improvements) in that it adds capacity to existing substations to meet increasing load demands. Transmission of power from the substations to the distribution system is safer, more reliable, and more efficient. Subprojects include, but are not limited to, adding transformers and related equipment, reconfiguring and extending get-aways to the distribution grid, and building ring buses.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,215**	**1,392**	**784**	**725**	**743**	**763**	**785**	**796**	**8,203**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Substation Comprehensive Improvements

Program: Finance & Administration
Type: Improved Facility
Project ID: 9161
Start Date: 1st Quarter 2001
End Date: 4th Quarter 2004

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Substation Comprehensive Improvements project improves substations to provide adequate facilities for assigned personnel and makes necessary upgrades to ensure the integrity of the facility. Each substation is upgraded in a prioritized sequence and all identified projects completed under one contract while minimizing disruption to operations. These improvements are identified in City Light's Comprehensive Facilities Plan. Included are items necessary to support assigned personnel such as lunch and locker room facilities required by union contracts, work areas for crew chiefs, ventilation and heating systems, and correction of water, sewer, security, and other significant building-related concerns.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**122**	**367**	**488**	**0**	**0**	**0**	**0**	**0**	**977**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Substation Equipment Improvements

Program: Distribution **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Project ID: 7752

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

Substation Equipment Improvements add, replace, and upgrade substation equipment to maintain or improve system reliability, comply with high voltage and environmental regulations, and ensure safe work sites. The subprojects cover the substation electrical and control equipment; facilities improvement projects are funded through the Substation Plant Equipment project (7750) below.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**7,556**	**4,531**	**5,036**	**5,256**	**5,398**	**5,547**	**5,705**	**5,782**	**44,811**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Substation Plant Improvements

Program: Distribution **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Project ID: 7750

Location: Citywide

Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Substation Plant Improvements project upgrades and improves substation buildings, their facilities and systems, and related structures. The capital work maintains and improves system reliability, provides for regulatory compliance, and ensures the safety of the work sites. It includes making environmental improvements as well as removing and replacing outdated utilities and structures.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**142**	**1,740**	**1,151**	**971**	**991**	**1,018**	**1,048**	**1,063**	**8,124**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Tolt - Penstock Crossover Connection

Program: Generation **Start Date:** 1st Quarter 2004
Type: New Facility **End Date:** 2nd Quarter 2005
Project ID: 6360

Location: South Fork Tolt River

This project connects the Seattle Public Utilities and City Light penstocks by installing 40 feet of pipe with two valves. Equipment lifetime should be 30 years or greater.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**0**	**0**	**366**	**38**	**0**	**0**	**0**	**0**	**404**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Transmission & Generation Radio Systems

Program: Distribution
Type: Improved Facility
Project ID: 9108
Start Date: 1st Quarter 1998
End Date: 4th Quarter 2009

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Transmission & Generation Radio Systems project builds or replaces communications infrastructure consisting of fiber optic cable, digital microwave or conventional radio systems. This project supports the Federal Energy Regulatory Commission-mandated vital communications systems which provide City Light's utility command and control through Supervisory Control and Data Acquisition (SCADA), radios, and the Energy Management System, and ensure safety of field employees.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**4,031**	**993**	**1,546**	**1,611**	**1,647**	**1,687**	**1,733**	**1,756**	**15,004**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Transmission Capacity

Program: Distribution
Type: New Facility
Project ID: 7011
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

Transmission Capacity projects create capacity to meet customer load demands. These projects include: Reconductoring Maple Valley-Massachusetts and Talbot-South transmission lines, Downtown Transmission, Aerial Survey, Interbay Transmission, and South Lake Union Transmission.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**288**	**1,012**	**693**	**700**	**717**	**737**	**758**	**768**	**5,673**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Transmission Inter-Agency

Program: Distribution
Type: Improved Facility
Project ID: 7105
Start Date: Ongoing
End Date: Ongoing

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The purpose of the Transmission Inter-Agency project is to provide demand-driven transmission improvements to City Light's transmission system, including reimbursable transmission work and relocations of transmission equipment to meet customer, other utility, agency, and regulatory requirements. Current projects include: Sound Transit at the E3 Busway and at S 212th, Amtrak relocation, and Lake Youngs Substation get-aways.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**138**	**201**	**171**	**172**	**176**	**181**	**186**	**188**	**1,413**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Transmission Reliability

Program: Distribution **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Project ID: 7104

Location: Citywide
Neighborhood District: In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project includes all engineering and construction to improve or maintain the reliability of the overhead or underground transmission system. Reliability projects may include line rebuilds, new lines to enhance reliability of a substation, new line configuration to improve operation, and relocations required to maintain the transmission system. Current projects include relocating conductors near Third Ave. S and S Massachusetts St. to accommodate construction of an Amtrak facility.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**6**	**233**	**117**	**122**	**125**	**129**	**132**	**134**	**998**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

Union St. Substation Networks

Program: Distribution **Start Date:** 1st Quarter 1999
Type: Improved Facility **End Date:** 4th Quarter 2009
Project ID: 8201

Location: 1312 WESTERN AV
Neighborhood District: Downtown **Neighborhood Plan:** Not in a Neighborhood Plan

The Union St. Substation Networks project adds capacity and improves reliability of the electrical system to the Seattle City Light customers in the Union St. Substation service area. Work may include installation of new civil facilities (vaults and conduits), reconductoring and relocation of primary feeders, upgrading network transformers, additions and separations to secondary bus ties, installation of fire wrap on cables, transferring load between networks (cuts and taps), installation of real time ampacity equipment, installation of primary switches for load transfer or sectionalizing, installation or replacement of network protectors, installation of fire protection systems, and rebalancing feeders. Project elements include reconductoring one feeder mainstem, replacing one failed primary cable, one rebalance reconfiguration, replacing one non-submersible network protector, and firewrapping a few primary cables.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**2,044**	**333**	**351**	**302**	**304**	**310**	**319**	**323**	**4,286**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*

Work Process Management System

Program: Finance & Administration
Type: New Investment
Project ID: 9927
Location: Various

Start Date: 1st Quarter 2001
End Date: 4th Quarter 2009

City Light uses many existing applications to perform asset management and work order management functions. In addition, an inventory management system, Passport, was implemented in 2000. A variety of tools estimate project budgets and schedules. An enterprise work management system interfaces with these applications or incorporates many of their functions, and is used by City Light personnel to identify, plan, schedule, track, and document field work across City Light. Implementation of this system enables work planners and schedulers to match job requirements with available resources to ensure the use of automated cost estimation results in more efficient engineering design, more accurate planning of materials and labor, and significant reductions in warehoused inventories.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
Seattle City Light Fund	**1,779**	**2,466**	**2,387**	**2,120**	**2,220**	**2,470**	**2,298**	**2,331**	**18,071**
O&M Costs (Savings)			N/C	N/C	N/C	N/C	N/C	N/C	**0**

**Amounts in thousands of dollars*