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 coordinating these activities; and
- Billing and metering equipment tracking more than 375,000 accounts.

City Light's Capital Improvement Program (CIP) is the vehicle for maintaining, upgrading, and expanding this infrastructure. The CIP also funds a variety of safety and mitigation activities. The CIP's overriding goal is to ensure that the facilities required to serve City Light customers with low-cost, reliable power, are in place when and where the power is requested.

For 2008, City Light plans 139 projects. Ten are new projects that provide for a new substation and network in the north downtown area, implement asset management, underground utilities, and enhance the infrastructure that supports effective and timely responses during outages.

The funds shown in this document are expressed as total project costs, including both direct costs and overhead costs. This makes the funds comparable to other City department funds. They are estimates of 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 intradepartmental expenses, commonly referred to as overhead costs or loadings. As is the case with direct cost, a project's 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 applies overhead costs to capital project expenditures only as they occur.

Highlights

- In 2008, the Customer Services & Energy Delivery (CSED) – CIP Budget Control Level provides $222 million in CIP funding for 75 projects, of which 10 are new. These projects connect new customers, and maintain and enhance the transmission and distribution system throughout the City Light service area.

- This CIP continues funding to support utility relocations associated with Sound Transit's light rail system and replacement of the Alaskan Way Viaduct and Seawall. The timing of the expenditures planned for the utility relocations associated with Viaduct and Seawall replacement is uncertain due to the results of a March, 2007 public vote on options for replacing the Viaduct. A collaborative City-County-State planning effort is underway, and is expected to bring certainty to the project's schedule, and SCL's spending plan and budget for this project will be adjusted accordingly.

- The CIP provides funding for City Light to acquire land and begin design for the construction of a new substation and network in the North Downtown area. When completed in 2013, this new substation will be the hub of a new underground network. The combined substation and network will provide power for the expected growth in the north downtown region by distributing an additional 200 megavoltamperes (MVA's). City Light will also continue the rehabilitation of the existing downtown network, ensuring reliable service for City Light network customers.

- The CIP includes funding to underground utilities along Aurora Avenue North and Mercer Street in conjunction with street improvements. Undergrounding helps to implement the City's Complete Streets policy, adopted by Ordinance 122386, while making City Light's infrastructure more resilient and providing aesthetic benefits. The CIP also provides funding for requested underground design and relocation work in the franchise areas of Shoreline, Burien and Tukwila.

- Three new CSED projects will provide the infrastructure – facilities, hardware, and software – needed for the Command, Control and Coordination Center initiative. This initiative enables City Light to anticipate, respond to, and manage events during a disaster or outage, in conjunction with other City agencies. Together with one existing project and two additional projects in 2009, the new projects will implement an integrated arrangement that will allow City Light to respond quickly and effectively to incidents.

- The CSED CIP budget includes $2.9 million for City Light's Asset Management initiative. The systems implemented by these projects will improve inventory management, asset condition tracking, maintenance scheduling, and other operational components.

- In 2008, the Financial Services – CIP Budget Control Level includes $4.0 million for the Utility's Information Technology program. The Information Technology program consists of two continuing projects; other technology projects are budgeted in the client organizations.

- In 2008, the Power Supply and Environmental Affairs – CIP Budget Control Level includes $35.5 million for Power Production, Utilities Support Services, Environmental Affairs, Power Management, and Vehicle Replacement programs with 62 projects.

- The Power Production program includes 50 projects and totals $25.0 million. Power Production will continue design work on the second tunnel at Gorge Dam. Studies show that friction will be significantly reduced, allowing the turbines to run more efficiently. When completed in 2013, the second tunnel will result in an additional production of 45,000 megawatt hours with no increased water release.

- The Ladder Creek Lighting and Historic Housing Renovation projects will allow City Light to meet the Federal Energy Regulatory Commission (FERC) licensing requirements at the Skagit facilities and provide other benefits. Installing a lighting system will enhance the Ladder Creek Gardens and create a safer work environment for maintenance crews. The restoration of the housing units will improve living conditions for out-of-area work crews when assigned to jobs at the Skagit facilities.

- The Utility Support Services program consists of 10 projects. The program provides $7.9 million to update the fleet by replacing outdated vehicles, and improving the fleet through additional purchases of new vehicles, and $2.0 million to preserve and improve buildings and physical plant.

- The Environmental Affairs program includes $683,000 for the capital portions of license-required mitigation work on the Skagit and Newhalem Rivers and for capital improvements to meet commitments for habitat protection and restoration of Chinook salmon and bull trout under the Endangered Species Act.

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.

City Light continues use of a capital priorities setting process, established in 2006, to prioritize capital projects for the 2008-2013 Adopted CIP. This step was taken to maximize the value of the Utility's capital investments and to implement direction from the Mayor and Council to use industry best practices.

City Light identified best practices for prioritizing capital projects by investigating the processes used by other utilities, City departments and engineering firms. Six specific priority-setting systems were also evaluated. This research helped to identify and select a core set of best practices, which formed the basis of City Light's new process. This process combines human review with an objective scoring and ranking process.

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

Project Identification: City Light staff members throughout the Department identify potential projects using several criteria, including economic, environmental impact, reliability, customer service, regulations, and safety. Existing strategic plans are a primary source of capital projects. Staff members working in the field also provide input based on their understanding of customer demands. A master list of projects is then developed, documented and justified in the capital budgeting system. Description, goals, rationale of, and alternatives to the proposed project also are entered into this system. Primary, secondary, and tertiary reasons for undertaking the project are identified. Staff members proposing projects answer a set of standardized questions pertaining to the primary criterion. When all of this information is collected, the capital budgeting system calculates an overall project score based on the answers to these questions.

Additional information is developed external to the capital budgeting system to evaluate projects with policy or programmatic implications or those with substantial lifetime allocations.

Project Selection: A cross-functional team with representatives from all City Light business units reviews project documentation and status. All projects, Department-wide, are ranked according to their scores.

To refine the list of projects meeting 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 enters 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 lines of business and the overhead costs associated with their projects. A detailed list of all projects in City Light's CIP follows this overview. The dollar figures reflected in this CIP document represent fully loaded project costs.

Customer Services & Energy Delivery – CIP: The CIP for this Budget Control Level supports fundamental electric utility service. It covers design, construction, and major maintenance of the distribution system. This system includes 14 principal substations, 650 miles of high-voltage transmission lines, 1,800 miles of overhead feeder circuits, 600 miles of underground feeder cables, 53,000 transformers, and 100,000 poles. The Customer Services & Energy Delivery Budget Control Level includes an array of projects spanning six major areas: Services, Capacity, Reliability, Interagency, Streetlights, and Ancillary.

Financial Services – CIP: The CIP for this Budget Control Level consists of Information Technology projects. These projects provide modern and efficient information systems and related services to meet City Light's business objectives.

Power Supply and Environmental Affairs – CIP: The CIP for this Budget Control Level consists of Power Production, Facilities Management, Environmental Affairs, and Vehicle Replacement projects.

The Power Production program 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, meet 63% of Seattle's annual electrical power demands. The remainder comes from long-term contracts and spot-market purchases.

The Facilities Management program includes projects that 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 $570 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 Environmental Affairs program includes projects mitigating the environmental effects of City Light's hydroelectric projects, in order to meet the City's commitments to provide wildlife habitat protection and restoration, and 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; and acquiring and restoring habitat for threatened Chinook salmon.

The Vehicle Replacement program includes replacement of cars, trucks, and heavy equipment used by City Light crews.

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 at 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**.**

City Light's CIP Project Summary Table

The amounts shown in the following Project Summary Table on the following pages include the direct costs that are reflected in the Budget Control Level (BCL) totals for each respective annual operating budget, as well as the estimated indirect costs that will be added to these projects.

City Council Provisos to the CIP

Council adopted the following capital budget provisos:

In addition to the restrictions imposed in Section 4(c) of the ordinance adopting the 2008 budget and elsewhere, none of the money appropriated for 2008 for the City Light Customer Services and Energy Delivery – CIP BCL may be spent to pay for pre-design or design work related to the North Downtown Substation Development, Project ID 7757, project until authorized by future ordinance. This proviso does not restrict expenditures for the purchase of property for a substation, or for work in support of that purchase.

In addition to the restrictions imposed in Section 4(c) of the ordinance adopting the 2008 budget and elsewhere, no more than $250,000 of the money appropriated for 2008 for the City Light Department's Customer Services and Energy Delivery – CIP BCL may be spent for the North Downtown Network Services, Project ID 8405, and North Downtown System Network, Project ID 8404, CIP projects combined, until authorized by future ordinance. Council anticipates that such authority will not be granted until City Light proposes a financial plan that will recover the cost of building and maintaining the network from those who receive the benefits from it.

In addition to the restrictions imposed in Section 4(c) of the ordinance adopting the 2008 budget and elsewhere, no more than $500,000 of the money appropriated for 2008 for Seattle City Light's Customer Service and Energy Delivery - CIP BCL may be spent to pay for undergrounding transmission lines as described in the Mercer Corridor Relocations, Project ID 8376, CIP project until the chair of the Council's Energy and Technology Committee, or successor committee with responsibility for Seattle City Light, has filed with the City Clerk his or her certification that the Mayor has demonstrated that the City has secured at least $4.6 million in non-City funds for this project. This proviso does not restrict spending by the affected BCL for overhead-to-overhead relocation of the transmission lines.