

## 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, 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 2010, City Light plans fifteen new projects, including the Neighborhood Cable Injection Program, Light-Emitting Diode (LED) Streetlight Conversion Program, and Boundary Powerhouse - Unit 55 Turbine Runner Replacement.

The amounts shown in this document are expressed as total project costs, including both direct costs and associated overhead costs. Overhead costs include a share of department support costs (such as finance, administration, and human resources functions), employee benefits, and interest incurred during construction, and other costs. The Project Summary and project details that follow combine the funds budgeted for direct project costs in City Light's CIP Budget Control Levels with the anticipated overhead costs budgeted in City Light's operating Budget Control Levels. This provides an estimate of the costs to be capitalized upon completion of the project. City Light applies overhead costs to capital project expenditures only as they occur.

## Highlights

In 2010, the Customer Services & Energy Delivery – CIP program provides \$170.1 million in CIP funding for 76 projects, of which four are new. These projects maintain and enhance the transmission and distribution system throughout the City Light service area and connect new customers to the system. Highlights include the following:

- ◆ Support for major regional transportation improvements, including the Sound Transit light rail system and utility relocation for the replacement of the Alaskan Way Viaduct and Seawall.
- ◆ A new project to extend the life of direct buried cables without replacing them. This process extends the life of the cables for an additional 20-40 years at a fraction of what it would cost to replace them. The project will focus on those areas of the City with the greatest need first as the project progresses.
- ◆ Various projects (including the Mercer Corridor Relocations Project and Citywide Undergrounding Initiative project) that provide for the relocation of overhead lines to underground lines in conjunction with upcoming transportation and utilities projects. 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 and Burien.

- ◆ Additional funding for implementation of City Light's Asset Management program, including the Work and Asset Management System project, and for implementation of the utility's Outage Management System.

In 2010, the Financial Services – CIP program includes \$5.1 million for the Utility's Information Technology program with four continuing projects. Other technology projects directly related to the Customer Services and Energy Delivery – CIP program or the Power Supply and Environmental Affairs – CIP program are budgeted in those CIP programs.

In 2010, the Power Supply and Environmental Affairs – CIP program includes \$53.6 million for Power Production, Utilities Support Services, Environmental Affairs, Power Management, and Vehicle Replacement programs with 75 projects. Highlights include the following:

- ◆ The Power Production program will continue design work on the second tunnel at Gorge Dam. This project will help City Light to realize the goal of 15% power from renewable resources as mandated by Initiative 937.
- ◆ The Utility Support Services program provides \$7.3 million for vehicle replacement. The Proposed CIP also provides \$2.2 million to modify access to City Light's South Service Center, reconfigure the service yard area to accommodate Seattle Department of Transportation's (SDOT's) new 4<sup>th</sup> Avenue South intersection, and preserve and improve buildings and the physical plant.
- ◆ The Environmental Affairs program provides funding for the capital portions of license-required mitigation work on the Skagit and Newhalem Rivers, and for capital improvements to meet commitments to habitat protection and restoration for Chinook salmon and bull trout under the Endangered Species Act.
- ◆ The Power Management program includes \$1.8 million to acquire and install Energy Trading and Risk Management software, to facilitate management of City Light's power resources.

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

**Project Identification:** City Light staff members identify potential projects using several criteria, including but not limited to, 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 developed, documented and justified in the capital budgeting system. Also entered into the system are descriptions, goals, rationale of, and alternatives to the proposed project. Primary, secondary, and tertiary reasons for performing the project are then 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.

City Light develops additional information external to the capital budgeting system to evaluate projects with policy or programmatic implications or those with substantial lifetime allocations.

**Project Selection:** As part of the new Asset Management Program, a cross-functional team comprising representatives of all City Light business unit's reviews project documentation and status. All Department-wide projects receive rankings 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 resources.

**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 crosscheck projects against Mayor and Council priorities.

### CIP Programs

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 total project costs (direct costs and applied overhead).

**Customer Services & Energy Delivery – CIP:** The CIP for this Budget Control Level supports fundamental electric utility service. It covers design, construction, or rehabilitation of the distribution system.

**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 supports projects that improve and enhance the hydroelectric generating facilities, buildings, mitigate the environmental effects of City Light's hydroelectric projects, and purchases new vehicles.

### 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.

