

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 almost 350,000 accounts.

City Light's Capital Improvement Program (CIP) is the vehicle for maintaining, 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 CIP's overriding goal is assuring 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 implemented a financial recovery plan in 2001 to offset the effects of the Western Power Crisis in 2000 and 2001. To mitigate the impact of low water conditions and lagging power sales, the Department made significant reductions in its operating and maintenance (O&M) expenses, deferring portions of its CIP for 2003 and 2004. Subnormal water conditions and lagging retail sales persisted into 2004. Financial recovery has become a bigger challenge as additional spending cuts become more difficult to make without adverse effects. Furthermore, several major transportation projects in Seattle will make unprecedented demands on City Light's resources in the next few years. Security concerns also have increased. As a result, City Light has made some reductions and deferrals in other capital programs to partially offset these increased costs without affecting system reliability.

City Light's 2005-2010 Proposed CIP reflects increases in planned spending for interagency projects, only partially offset by deferral of other projects until 2007 and later. 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 intradepartmental 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 applies overhead costs to capital project expenditures only as they occur.

Highlights

- ◆ In 2005, the \$125.3 million CIP for the Distribution Branch provides funding for community development funds, utility design work and relocations supporting the Sound Transit light rail system, Seattle Monorail and Alaskan Way Viaduct; resources to connect new customers and perform major maintenance on the transmission and distribution system throughout the City Light service area; and underground design and relocation work for franchise customers in Shoreline and Burien. In 2006, funding is provided to build the Interbay Substation. Work continues on rehabilitation of the downtown network and ensuring reliable service for all City Light customers. Forty-seven capital projects support Distribution infrastructure work.

- ◆ The \$9.7 million CIP for the Finance and Administration Branch includes program expenditures for Information Technology and Facilities Management. The \$3.2 million budget for Facilities Management includes \$1.5 million each year for security enhancements and substation improvements. The \$1 million budget for the Information Technology program consists of five continuing projects, and a new performance monitoring and budgeting system.
- ◆ The \$1 million CIP 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, enabling 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 2005, the \$23.1 million CIP for the Generation Branch is allocated over some 72 active projects. Of these, 25 are multi-year projects continuing from 2003. The Generation CIP includes \$9.3 million to rebuild two generators at the Ross hydroelectric facility. Approximately \$5 million is allocated to Boundary facility projects to restore major equipment, auxiliary systems, and support features.

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 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 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 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 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. 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 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 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 project costs.

Executive: The CIP for this branch includes projects mitigating the environmental effects of City Light's hydroelectric projects, meeting the City's commitments providing wildlife habitat protection and restoration, and providing 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 dollar figure reflected in this CIP document represents fully loaded project costs.

Finance and Administration: The CIP for this branch consists of Facilities Management and Information Technology projects. Facilities Management includes projects keeping 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 providing 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 project costs.

Generation: The CIP for this branch includes projects improving and enhancing Seattle's hydroelectric generating facilities. These facilities include seven major plants on the Skagit, Pend Oreille, Cedar, and Tolt Rivers, which, on average, meet 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 project costs.

Power Management: The CIP for this branch funds acquisition and implementation of an information system to optimize planning and scheduling of City Light's hydroelectric generating resources.

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.

