

Seattle City Light 2013-2018 Strategic Plan

Your Power Future

May 2012



City Light's customers include a mix of residential, commercial, institutional and industrial users. While City Light's customers' needs may vary, they share a common desire for energy that is environmentally responsible, available, affordable and reliable.



Letter From the Superintendent

Perhaps there has never been a more important time in the history of City Light than now. The investments made by the public in 1902 to create a hydroelectric utility to serve the power needs of a growing city are not entirely dissimilar to the situation we face today.

Since 2004, a pathway for critical investments in the utility's infrastructure has been carefully plotted. Decisions have been made to conduct regular maintenance on production, transmission and distribution equipment on a routine basis. However, we have seen those plans delayed or postponed due to volatile cycles in the energy market, snow pack, and the national and local economies. Sadly, this has been the case for the utility since 1980.

Today, the Strategic Plan presented to city decision-makers and to our customers is a determination to break that erratic cycle. We listened carefully to our customers – both residential and business – who said that they want reliable power, they want investments in the utility's infrastructure to be made routinely, and they want rate predictability. It is unlikely that any other electric utility in the country is able to offer a six-year rate path. Certainly, this is the first effort of its kind in City Light's history to offer clear metrics and accountability tied to rates.

Rate increases are not popular. We would not be offering a plan to our customers that doesn't come with intense scrutiny. Guided by the mayor and City Council-appointed review panel, who spent countless hours during a two-year period asking tough questions and turning over every rock to find efficiencies and cost savings, I am proud to submit this six-year Strategic Plan to the public.

We will look for ways to help those among us with the least ability to pay to reduce their energy power bills through efficiencies and services. We will continue to look for every efficiency we can find – even above and beyond the commitment to the \$18 million annual savings we will achieve by year three of the plan. And, we will report annually to our elected officials and our customers about how well we are doing with our commitments contained in the Strategic Plan.

On behalf of all of the dedicated men and women who are proud to be employees of Seattle City Light, I transmit our six-year Strategic Plan that charts a course to deliver on our promise to provide the best customer service experience of any utility in the country – today and for years to come.

Sincerely,

A handwritten signature in blue ink that reads "Jorge Carrasco". The signature is fluid and cursive, with the first name "Jorge" and last name "Carrasco" clearly distinguishable.

Jorge Carrasco
Superintendent
Seattle City Light

Executive Summary

The Seattle City Light 2013-2018 Strategic Plan lays a foundation for making informed decisions to meet current and future needs benefiting the public and Seattle City Light customers.

The Strategic Plan represents a huge step forward in accountability and transparency – for the utility as a whole, for business units within the utility, and for individual employees. It identifies specific projects and initiatives to be undertaken, and the revenue needed to efficiently accomplish them. During each year of the plan, the utility will publicly report on the progress that has been made.

The Strategic Plan is based on Seattle City Light’s durable and valuable system. Yet City Light also faces crucial challenges:

- The utility’s historically solid transmission and distribution system includes obsolete equipment and thus is inadequate for meeting today’s needs;
- City Light generates more than half of its own power needs, yet it must acquire more, higher cost, new, renewable power to continue its commitment to the environment and to comply with voter-passed I-937;
- The workforce is highly skilled and experienced, but 50 percent of employees will be eligible to retire within five years;
- Finally, even though, since 2004 Seattle City Light realized savings from efficiencies of about \$53 million, costs are projected to increase to maintain the current levels of service, due to capital spending, rising debt service costs, increasing power costs, and inflation.

There is an increasing urgency to address these issues. The cumulative effect of delay will result in a system and level of service that fails to meet customers’ needs and expectations. Costs will be higher, reliability less assured, economic development advantages will be lost, and customer satisfaction will be compromised if we stop making incremental progress on the growing backlog of necessary improvements, especially related to transmission and distribution.

In consultation with the mayor and city council, Seattle City Light initiated the strategic planning process nearly two years ago. Led by the City Light executive team, it included involvement by the Seattle City Light review panel, City Council members, other city department personnel, community members, business leaders, customers, and other key stakeholders. Dozens of meetings and forums were held, and surveys and focus groups were conducted. Review panel members spent countless hours studying the issues and giving advice. This plan reflects the input and priorities that Seattle City Light heard.

The 2013-2018 Strategic Plan provides a more predictable course for how to best meet City Light’s customers’ current and future needs. The strategic approach builds upon the current level of services provided by Seattle City Light; includes policies that enable additional efficiencies; and makes strategic investments to improve reliability, strengthen the workforce, and provide for economic development and job growth.

The strategic investments recommended in this plan are critical to Seattle City Light's future success. These are the investments needed to transition from a "run-to-failure" system to a management practice that extends the life, and then replaces the infrastructure, in a timely and cost-effective manner. The result will be to provide energy in a modern, efficient and reliable way while achieving long-term cost savings. The strategic plan includes investments such as the construction of the first substation to be built in more than 30 years. This critical infrastructure project will improve the entire city grid system by providing needed flexibility and increased reliability. City Light also believes it is time to invest in new technology (Advanced Metering Infrastructure) to allow for almost simultaneous energy and outage management. This technology will provide data that enables reductions in customer bills, real-time energy use management by customers and increased City Light workforce productivity.

The Strategic Plan also makes wise investments in workforce development to address retirement and competitive compensation issues, to reduce injuries, and to improve customer service. Seattle City Light will be able to attract, retain and train workers to design, maintain, and deliver energy services in more cost-effective and timely ways.

Implementation of this plan will require a rate increase that averages 4.7 percent annually. For residential customers, this will result in an average monthly bill increase of \$2.90, or an annual increase of \$34.86.

Rate estimates are based on several assumptions, among them that demand for electricity will increase only moderately at 0.6 percent per year for the 2013-2018 period, inflation will remain low, and low energy prices will continue affecting the value of surplus power Seattle City Light can sell on the wholesale market.

The past decade, in the wake of the energy crisis, has been a challenging one for Seattle City Light and our customers. The utility has emerged leaner and smarter, and better connected to policy makers and our customers. City Light has excellent generation facilities. The utility has doubled its conservation and environmental effort – on top of what was already a national model. It is time to make gains on the transmission and distribution system. Implementation of the 2013-2018 Strategic Plan ensures that Seattle City Light can efficiently and effectively meet the needs and expectations of Seattle's citizens and all of the utility's customers.

At a Crossroads

Electricity rates are too high and are going up. Consumers don't believe what the utilities are telling them. Policy makers are criticized for their inaction and struggle for answers. The region has the opportunity for tremendous growth, but faces daunting challenges. The year? 2001 after the energy crisis? The present day? No. It was 1901.

Thomas Edison's incandescent light bulbs had been demonstrated in Seattle in 1886 and soon after a number of companies were offering electricity in the city, often at high rates and with little oversight by government. In 1902, Seattle said enough was enough and voters approved a \$590,000 bond for the construction of a hydroelectric plant on the Cedar River at Cedar Falls. Seattle City Light was born. James Dalmage "J. D." Ross, a self-educated, spiffily dressed engineer, supervised the construction of a wood-frame power house with two 1,500-kilowatt generators.

In 1902, Seattle faced tough decisions and made the right choice. City Light today is at a similar crossroads, with complicated, far-reaching decisions ahead that will set the course of the utility for years to come.

Why a Strategic Plan?

This six-year plan provides a framework for making informed decisions about the future. It answers a fundamental question: How can Seattle City Light best meet and exceed customers' expectations in producing and delivering environmentally responsible, safe, affordable, and reliable power not only for the next six years, but for many years to come?

This blueprint affirms Seattle City Light's mission and values, takes stock of the current situation, analyzes future demand, outlines challenges, identifies potential approaches, recommends a strategy for success, and explains the rate impacts.

The plan is results-focused. It reflects a shared desire to provide tangible benefits to customers and community – enhanced reliability, improved customer service, sustained environmental stewardship, an improved infrastructure that is essential to economic development, a high-performance workforce, and improved accountability over a predictable period of time.

Mission

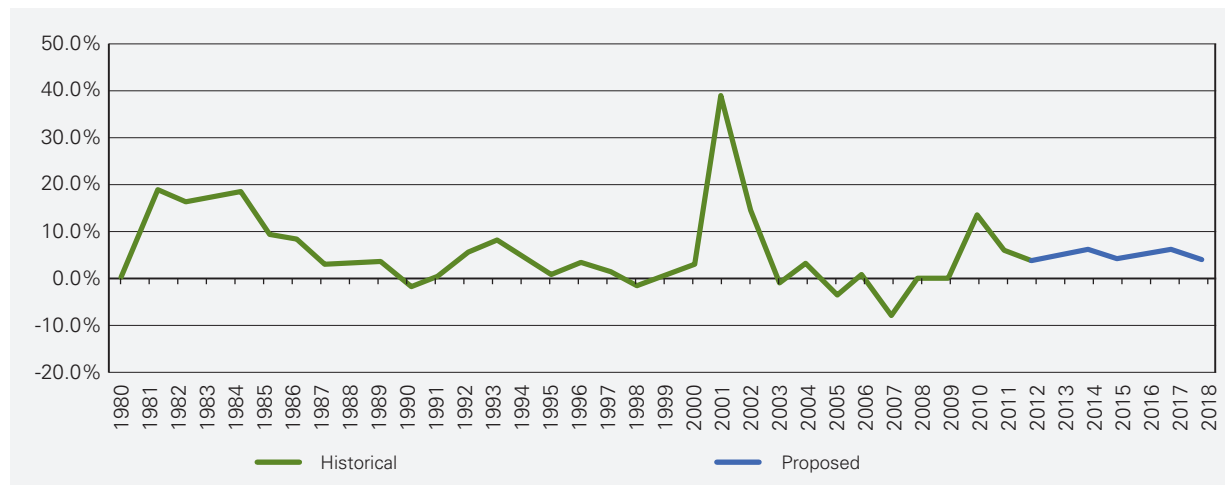
Seattle City Light is a publicly owned utility dedicated to exceeding our customers' expectations in producing and delivering environmentally responsible, safe, low-cost, and reliable power.

Accountability & Updates

The Strategic Plan will be updated by Seattle City Light and adopted by the Seattle City Council every two years. In the first year of each cycle (2013, 2015, 2017), the utility will revisit the plan with the Seattle City Light review panel and changes will be presented to City Council for review. Beginning in 2012, the utility will develop the subsequent biennial budget based on the approved plan.

Historically, Seattle City Light and its customers have been subject to significant volatility and uncertainty in rates (see Figure 1). The 2013-2018 Strategic Plan addresses this problem and proposes highly stable and predictable rates. This addresses strong concerns raised by stakeholders throughout the development of the plan.

Figure 1: Seattle City Light Historical Rate Increases *(not inflation adjusted)*



Process

The Strategic Plan is the culmination of a two-year effort launched by the Seattle City Council and mayor in May 2010 with the appointment of nine individuals to a newly chartered Seattle City Light review panel. This was the most extensive planning process ever undertaken by the agency.

The City Light executive team (the superintendent and officers) led the utility's planning effort with extensive involvement and input from the review panel, City of Seattle leaders, community members, business leaders, customers, employees and other key stakeholders.

Building a Shared Vision

Public and employee feedback was solicited throughout the development of the Strategic Plan. From February through April 2012 feedback was solicited on the draft Strategic Plan and final recommendations.

City Light leaders have actively engaged staff from City Council and the Central Budget office in the process. Panel co-chairs and utility leadership have also presented several briefings to the mayor and the council's Utilities, Technology and Civil Rights Committee. Additional council briefings with the Energy and Environment Committee are planned.

The strategic planning process included six stages:

1. Developed Strategic Framework

[May 2010 to May 2011]

- Completed a thorough operations review, identified key issues facing the utility and briefed the review panel and City Council.
- Reviewed and confirmed the utility's vision, mission and values and identified six- and 20-year priorities.
- Conducted a strengths, weaknesses, opportunities, challenges exercise (SWOC) and refined analysis in collaboration with the review panel.
- Developed 12 strategic objectives in four priority areas (see Figure 2).
- Forecasted costs and rates assuming continuation of current service levels to create the financial baseline.
- Involved all divisions of the utility to develop 36 initiatives to address the 12 strategic objectives (including budgets, timelines and performance metrics) and shared proposed initiatives with the review panel.

Figure 2: Seattle City Light's Priorities and Objectives

Priority	Objectives
Customer Value	<ul style="list-style-type: none"> • Provide more rate stability and predictability • Anticipate and exceed customer service expectations • Promote environmental stewardship
Workforce Investments	<ul style="list-style-type: none"> • Ensure a safe work environment • Attract, train and retain a high-performance workforce
Asset Preservation	<ul style="list-style-type: none"> • Provide reliable, safe, cost-effective electric service to our customers • Maintain stable, cost-effective, environmentally responsible power supply portfolio • Incorporate technology to meet future customer needs
Municipal Enterprise Excellence	<ul style="list-style-type: none"> • Improve communication about City Light's strategic priorities • Enhance cost competitiveness and accountability in procurement of all services • Implement best practices in business processes and technology across the enterprise • Ensure fiscal strength

2. Conducted Interim Outreach [May to August 2011]

- Conducted public meetings and solicited stakeholder and employee input on SWOC results, proposed priorities and financial baseline results. Outreach included an online customer survey (153 respondents); stakeholder group forums (224 attendees); customer telephone survey (500 respondents); employee online survey (225 respondents); and employee forums.

3. Developed Core Themes, Preferred Strategy and Alternatives

[August to November 2011]

- Refined initiatives based on interim outreach and financial baseline.
- Identified core themes: customer value, workforce investments, asset preservation, and municipal enterprise excellence.
- Developed prioritization scheme, evaluated potential impact of initiatives, presented and refined priorities with executive team and review panel.
- Proposed investment options, including preferred investment and rate path.

The Seattle City Light Review Panel

The Seattle City Light review panel includes representatives from private, public and non-profit sectors, utility experts, business representatives and community representatives. The review panel met 32 times to hear briefings from City Light leaders and provide input into the development priorities included in the plan. The review panel issued a letter with detailed comments following the public outreach.

4. Share Draft Plan and Seek Stakeholder Input

[February to March 2012]

- Circulated draft Strategic Plan to the review panel and key council and budget office staff.
- Conducted broad public and stakeholder outreach on draft plan including outreach to community, business and stakeholder groups, public forums, direct mail and an online survey.

5. Incorporate Stakeholder Input and Further Analyze Efficiencies and Major Strategic Initiatives [March 2012 to May 2012]

- Conducted additional analysis of \$18 million per year in efficiencies targeted for the plan.
- Provided further information to City Light review panel on proposal to reduce reliance on net wholesale revenue, Advanced Metering Infrastructure (AMI) business case, and workforce challenges.

6. Mayor Transmits the Final Plan to the City Council for Review and Adoption

[May 2012]

- The Seattle City Light review panel will continue their work as directed in Council Ordinance 123256 to review and provide input to the mayor and council on the Strategic Plan implementation and the biennial revisions or updates to the plan.

Current Situation

Electricity is something many City Light customers take for granted. Each day, individuals and businesses throughout Seattle and seven adjacent communities rely on Seattle City Light to supply affordable and reliable energy. Customers flip light switches, turn on appliances, plug in devices, walk down well-lit streets and expect the power to be on. But City Light's transmission and distribution system is aging and increasingly fragile. Affordable, reliable power can no longer be taken for granted.

City Light's customers include a mix of residential, commercial, governmental and industrial users – from single family homeowners requiring power to keep their families safe and comfortable, to large institutions such as hospitals powering state-of-the art, life-saving equipment and technologies. While City Light's customers are diverse and their specific needs may vary, they share a common desire for electricity that is available, affordable, and reliable.

Energy availability, costs, and reliability are inextricably linked to economic development, public safety, and our quality of life. Companies make location and investment decisions based on energy reliability and predictable costs. Dependable communications and adequate lighting are essential to public safety. And so much of what we do each day – getting a latte at the coffee shop, riding the streetcar or electric bus, conducting vital research on breakthrough medical cures, or even updating a Facebook status – depends on reliable energy. This means electricity that is available when we want it; not prone to failures, outages and disruptions; and able to recover quickly when disruptions occur.

In recent years, Seattle City Light has weathered significant financial challenges. In 2010, the recession, volatile energy prices, and a low snow-pack dealt the utility a triple blow. City Light responded by developing a new business approach to aggressively pursue efficiencies, cut spending, and secure the utility's finances through the creation of a rate stabilization account, as well as rate increases that went into effect in 2011 and 2012. These difficult decisions were necessary to improve essential infrastructure and ensure reliable electrical service to City Light's customers.

Efficiency is a necessary ingredient in all the work of City Light, especially as it relates to its owners – the citizens of Seattle. Efficiency means that City Light is spending the resources provided by ratepayers well. Like any business, City Light can only spend a dollar once, so it must make the best use of it to achieve its mission to be the best public utility in the nation.

Between 2004 and 2011, City Light adopted a stronger business model and took a number of steps to improve performance and increase efficiencies in the areas of transmission and distribution, environment

About City Light

Seattle City Light was created by the citizens of Seattle in 1902, when they approved bonds to build a hydroelectric power plant on the Cedar River. The plant delivered its first electricity to customers in 1905. As a municipally-owned public power system, Seattle City Light is governed by elected Seattle officials and primarily supported by customer revenues as well as surplus power sales. Recognized as a national leader in energy efficiency and environmental stewardship, Seattle City Light provides low-cost, reliable and environmentally responsible electric power. Over half of customers' electric needs are met from hydropower dams owned and operated by City Light; most of the remaining power needs are met by hydropower purchased from the Bonneville Power Administration and investments in renewable and conservation resources. Seattle City Light is the 10th largest public power system in the United States on the basis of retail energy sales.

and conservation, generation and power, human resources and safety, customer service, infrastructure, and financial management. Together, these savings amount to more than \$53 million per year.

Specific programs included short- and long-term investments. For example, a more aggressive tree-trimming operation reduced power outages and saved money, and a 17-year power contract with the Bonneville Power Administration is expected to provide more than \$230 million in savings over the life of the contract (see Figure 3).

Figure 3: Efficiency and Cost Savings Achievements (2004-2011)

Transmission and Distribution	<ul style="list-style-type: none"> • Began a work and asset management program to identify, assess and prioritize work. • Inspected and initiated a systematic pole replacement program. • Began an underground cable injection program to treat failure-prone cables. • Increased tree trimming to avoid outages and improve reliability.
Environment and Conservation	<ul style="list-style-type: none"> • Installed 20,000 light emitting diode (LED) streetlights. • Reduced cost of lamp heads for streetlights. • Implemented a five-year energy conservation strategy that would double the utility's energy savings. • Implemented a renewable energy program that combined resource acquisition and energy credits to achieve cost efficiencies.
Generation and Power	<ul style="list-style-type: none"> • Carried out a rewind and turbine runner replacement program to improve and extend the life of aging generators. • Reorganized operations at Skagit and Boundary projects for improved efficiency. • Executed a 17-year contract with the Bonneville Power Administration.
Human Resources and Safety	<ul style="list-style-type: none"> • Improved safety performance. • Reduced workers' compensation costs. • Developed and implemented a critical needs staffing plan and reduced hiring cycle time. • Hired 152 apprentices (since 2004) to fill skilled trade vacancies and anticipated retirements.
Customer Service	<ul style="list-style-type: none"> • Revamped streetlight re-lamping cycle to improve service and reduce costs. • Reduced streetlight repair cycle time. • Enhanced outage management system to restore service faster, provide more accurate restoration time information to customers, and improve reliability. • Improved customer service processes to significantly reduce hookup time. • Upgraded customer communications tools including the City Light website, electronic billing and mobile applications.
Infrastructure	<ul style="list-style-type: none"> • Introduced new security and emergency preparedness programs reducing risk to assets and personnel. • Established North American Electric Reliability Corporation (NERC) compliance office to avoid compliance problems and costly fines. • Enhanced current diversion enforcement program to reduce theft and loss of power.
Financial Management	<ul style="list-style-type: none"> • Established a \$100 million rate stabilization account (RSA) to mitigate rate changes and provide continuity of customer service in years with poor net wholesale revenue. • Refinanced \$672 million of debt, saving \$52 million in interest costs. • Generated revenue through sales including renewable energy credits, surplus property and excess long-term transmission capacity. • Maximized value of contracted energy resources by re-negotiating contracts to reduce future energy costs. • Reduced debt-to-capitalization ratio, resulting in credit rating improvements that lowers future interest cost. • Eliminated energy billings based on standard amount of consumption; replaced with a bill for actual energy used. • Improved risk policies, allowing utility to maximize revenue from surplus energy sales while minimizing wholesale purchases. • Implemented Energy Trading & Risk Management system. • Revised rental property leases.

Strengths

Seattle City Light's many strengths position the utility well for the future. These strengths have helped the utility achieve high marks for improved business processes, high levels of customer satisfaction and aggressive environmental practices. This foundation provides the legacy on which the Strategic Plan builds.

Publicly Owned and Community Minded

First and foremost is strength that customers bring to the utility. Strong public support for and interest in public power has helped drive ongoing customer service improvements and strong environmental programming, and has created a favorable rate structure that supports local economic activity.

Assets

The organization's core assets and infrastructure have an original value of \$3.4 billion and possess significant strengths. City Light owns seven hydropower facilities and controls 50 percent of its supply, in addition to having long-term rights to low-cost federal system generation through the Bonneville Power Administration. City Light also owns 656 miles of transmission; 2,300 miles of distribution (including the downtown network); 108,000 poles; and 14 substations.

Financial Management

On the financial front, City Light benefits from access to low-cost capital, the City of Seattle's AAA bond rating and overall financial stability. Other strengths include the rate stabilization account (RSA), the utility's own high bond rating, and low rates when compared both nationally and regionally to other utilities. The RSA allows the utility to absorb fluctuations in net surplus energy sales revenue without cutting approved program budgets or resorting to general rate increases to keep programs afloat.

People

City Light's workforce adds additional strength. The utility's knowledgeable, experienced, and diverse workforce is committed to the organization's mission and over the years has provided for continual improvement. Management has brought a new sense of accountability to the work of the utility, making sure that it follows through on key initiatives.

Environmental Commitment

The utility was the first in the nation to become carbon neutral and continues a strong leadership role in conservation and environmental stewardship. The utility can meet its energy needs through 2020 without acquiring new, year-round generating resources, through a combination of conservation, efficiency improvements, flexibility of current power contracts, and market purchases.

Challenges

Many challenges must be overcome to keep up with municipal utility best practices and to meet evolving customer requirements and community expectations. These challenges underscore the importance of developing a strategic approach.

Aging Infrastructure

Capital funds for updating the aging generation, transmission and distribution infrastructure have averaged \$224 million per year from 2006-2011 (2012 dollars), but this has not been sufficient to address the maintenance backlog. As a result, investments in advanced technology have been lagging. For example, deferred investments are delaying completion of a smart grid, implementation of an automated outage sensor system, relief of regional transmission system bottlenecks, and cyber security enhancements.

Customer Service

Customers want more from their electric utility. They want more reliable power, faster outage responses, improved customer service interactions, the ability to manage their own electrical use in real time, advanced technology, enhanced rate stability, and continued environmental leadership. They also want lower operational costs and predictable, affordable rates.

Workforce Challenges

Challenges attracting, training and retaining talent are a significant issue for the utility that must compete with other publicly owned and investor owned utilities for skilled workers. Shortages are occurring or expected in several job categories including engineers and skilled trade personnel. These shortages could worsen as the aging workforce retires (50 percent are eligible to retire within five years). Current budgets and processes fail to adequately fund training to ensure workforce continuity. Without a plan to document and transfer knowledge, and address competitive compensation, the utility faces a serious threat to its ability to provide satisfactory customer service and implement an aggressive capital investment plan. Additionally, despite some significant improvement in workplace safety, the utility's employee injury rate is nearly twice the national average. Finally, outdated workforce rules and personnel classification systems threaten to reduce efficiency and inhibit employee development.

Increased Cost for Compliance

City Light is required to procure additional renewable resources to comply with Washington State Initiative 937 (I-937). The cost of this renewable power exceeds the cost of the utility's current hydro-focused portfolio, putting pressure on rates. Additionally, mandatory reliability standard requirements continue to add costs to the utility.

Washington State Initiative (I-937)

Passed by Washington voters in November 2006, I-937 requires the state's major utilities to increase the amount of new renewable resources (such as geothermal and wind) in their electricity supply to three percent in 2012, nine percent in 2016 and 15 percent in 2020. A utility may comply by purchasing eligible renewable resource credits (REC's). Hydropower is not considered a renewable power source as defined by I-937. Major utilities are also required to undertake cost-effective energy conservation programs.

Low Load Growth

Utilities face a Catch-22 situation in which they are asked to satisfy increasing demands to spend more money on basic infrastructure, energy efficiency, smart grid and cyber security at the same time that their sales may be flat, declining or – like City Light – only increasing at modest annual rates. City Light's load is fairly stable since its service territory is well established. However, the financial impact of forces, such as the recent economic downturn, more natural gas availability, and more energy conservation, will affect City Light customers. The slow economic recovery and natural gas availability will suppress prices City Light can realize from surplus electricity sales, leading to less revenue. At the same time, lower energy consumption by customers, due to the economy and to conservation efforts, also keeps revenue from growing at a pace that might keep up with increasing demands.

Falling Energy Prices

Gas prices are a major determinant of wholesale energy prices. Natural gas prices rose 300 percent between 2004 and 2008 then dropped by half in 2008 as shale gas and other factors came into play. Because City Light sells surplus electricity on the wholesale power market, low energy prices mean less revenue for City Light. If economic conditions remain stagnant and natural gas production levels stay high, prices could remain low for years to come. The rate stabilization account (RSA), which is set at the target level of \$100 million, helps reduce, but does not eliminate, the impact of energy price volatility on the utility's finances.

The utility draws down the RSA when it receives less net wholesale revenue than it planned for in its approved budget. That planned amount is determined by City law to equal the average calculated from 2002 to the most recent year. When the RSA is drawn down to \$90 million or less, rate surcharges automatically begin to take effect in order to replenish it. Because energy prices are forecasted to remain low for the next several years, surcharges are likely unless steps are taken to reduce the planned amount.

Growing Debt Service

City Light's debt service is expected to rise significantly in the future. While some of this debt service is due to increased capital spending, there are several additional drivers including increased borrowing to offset low wholesale revenues in prior years, a City Council policy change requiring the utility to finance a larger portion of the Capital Improvement Program with debt, and the front-loading of refinancing savings to keep rates lower in the short term. Debt service and coverage needs are a major driver of rate increases in the coming years and will account for 52 percent of the rate increase for 2013-2018.

Changing Times, Challenging Landscape

- **The environment:** Seattle City Light has been a leader in environmental initiatives, becoming one of the first carbon neutral utilities in the nation. Yet new legislation requires the use of renewable resources when adding new sources of power.
- **The industry:** Unlike other city departments, City Light functions in a regional and national market place. It buys and sells electricity on the open market every day. It is tied into the national grid for all electrical power. It is both a consumer of electricity and a wholesale supplier of energy.
- **The economy:** Seattle, like the rest of the nation, is just beginning to emerge from one of the longest and steepest economic downturns since the Great Depression. The downturn has affected demand for electricity, capital markets and access to capital, and has placed extraordinary financial pressures on home owners.

Efficiency and Accountability Requirements

With billions of dollars in publically owned assets and infrastructure, Seattle City Light must continue to operate these assets with the utmost efficiency. Becoming a more accountable organization will require new approaches, better technology, and additional training.

Developing the Strategy

Working with stakeholders, businesses, citizens and employees, a Strategic Plan has emerged that raises the utility's performance to be more accountable to its customers, more strategic in its capital expenditures, and have better business practices in place to successfully manage the power and smart grid systems.

The planning process explored five policy paths that were developed through discussions and outreach efforts with the community and the City Light review panel. The policy paths are presented in an intentional order – each builds on the previous path. This is meant to help the reader understand the underlying assumptions of the Strategic Plan. The policy paths explored were:

- 1. Baseline.** The baseline defined the investments and practices required to continue the current level of service. The baseline assumed that some new investments and better business practices are required to carry out the current level of service. *The assumptions of the baseline are included in the Strategic Plan.*
- 2. New Efficiencies.** City Light has made a number of changes that have improved efficiencies over the past six years. The new efficiencies path included additional efficiencies that are contemplated for the next six years. *The assumptions of the new efficiencies path are included in the Strategic Plan.*
- 3. Strategic Investments (recommended approach).** This approach included the baseline investments and expected improvements included in new efficiencies. In addition, it addressed the strategic needs of Seattle City Light around four core themes that will position the utility for the future in terms of power reliability, workforce needs, organizational improvements, and continued leadership in conservation and environmental stewardship. *The strategic investments path is the recommended approach outlined in this Strategic Plan.*
- 4. More Aggressive Reliability Investments.** This path addresses the implications of a fast-track program to invest in aging transmission and distribution infrastructure to improve reliability. *The Strategic Plan includes many reliability investments, but not at the level outlined in this policy path.*
- 5. Bolder Environmental Initiatives.** City Light is already a proven environmental leader – this path stretched the organization to new levels of environmental commitment. *The Strategic Plan includes a very strong commitment to conservation and environmental initiatives, but not at the level envisioned in this policy path.*

Strategic Investments: A Shared Plan for the Future

The Strategic Plan builds on current levels of service, adopts new efficiencies, and makes strategic investments to meet the future needs of City Light customers and the community.

Ensuring Current Levels of Service

Seattle City Light has been providing basic electrical service for businesses and residents of Seattle and in the Puget Sound region for more than a century, from the needs of a new growing city, through the rapid changes created by World War II, to the emergence of Seattle as a major world-class metropolitan area. Day in and day out, customers flick a switch and the power is there.

In developing the Strategic Plan, Seattle City Light defined a service baseline. The baseline defines the assumptions necessary to provide current levels of service and outlines the minimum level of investments necessary to maintain operations and meet customer demand without significantly increasing operating risk. This analysis enables City Light to better understand the factors that have contributed to the current condition and prepare for the future. (See Figure 4.)

Figure 4: Baseline Assumptions

Power Supply and Environment

- Produce and purchase 10 billion kilowatt-hours of clean electricity each year to power all the homes and businesses (nearly 400,000 customers) in Seattle, Shoreline, Lake Forest Park, Burien, SeaTac, Tukwila and other small parts of King County.
- Operate and conduct maintenance on Boundary, Skagit, Cedar Falls and Tolt Dams.
- Incorporate environmental and wildlife habitat mitigation as part of the new Boundary plant license.
- Meet load growth with conservation and renewable power resources, including compliance with I-937 requirements to acquire renewable power resources.
- Continue strong conservation program and achieve I-937 mandated targets.
- Uphold greenhouse-gas neutrality status.
- Continue hazardous waste/Superfund cleanup, water quality testing, and the restoration of hundreds of acres of land that includes fish and wildlife habitats.

Reliability

- Provide reliability equal to no more than one outage per year per customer lasting no more than 70 minutes per customer.
- Support operation and maintenance of 14 large substations and almost 3,000 miles of transmission and distribution lines.
- Conduct maintenance on highly reliable network system that serves customers in downtown Seattle.
- Manage 500-plus miles of annual tree trimming along power lines – a major contributor to keeping reliability at a high level.
- Inspect and treat City Light's 108,000 poles and annual replacement of 2,000 poles.
- Direct streetlight repair response within 10 working days of a reported outage, as well as replacement of about 15,000 streetlight lamps per year with energy-efficient LEDs until all residential streets have LEDs.
- Implement a new work and asset management program to assess and prioritize work on City Light's most critical assets.
- Conduct an apprenticeship program that hires and trains 10-20 new apprentices per year.
- Maintain an outage management system that provides customers critical information during outage events.

Customer Service

- Manage a customer metering and billing system, including an e-billing option, that provides monthly or bi-monthly bills to all customers.
- Ensure new service connections are completed within 40-60 days.

Infrastructure and Support

- Continue and complete a wide variety of capital projects that maintain and upgrade City Light's power production, transmission and distribution systems.
- Maintain the utility-wide information technology infrastructure and about 125 software applications including website, customer care, billing, energy management, inventory management and budgeting enhancements.
- Hold staffing to 1,811 authorized positions to perform necessary work in distribution, transmission, generation, conservation, customer service, and administration.
- Maintain compliance with federal regulatory requirements regarding system reliability and critical asset protection.

The baseline is not the same as status quo. To provide today's level of programs, reliability and response, Seattle City Light must make ongoing business improvements and investments and continue efficiencies achieved by the utility over the last six years. For these reasons, the baseline includes several industry best practices, such as asset management, outage management, and vegetation management programs.

Incorporating New Efficiencies

While the financial baseline represents a projection of costs for maintaining the current level of service, this should not be taken as an indication that no improvement opportunities exist. The results of the baseline rate projection compel City Light to look for opportunities to reduce costs.

The 2013-2018 Strategic Plan includes efficiencies that have already been undertaken and new initiatives, yet to be implemented. Existing efficiency initiatives have resulted in savings of \$53 million per year – these savings are reflected in the baseline. Additionally, City Light has identified new efforts that are projected to save \$18 million per year within the next six years. (See Figure 5.)

Figure 5: New Efficiencies

Type of Efficiency	Annual Savings
Revised transmission, distribution, and generation practices	\$15 million
Improved project management on capital projects	\$985,000
Modified cost allocation and service level agreements	\$360,000
IT application enhancements (security and internal controls)	<i>(avoided loss of \$100,000 per incident)</i>
Improved work processes (billing, credit/collection, procurement, fleet management, street-use permitting, online security)	\$1,655,000
Total	\$18 million

New Efficiencies Assumptions

Operations

Informed by a benchmarking report from a third-party energy consulting firm, Seattle City Light has highlighted opportunities that can save a total of \$15 million in the next six years from revising practices in transmission, distribution, and generation. Thirty-six potential operational changes were explored to see if they could produce additional efficiencies. Seventeen of the changes produced little or no savings to City Light and are not being pursued at this time. Seven may produce savings but require re-negotiation of existing labor contracts. And 12 may produce savings and can be implemented without changes to existing labor contracts. All 19 savings opportunities have been prioritized for implementation, recognizing that some are more complex, long-term strategies. The targeted efficiency opportunities fall into the following categories:

- **Work process changes** – For example, having one crew set a new pole and transfer wires in one site visit.
- **Broader job descriptions** – For example, less specialization of crew types, allowing more flexibility for crew configuration and work assignments.
- **Crew sizing** – For example, the flexibility to match the right size crew to the work.

Capital projects

Improved project management on capital projects could produce savings of about 0.5 percent in the Capital Improvement Program annually. That may not seem like much, but it could total nearly \$1 million in savings annually.

City departments

Some services expected by City Light customers are provided by employees in other city departments. City Light negotiates agreements with city departments to provide these services. By revising these service level agreements to include performance measures and improved cost allocation formulas, City Light could save as much as \$360,000 per year.

Other enhancements

A range of other initiatives including improved billing processes, revised credit/collection processes, reduced City Light vehicle fleet needs, improved street-use permits, and an online system to track security incidents could save as much as \$1.65 million per year.

Making Strategic Investments

The Strategic Plan looks at both the strengths and challenges faced by Seattle City Light and responds with a call for prudent strategic investments in the 2013-2018 period, organized around four key objectives.

Objective 1	Objective 2	Objective 3	Objective 4
Improve customer experience and rate predictability	Increase workforce performance and safety practices	Enhance organizational performance	Continue conservation and environmental leadership

Figure 6: Strategic Investments Summary

Strategic Initiatives	Additional Funding ² (Proposed 6-yr total, millions)		Objectives
	Operating (\$) ³	Capital (\$)	
Budget/rate alignment	0.3		◆
Net wholesale revenue practices ¹	126.3		◆
Ratepayer advocacy initiative			◆
Cost of service & rate design policies			◆
Customer-focused website/services	0.7	1.4	◆
Customer Service Center improvements			◆
Enhanced environmental leadership	0.1		◆ ●
Environmental liability reductions	1.4	9.1	◆ ●
Safety culture promotion/practices	(4.6)		▲
Skilled workforce attraction & retention	27.2	6.2	▲
IT security upgrades	1.2	4.2	◆ ■
Reliability and cybersecurity standards compliance	3.5	0.8	◆ ■
Enterprise GIS	4.1	6.4	◆
North downtown substation	1.5	117.4	◆
Transmission system improvement		18.2	◆
Underground cable replacement	1.2	5.3	◆
Streetlight planning, design, construction		29.9	◆
Mobile workforce implementation	0.8	0.8	◆ ■
Hydro performance & generator availability	1.4		◆
Regional power & transmission leadership	(10.2)		◆ ■
Advanced metering infrastructure	(6.4)	80.5	◆ ■
Electric vehicle infrastructure & rates			◆ ■ ●
Engineering and operations standards	3.0		◆ ■
Climate research	1.3		●
Conservation enhancement program			◆ ●
Communications and engagement			■
Performance benchmarking & efficiencies			■
IT roadmap	5.7	12.5	■
Performance-based reporting	5.4	3.1	■
Internal management review unit	4.1		■
Project management quality improvement	2.8		■
Service agreements/performance metrics	0.8		■
External service contract procurement			■
Efficiencies initiatives	(55.9)	(37.5)	◆ ■
Financial policies initiative	3.0		■

- ◆ Improve customer experience and rate predictability
 ▲ Increase workforce performance and safety practices

- Continue conservation and environmental stewardship
 ■ Enhance organizational performance

¹ Gradual reduction in net wholesale revenue target over six years. ² In constant 2012 dollars (without inflation).

³ Reflects increased and decreased O&M but not revenue enhancements.

Objective 1: Improve the Customer Experience and Rate Predictability

Seattle's technology-savvy population expects Seattle City Light to meet the customers' rapidly evolving electricity needs, efficiently manage the energy system, and respond quickly to customer concerns. Currently, City Light lacks many of the customer-supporting technology systems that are the standard, such as an automated outage sensor system, automated switching of lines to route power around out-of-service equipment, and the ability to proactively notify customers of outages.

Another important aspect of the customer experience is rate predictability. While Seattle's rates are low, the possibility of automatic surcharges, implemented in 2010, introduces an element of unpredictability in rates. When and why are surcharges triggered? City Light sells energy both to retail customers and to the West Coast wholesale market. Retail sales are quite stable and predictable, but wholesale sales are not - they are highly variable depending on price, demand, and the amount of water available to produce surplus energy to sell. By current City ordinance, Seattle City Light must budget its expected net wholesale revenue in any year as the average of such revenues from 2002 to the present (the target), and keep at least \$100 million in the RSA to make up for any shortfalls. When the wholesale revenue target is not met, City Light draws down the RSA to make up the difference. If the amount in the RSA falls to \$90 million or less, automatic rate surcharges to replenish it are triggered. The future for wholesale revenue looks much worse than it did in the past. Therefore, the wholesale revenue target set by the current method is too high and surcharges are likely unless steps are taken to reduce that target.

Key activities to meet this objective include:

Improving and ensuring continued system reliability.

- Building a new north downtown substation will create a stronger and better-integrated distribution system throughout the city and provide highly reliable power to serve the city's growing biotechnology research and information technology sectors.
- Collaborating with neighboring Puget Sound utilities to improve the regional transmission system.
- Replacing failing underground cable in several Seattle neighborhoods.
- Implementing power dispatching software to improve operation of the distribution system and reduce outages.
- Replacing 350 miles of failing underground wiring that supports the streetlight system, and updating other street-lighting infrastructure.

Improving customer interface and information exchange capacity.

- Replacing City Light's nearly 400,000 manually read meters with technologically up-to-date digital meters (Advanced Metering Infrastructure/AMI) to allow customers flexible billing and quicker outage notices, and providing more user-friendly access to the information, quickly and cheaply, on the City Light website, and through improved responsiveness at the Call Center.

Improving the efficiency of our legacy hydroelectric generation assets.

- Including dedicating more labor and materials to maintenance of the Skagit, Cedar, Tolt and Pend Oreille River dams. These efforts would provide for lower rates in the future.

Providing greater rate predictability and transparency.

- Implementing a new internal budgeting process and system, and making sure rates are synchronized with approved budget and consistent with the rate guidance provided in the Strategic Plan.
- Improving the way costs are spread among customers to make sure they are as equitable as possible.
- Providing more ways to gather input from customers before rate changes are implemented.
- Reducing the chance of rate surcharges by gradually reducing dependence on the highly volatile wholesale energy market to cover City Light costs.

Objective 2: Increase Workforce Performance and Safety Practices

Addressing the utility's workforce challenges is imperative. Seattle City Light faces business risks if the utility fails to improve its safety record. Based on the annual number of safety incidents divided by the number of labor hours per 100 employees, City Light's reported injury record of 8.5 incidents compared to a national average of 4.3, must be improved. The utility plans to accomplish this by tracking and reporting problem areas, and investing in training and equipment.

City Light must also affirmatively manage the impending wave of retirements and improve its track record of retaining highly skilled workers. There is a national, growing shortage of skilled electrical utility employees as a result of retirements. City Light has far more job classifications than peer utilities, which limits opportunities for efficiency. In terms of attracting and retaining talent, the utility operates within a competitive national labor market. While most City Light employees are compensated at market levels, for some of the most critical expert positions, City Light is 10 to 40 percent below the national market for salary.

Key activities to meet this objective include:

Improving workforce safety.

- Reducing Seattle City Light's injury rate by improving and documenting safety standards and work practices, providing additional worker safety training, and rewarding employees for safe work behavior.

Attracting and retaining workers with expertise specific to electric utilities.

- Improving compensation to a competitive level for certain positions, and developing partnerships with educational institutions to obtain trained workers for entry level positions.

Investing more in employee training.

- Expanding the apprenticeship program, building a technical training center, providing more on-the-job training, and smoothing out staff succession.
- Developing a leadership training program, increasing training funding and working to establish trainee positions for non-field jobs that require a high level of utility-specific expertise.

Increasing workforce flexibility and efficiency.

- Securing city approval to structure labor negotiations and work rules to achieve more efficient workforce performance. Goals would include a gain-sharing program to provide incentives to employees for productivity improvements, as well as reducing the number and broadening job classifications to provide flexibility in assignments along with higher job satisfaction.

Objective 3: Enhance Organizational Performance

City Light already has made investments to upgrade the utility's efficiency and adopt industry best practices. Before 2018, City Light's goal is to be in the top 10 percent of peer utilities on measures of efficiency and effectiveness and to reduce baseline costs by an ongoing \$18 million per year at a minimum. The mayor and City Council will be engaged with City Light to confront challenges and meet this ambitious goal. Accountability measures will be used to evaluate City Light's progress and hold the utility responsible.

Key activities to meet this objective include:

Using the Strategic Plan and periodic reporting on progress as a basis to engage the mayor and City Council. This additional oversight process is separate from, but clearly linked to, the regular budget and rate setting processes.

Improving the effectiveness and efficiency of business practices across City Light through benchmarking and process improvements. City Light will continue to benchmark its performance against peers and use that information to drive improvements in business processes. Some examples include:

- Implementing efficiencies in transmission, distribution and generation operations to reduce ongoing operating and capital costs by \$15 million per year by 2015 (ramped up gradually in 2013-2014), and identifying other utility-wide process improvements to save \$3 million annually.
- Implementing performance-based reporting to track cost and performance metrics of key business processes.
- Using an internal management review unit to identify process improvement opportunities.
- Improving project management to ensure projects are completed on time, on budget, and within defined scope and quality.
- Implementing service level agreements for key services obtained from other city departments.

Improving City Light's external procurement process and supplier performance. City Light will improve procurement of external services and products and increase engagement in regional power supply and transmission matters to address the utility's and customers' interests.

Replacing outdated technology systems and filling major technology gaps. City Light will implement mobile workforce management software to automate scheduling and dispatch of field workers to reduce costs and improve service responsiveness. Additional activities include:

- Implementation of standards and compatible units for engineering and field crews to reduce costs and complexity;

- Integration of existing non-compatible GIS systems into a single system that can support transmission, distribution, and streetlight system management;
- Completion of currently unfunded portions of the Information Technology Roadmap (a citywide initiative to update accounting systems, improve IT strategic planning and disaster-recovery capabilities, inventory management, and an enterprise document management system).;
- Improvements in cyber security to meet evolving threats and new regulations.

Monitoring and revising fiscal policies as appropriate to ensure continued fiscal strength.

City Light will carry out financial policies including debt service coverage and capital project funding practices to ensure a suitable balance between current and future ratepayers. Additional options to reduce financial risk will be considered, including increased use of insurance and reserves.

Objective 4: Continue Conservation and Environmental Stewardship Leadership

Reflecting the values of its community and customer-owners, Seattle City Light has a rich tradition of environmental stewardship, including fish-friendly operation of its hydroelectric projects and achieving climate neutrality since 2006.

Since the late 1970's energy conservation has been the utility's first-priority resource for meeting customers' electricity needs. Current power demand forecasts show City Light can meet expected demand through at least 2020 without purchasing new year-round generating resources through a combination of conservation, efficiency improvements, flexibility of current power contracts, and market purchases. Conservation levels assumed in the Strategic Plan are designed to ensure compliance with I-937, meet customer expectations, and support City Light's legacy of environmental stewardship.

Because of prior investments and strong environmental leadership, meeting objectives in this area does not require a substantial change from baseline investments. Key activities to meet this objective include:

Improving effectiveness in deploying conservation program dollars. Establishing a measurement and verification function to plan and validate future conservation acquisitions is assumed. There also will be expanded conservation program offerings and partnership opportunities with customers.

Investing in capacity to assess and address long-term resource risks associated with climate change. Determine impacts on watersheds and generating facilities that may result from climate change, then develop strategies to reduce, minimize or mitigate those impacts.

Identifying and implementing changes in rate policy and infrastructure necessary to cost-effectively support customer adoption of electric vehicles. Ensure future needs of customers who will acquire electric vehicles are met, including researching and addressing the future infrastructure investments and rate structure necessary to encourage charging vehicles at non-peak times.

Enhancing environmental leadership. Implement changes to vegetation and landscape management operations that are environmentally friendly, with more focus on preserving the tree canopy. Continue significant investments included in Skagit and Boundary Dams relicensing agreements such as enhancing recreational opportunities, fish passage, fish and wildlife habitat acquisition, and restoration and support for environmental education.

Installing and using better systems to track, respond to and reduce environmental liability associated with our activities. Reduce our environmental liability and the risk of pollution by reducing historical contamination and the presence and use of toxic material in current operations. Develop a comprehensive environmental management plan including testing (20,000-plus) transformers, auditing specific sites to ensure compliance with environmental requirements, and reducing the risk of oil spills at generating plants.

Analysis and Rate Estimates

Factors Driving Rate Increases

Seattle City Light's revenue requirement and rates for providing today's level of service are projected to increase in the coming years, even prior to consideration of prudent strategic priorities and investments. The power industry is capital intensive and the money for investments comes from only two sources – ratepayer cash flow and borrowing. City Light has worked hard to manage its costs and has tried to reduce its debt responsibly. For example, the overhang of large amounts of debt incurred as a result of the 2000-2001 energy crisis prevented the utility from moving forward earlier with several initiatives. For three years, the utility essentially operated on its cash flow and limited borrowing to pay down debt. As interest rates fell during the economic downturn, the utility was also able to refinance debt to reduce costs and allow for growth. Borrowing is necessary and responsible because it pays large- and long-lived expense obligations, such as relocating utility lines and other equipment to accommodate the Alaskan Way Viaduct project, Boundary Dam upgrade, and other capital improvements that last for decades.

The primary drivers of these increases and their relative contribution to the increase include:

- **Debt Service (52 percent)** – The costs to repay money borrowed for past, present and future capital programs. Major capital projects include the utility relocation required by the Alaskan Way Viaduct project, improvements at Boundary Dam, and distribution equipment renewal or replacement. Fortunately, Seattle City Light has a strong financial record which results in a high bond rating and lower borrowing costs.
- **Operations and Maintenance, Taxes and Other (30 percent)** – These are the costs to run the utility and maintain its plants and equipment. Included here are some new investments and better business practices.
- **Power Costs (18 percent)** – The cost of electricity can vary dramatically over the years and can be affected by other energy costs. In addition, depending on snowpack in the mountains and other climate variables, Seattle City Light can be a supplier on the wholesale market, raising additional revenues. By the same token, a poor water year can reduce those revenues. Finally, a long-term

Bonneville Power Administration contract includes gradual increases.

Adopting new efficiencies will result in significant savings, but these savings are not enough to offset the factors driving rate increases.

Strategic Plan Rate Estimates

The Strategic Plan builds on the baseline analysis, incorporates new efficiencies and includes key strategic investments to put City Light on a realistic path to deliver an optimal level of customer service, significantly enhance energy reliability, and improve rate predictability and stability at a minimal incremental cost to the existing rate path.

Implementation of the Strategic Plan will require a rate increase that averages 4.7 percent annually. The proposed annual percentage rate increases, average monthly residential bill increases, and average annual residential bill increases are shown below.

Figure 7: 2013-2018 Strategic Plan Rate Estimates*

	2013	2014	2015	2016	2017	2018	Average
Annual Rate Increase	4.4%	5.6%	4.1%	4.8%	5.3%	3.9%	4.7%
Change in Residential Monthly Bill	\$2.42	\$3.20	\$2.50	\$3.04	\$3.54	\$2.72	\$2.90
Change in Residential Annual Bill	\$29.07	\$38.43	\$30.03	\$36.53	\$42.45	\$32.64	\$34.86

*Average change in monthly residential bill. For rate impacts on other customer classes, City Light will post additional information online at: www.seattle.gov/light/strategic-plan.

The rate trajectory is based on several assumptions, among them, that demand for electricity will increase only moderately at 0.6 percent per year for the 2013-2018 period, inflation will remain low, and low energy prices will continue affecting the value of surplus power Seattle City Light can sell on the wholesale market. Furthermore, while the average annual percentage increase is expected to be 4.7 percent, the percentages from year to year may change slightly as new information becomes available.

Seattle City Light recognizes that increased revenue requirements in the Strategic Plan will affect rates and those customers who are least able to pay. There are several ways City Light intends to proactively mitigate the impact of the rate increases:

- 1) For income-eligible customers, there is currently a low income rate. However, it is not being fully utilized by those who qualify. City Light will work with other city departments and community-based organizations to identify and enroll eligible low income customers.
- 2) Low income customers will be directed to programs to help customers reduce their energy use. Conservation and weatherization tools available through City Light and the city's Office of Housing can provide specific measures that reduce power bills. For instance, installing compact fluorescent light bulbs (CFLs), low-flow showerheads, insulation or other measures can help many residents lower their bills.
- 3) City Light will assist customers with payment plans to provide better management of energy costs. A barrier to program access for some customers may be language. City Light and the Department of Neighborhoods are actively working in non-English speaking communities to provide information and enrollment for the programs that are available.

Conclusion

There is an increasing urgency to address the challenges facing Seattle City Light. The cumulative effect of delay will result in a system and level of service that fails to meet customers' needs and expectations. Costs will be higher, reliability less assured, economic development advantages will be lost, and customer satisfaction will be compromised if we stop making incremental progress on the growing backlog of necessary improvements. The 2013-2018 Strategic Plan positions Seattle City Light to address these challenges and fulfill its promise of delivering the best customer service experience of any utility in the nation.

Appendices

1. Financial Baseline Report
2. Strategic Investments Summary
3. Outreach Summary
4. Review Panel Recommendations Letter