

Seattle City Light 2013-2018 Strategic Plan

Your Power Future

March 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.



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Letter from the Superintendent

I am pleased to present the proposed Seattle City Light 2013-2018 Strategic Plan, a new direction for making informed decisions to ensure our customers' needs and expectations are met, now and in the future.

City Light is the 10th largest public utility in the nation, serving more than 400,000 customer accounts representing more than 750,000 customers in the City of Seattle and seven adjacent jurisdictions. Electricity is a vital service to residents, businesses, organizations and government. The availability of safe, affordable and reliable electricity is also paramount to economic vitality and public safety.

This is a pivotal time for City Light. We are entering a period in which critical decisions – and investments – are needed to ensure the Utility's systems and services continue to meet customer expectations, especially for reliability, smarter technologies and rate predictability.

The proposed plan provides guidance for decision-making. It is the result of a public process that involved hundreds of citizens, business and community leaders, the Mayor's office, City Council members and other City officials. The process included extensive analysis and reviews of Utility practices compared to national best practices. I believe it is fair to say this is the most comprehensive strategic plan that has been developed in the history of City Light. We appreciate the contributions so many people have made to this plan.

At Seattle City Light we are very proud of the system we maintain and the service we provide to our customer owners. With continued support and investment, City Light can set the standard and deliver the best customer service experience of any utility in the nation.

Sincerely,

A handwritten signature in blue ink that reads "Jorge Carrasco". The signature is written in a cursive, flowing style.

Jorge Carrasco
Superintendent
Seattle City Light

Executive Summary

The proposed Seattle City Light 2013-2018 Strategic Plan lays a foundation for making informed decisions to meet current and future needs benefiting the public and 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 report on the progress that has been made.

Seattle City Light is an incredibly durable system and a valuable asset, yet it 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 needs to 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; and
- Finally, even though we have realized savings from efficiencies of about \$53 million annually since 2004, 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 Plan 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 City Light heard.

The Strategic Plan provides a more predictable course for how to best meet City Light’s customers’ current and future needs. The Strategic Plan provides five policy and tactical options, each of them building on the cost efficiencies that have been put in place during the past six years resulting in lower staffing levels, lower interest costs and better management. The final two paths also build off paths 1-3 but could be pursued individually or in combination with each other.

The Strategic Plan provides policymakers with the following options:

Path 1 - Current Level of Service (Baseline): Maintain current service levels, including “best practices” investments.

Path 2 - New Efficiencies: Adopt policies that enable additional efficiencies while maintaining current service levels.

Path 3 - Strategic Investments (Preferred Option): Maintain current services, adopt efficiencies and make additional investments to improve reliability, strengthen the workforce and provide for area job growth and economic development.

Path 4 - More Aggressive Reliability Investments: Accelerate investments to maximize reliability sooner.

Path 5 – Bolder Environmental Initiatives: Aggressively expand already strong environmental and conservation practices.

Based on extensive analysis conducted as part of the strategic planning process, City Light’s rates are projected to increase about 4.1 percent per year through 2018 to maintain current service levels (Path 1: Current Level of Service/Baseline).

The additional efficiencies identified in the Strategic Plan can reduce the rate increase to below 4 percent, and we recommend adopting them (Path 2: New Efficiencies). Concurrently, City Light recommends the third path that calls for additional investment in reliability, technology and workforce development. Capital spending has averaged \$150 million per year during the past six years, but more is needed to move from a “run to failure” system to a management practice which 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 option also proposes building the first substation in more than 30 years which improves 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.

This preferred option also makes wise investments in workforce development to address the retirement and competitive compensation issues, to reduce injuries and to improve customer service. We will be able to attract, retain and train workers to design, maintain and deliver energy services in more cost-effective and timely ways.

This option, together with the efficiencies, brings the average annual rate increase to about 4.7 percent through 2018.

The Strategic Plan also identifies two additional options for policymakers and our customers to consider: more aggressive investments in reliability; and/or bolder initiatives in environment and conservation. These options reflect the input from some stakeholders and would require additional staffing and rate increases.

The past decade, in the wake of the energy crisis, has been a challenging one for City Light. The Utility has emerged leaner and smarter, and better connected to policymakers 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. Now is the time to make gains on the transmission and distribution system.

Implementation of this plan ensures that the Utility 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 going up. Consumers don't believe what the utilities are telling them. Policymakers 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 issue for the construction of a hydroelectric plant on the Cedar River at Cedar Falls, and 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 6-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 strategies, recommends a preferred path to success and explains the rate impacts associated with these recommendations.

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.

Updating the Plan

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.

The plan is a tool for the Mayor, City Council, Seattle City Light Review Panel, Seattle City Light managers and employees and Seattle residents. It is intended to guide decisions about where to invest resources (time, effort and money) and serve as a guide for those evaluating the Utility's progress.

This plan will be an invaluable resource as city and Utility leaders deal with uncertainties beyond their control (e.g., weather, economy, federal policies, international policies, etc.) The intent of the plan is to have biannual measurements to hold the Utility accountable to the plan and to update it to reflect new realities and needs. Specific elements of this guide will need to adjust and adapt, but the framework will remain constant.

Process

The recommendations in the Strategic Plan are the culmination of a 2-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 (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.

The strategic planning process included four 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 6- 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 1).
- Forecasted costs and rates assuming continuation of current service levels to create the financial baseline.

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 29 times to hear briefings from City Light leaders and provide input into the development priorities included in the plan. The Review Panel will issue a separate communication about the plan after they have reviewed the draft plan and heard public feedback.

Building a Shared Vision

Public and employee feedback was solicited throughout the development of the Strategic Plan and a second round of outreach is underway in February/March 2012 to solicit feedback on the 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 & Environment Committee are planned.

- 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.

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.

4. Share Draft Plan and Seek Stakeholder Input [February to March 2012]

- Circulate draft Strategic Plan to the Review Panel and key Council and Budget Office staff. Input will be used to refine the draft.
- Conduct broad public and stakeholder outreach on draft plan.

Figure 1: Seattle City Light’s Priorities & 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

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.

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.

Efficiencies and Cost Savings

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 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.

Figure 2: 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 5-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 need 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 renegotiating contracts to reduce future energy costs. • Reduced debt to capitalization ratio, resulting in credit rating improvements which 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 7 hydropower facilities and controls 50% 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, the Utility's own high bond rating and low rates when compared both nationally and regionally to other utilities. The Rate Stabilization Account 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 \$150 million per year from 2004-2010 (2010 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% 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.

Costly 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 937 (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 solar and wind) in their electricity supply to 3 percent in 2012, 9 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, both due to the economy and to conservation efforts, also keeps revenue from growing at a pace that might keep up with previously mentioned 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) helps reduce, but does not eliminate, the impact of energy price volatility on the Utility’s finances.

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.

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.

Five Policy Paths

Overview

This plan proposes five policy paths that build on each other:

1. **Current Level of Service (Baseline).** This defines the investments and practices required to continue the current level of service. The Baseline assumes that some new investments and better business practices are required to carry out the current level of service.

2. **New Efficiencies.** City Light has made a number of changes that have improved efficiencies over the past six years. This option includes additional efficiencies that are contemplated for the next six years.
3. **Strategic Initiatives (Preferred Option).** This includes both the Baseline and the expected improvement through efficiencies. It then addresses the strategic needs of the Utility around four core themes that will position City Light for the future in terms of power reliability, workforce needs, organizational improvements and continued leadership in conservation and environmental stewardship.
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.
5. **Bolder Environmental Initiatives.** City Light is already a proven environmental leader – this stretches the organization to new levels of environmental commitment.

The five paths were developed through discussions and outreach efforts with the community and Review Panel. They 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 plan and the reasons for selecting the preferred path.

Rate Implications

The paths presented envision annual rate increases that vary depending on the option. The Current Level of Service (Baseline) path translates into an average annual rate increase of 4.1 percent. A savings of 0.4 percent is estimated to be gained from the New Efficiencies path. The Strategic Initiatives (Preferred Option) path calls for an average net increase of 1 percent per year. Those three combined create the recommended Preferred Option path with an estimated average annual rate increase of 4.7 percent. The More Aggressive Reliability Investments path would increase rates by 0.3 percent annually. The Bolder Environmental Initiatives path would increase rates by 0.4 percent annually. The More Aggressive Reliability Investments and Bolder Environmental Initiatives paths could be pursued together, with an estimated average annual rate increase of 0.7 percent.

Path 1: Current Level of Service (Baseline)

Description

Seattle City Light has been providing basic electrical service for businesses and residents of the City 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.

This path answers the question, “How can City Light maintain the current level of services expected by customers?” The Baseline defines current level of service assumptions and outlines the minimum level of investments necessary to maintain operations and meet customer demand without significantly increasing operating risk.

This analysis also enables City Light to better understand the factors that have contributed to the current condition and prepare for the future.

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 Current Level of Service (Baseline) path includes several industry best practices, such as asset management, outage management and vegetation management programs.

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.

What Drives Rates?

A variety of trends and costs are driving rates higher for the entire electric utility industry. With a strong hydroelectric power generation system and investments in clean, renewable power, Seattle City Light is better positioned than many (if not most) electric utilities to respond to factors that will put upward pressure on electric utility rates. For example, City Light owns no coal facilities and will not incur the same kinds of carbon mitigation costs expected by other electric utilities. Since most of the Utility's resource portfolio is in hydropower, Seattle City Light customers have benefited from some of the lowest residential rates in the country.

City Light is experiencing pressure to increase rates due to other factors. Some of these drivers are generally controllable, while others are not (see below). Like any well-run business, City Light tries to maximize the areas it can control and minimize those it cannot. As a publicly-owned utility, City Light strives to preserve its standing as one of the lowest-cost energy providers in the nation.

More Controllable Factors:

- Program additions and other basic operations of the Utility
- Number of staff and how work is performed
- Size and timing of future capital improvement budgets

Less/Uncontrollable Factors:

- Labor cost changes
- Net wholesale energy prices and volumes, often driven by the weather
- Costs related to meeting regulatory requirements
- Interest rates on newly issued debt
- Upcoming debt service charges for capital dollars already spent

Figure 3: Current Level of Service (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 Initiative 937's 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+ 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.

Analysis and Rate Impacts

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 initiatives.

The power industry is capital intensive and the money for investments comes from only two sources – rate payer 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.

A review of the Utility's Baseline shows that to maintain the current level of service and programs, rate increases averaging about 4.1 percent per year will be required for years 2013-2018. 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 plant 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 snow-pack 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.

Path 2: New Efficiencies

Description

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 us to look for opportunities to reduce costs. This path answers the question, “How can City Light maintain the current level of service expected by customers and maximize efficiencies?”

The 2013-2018 Strategic Plan acknowledges the significant savings that have already been achieved (see “Efficiencies and Cost Savings”, pages 11-12) and envisions even more efficiency in the future, totaling about \$18 million per year.

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. Some of the desired efficiencies require more complex, longer-term change. For example, some changes in workforce practices require amendments to labor agreements through negotiations (the current labor contract expires in 2013). Other “best-in-class” practices require additional investments in new equipment and technologies. New software, for example, will soon enable managers to assign work to repair crews more efficiently, producing savings in both paper work and time. City Light is committed to continue to aggressively pursue additional operational efficiencies.

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.

Figure 4: 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)	(avoided loss of \$100,000 per incident)
Improved work processes (billing, credit/collection, procurement, fleet management, street-use permitting, online security)	\$1,655,000
Total	\$18 million

Analysis and Rate Impacts

Under the New Efficiencies path, Seattle City Light is still subject to the factors driving rate increases in the Baseline. The difference is that some of these rate pressures will be offset through additional savings. These savings amount to a 0.4 percent decrease from the Baseline (or an average annual rate increase of 3.7 percent for years 2013-2018 rather than 4.1 percent). The primary drivers of these increases and the drivers' relative contribution to the increases are consistent with the Current Level of Service (Baseline) path.

Path 3: Strategic Initiatives (Preferred Option)

Description

The Strategic Initiatives path builds on the Baseline and New Efficiencies options and makes strategic investments to meet the future needs of the organization, its customers and the community. This path answers the question, "How can City Light best prepare to meet customers' needs now and in the future?"

The 21st Century has been difficult for City Light. In the early years, a "perfect storm" of high energy prices and drought forced the Utility to borrow heavily. The resulting debt produced unexpectedly high rate increases and forced the Utility to defer needed maintenance. At the same time, wise decisions and investments in the past were paying off in a strong hydro-based system and a commitment to the environment. New management, a new philosophy and

Key Strengths & Challenges**Key Strengths**

- 1) A hydro-focused generation portfolio, providing sufficient power to meet demand through 2020
- 2) Comparatively low rates and deep support for public power philosophy
- 3) A strong tradition of environmental stewardship and conservation

Key Challenges

- 1) Demand for improved energy reliability and responsiveness despite an aging infrastructure
- 2) Efficiency requirements to reduce overall operating costs
- 3) Need for stable, predictable and transparent rates
- 4) Calls for safety improvements
- 5) An aging skilled workforce

A more detailed discussion of City Light Strengths, Weaknesses, Opportunities and Threats is included in the report appendix.

continued improvements started in 2004 have built steadily toward the Utility's vision of "providing the best customer service experience of any utility in the nation."

The Strategic Initiatives path looks at both the strengths and challenges faced by City Light and responds with a call for prudent strategic investments in the 2013-2018 period.

The Strategic Initiatives path organizes activities around four key themes:

Strategic Initiatives Objectives

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

Strategic Investments

1. Improve the Customer Experience and Rate Predictability

Seattle's technology-savvy population expects the Utility 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. Key activities to meet this objective include:

Improve and ensure 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. Additional capital investments include:

- Collaborating with our neighboring Puget Sound utilities to improve the regional transmission system.
- Replace failing underground cable in several Seattle neighborhoods.
- Implement 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.

Improve customer interface and information exchange capacity. Projects include replacement of City Light's nearly 400,000 manually-read meters with technologically up-to-date digital meters 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.

Improve efficiency of our legacy hydroelectric generation assets. Projects include 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.

Provide greater rate predictability and transparency. Strategies include:

- 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 increasing base customer rates while reducing excessive dependence on the highly volatile wholesale energy market to cover City Light costs.

2. Increase Workforce Performance and Safety Practices

Addressing the Utility's workforce challenges is an 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 nationally 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 20 to 40 percent below the national market for salary.

Key activities to meet this objective include:

Improve workforce safety. City Light plans to reduce its injury rate by improving and documenting safety standards and work practices, providing additional worker safety training, and rewarding employees for safe work behavior.

Attract and retain workers with expertise specific to electric utilities. The Utility's strategies include improving compensation to a competitive level for certain positions, and developing partnerships with educational institutions to obtain trained workers for entry level positions.

Invest more in employee training. Strategies include expanding the apprenticeship program, building a technical training center, providing more on-the-job training and smoothing out staff succession. City Light also proposes 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.

Increase workforce flexibility and efficiency. City Light's strategy is to secure 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.

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 the Utility to confront challenges and meet this ambitious goal. And they will have accountability measures to evaluate City Light's progress and hold the Utility accountable.

Key activities to meet this objective include:

Use 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.

Improve effectiveness and efficiency of business practices across the Utility 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.

Improve 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.

Replace outdated technology systems and fill 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.

Monitor and revise 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.

4. Continue Conservation and Environmental Stewardship Leadership

Energy conservation is Seattle City Light's most cost-effective, environmentally friendly, and least risky energy resource. Since the late 1970s, 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. City Light is required to purchase renewable resources or their equivalent to meet requirements of I-937. City Light's Conservation Five-Year Action Plan enables the Utility to slightly exceed the conservation purchase requirements of I-937. In 2010, conservation customers reduced their City Light bills by \$57.2 million.

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:

Improve 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.

Invest 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.

Identify and implement 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 including researching and addressing the future infrastructure investments and rate structure necessary to incentivize charging vehicles at non-peak times. Make investments in advanced metering infrastructure.

Enhance 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 dam relicensing agreements such as enhancing recreational opportunities; fish passage, fish and wildlife habitat acquisition and restoration and support for environmental education.

Install and use 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+) transformers, auditing specific sites to ensure compliance with environmental requirements and investigating generating plants for chemical spill risks to bodies of water.

Analysis and Rate Impacts

The Strategic Initiatives (Preferred Option) builds on the Baseline, incorporates New Efficiencies and includes key strategic initiatives 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.

The Strategic Initiatives (Preferred Option) assumes the following: the 4.1 percent annual average rate increase in the Baseline, an estimated reduction in rates of 0.4 percent achieved with efficiencies and a net 1 percent increase for the investments in the Strategic Initiatives (Preferred Option) plan. That brings the annual rate increase under the Strategic Initiatives (Preferred Option) to 4.7 percent annually.

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 generally low; and low energy prices will continue affecting the value of surplus power the Utility can sell on the wholesale market.

Figure 5: Strategic Initiatives (Preferred Option) Summary

Strategic Initiatives	Additional Funding (Proposed 6-yr total, millions) ²		Objectives
	Operating (\$)	Capital (\$)	
Budget/rate alignment	0.4		◆
Net wholesale revenue practices ¹	87.0		◆
Ratepayer advocacy initiative			◆
Cost of service & rate design policies			◆
Customer-focused website/services	0.6	1.4	◆
Customer Service Ctr. improvements			◆
Enhanced environmental leadership	0.1		◆ ●
Environmental liability reductions	1.4	9.1	◆ ●
Safety culture promotion/practices	4.2		▲
Skilled workforce attraction & retention	25.5	7.8	▲
Distribution management system	0.5	10.3	◆
IT security upgrades	2.1	3.1	◆ ■
Reliability & cybersecurity standards compliance	3.5	0.8	◆
Enterprise GIS	3.1	6.9	◆
North downtown substation	1.5	118.3	◆
Transmission system improvement		21.5	◆
Underground cable replacement	1.2	5.0	◆
Streetlight planning, design, construction		34.2	◆
Mobile work implementation	2.6	0.8	◆ ■
Hydro performance & generator availability	1.6		◆
Regional power & transmission leadership	(10.2)		◆ ■
Advanced metering infrastructure (AMI)	(8.6)	109.9	◆ ■
Electric vehicle infrastructure & rates			◆ ■ ●
Engineering and operations standards	3.0		◆ ■
Climate research	1.3		●
Conservation enhancement program			◆ ●
Communications & engagement			■
Performance benchmarking & efficiencies	1.7		■
IT roadmap	5.7	13.2	■
Performance-based reporting	5.4	3.1	■
Internal management review unit	4.1		■
Project management quality improvement	4.2		■
Service agreements/performance metrics	0.8		■
External service contract procurement			■
Efficiencies initiatives	(55.9)	(37.8)	◆ ■
Financial policies initiative	3.1		■

◆ Improve customer experience and rate predictability

● Continue conservation & environmental stewardship

▲ Increase workforce performance and safety practices

■ Enhance organizational performance

¹ Reduction in net wholesale revenue and transfers to/from RSA² Reflects increased and decreased O&M but not revenue enhancements

Path 4: More Aggressive Reliability Investments

Description

Generally, capital investment drives reliability. It makes sense. If you spend money on more modern, up-to-date and reliable equipment, the overall functioning of the generation and distribution system will improve. In the Current Level of Service (Baseline) path, capital investments are estimated to be \$250 million per year between 2012 and 2018, an increase of about 75 percent or \$108 million per year over earlier years.

About half of that increase represents real growth in spending and the other half represents inflation. Major drivers of the increase include the relocation of transmission and distribution facilities required by the Alaskan Way Viaduct and Mercer Corridor projects, improvements at Boundary Dam, distribution system renewals such as LED streetlights and replacement of equipment and systems that support utility operations, such as vehicles and energy management, customer billing, inventory and budgeting systems.

There is an opportunity to do more. The More Aggressive Reliability Investments path would complete the projects in the Strategic Initiatives (Preferred Option) path, but also accelerate the pace of refurbishment of the Utility's aging distribution and substation infrastructure. It takes the Baseline investments to the next level and answers the question, "What is the most ambitious path to achieve desired reliability goals?" This path builds on the Strategic Initiatives (Preferred Option) path and ramps up the time and budget to accomplish key strategies, doubling the rate of investment.

Under the more aggressive path, key initiatives to address reliability include:

- Restoring failing underground cable in several additional Seattle neighborhoods;
- Additional wood pole and overhead equipment replacement; and
- Upgrading and protecting specific elements in the substations throughout the City.

Analysis and Rate Implications

The More Aggressive Reliability Investments path would increase funding in the capital budget for work by \$23.1 million annually between 2014 and 2018, with a 50 percent ramp up of that amount in 2013. The rate impact would add 0.3 percent to the Preferred Path, resulting in an average annual rate increase of 5.0 percent.

The More Aggressive Reliability Investments path would make a dramatic shift from the current "run-to-failure" approach to more proactive maintenance practices. The Utility could get ahead of repairs and replacements and build a modern system on a much faster timeline. The chart below shows the impact of the More Aggressive Reliability Investments option.

Figure 6: More Aggressive Reliability Investments

Project Title	Current Schedule	Current Annual CIP Budget (\$ millions)	Accelerated Schedule	Annual Budget for Accelerated Schedule (\$ millions)
Underground Cable Replacement	5 miles per year	2.5	10 miles per year	5.0
Neighborhood Cable Injection	22 miles per year	5.0	44 miles per year	10.0
Substation Transformer Replacement	1 per year	3.5	3 per year	10.0
Substation Automation <i>(RTU only portion of this project budget)</i>	Install Remote Terminal Units in 2 substations per year	0.4	4 per year	1.0
Wood Pole Replacement and Overhead Equipment Replacement	2,000 poles per year	6.5-10	3,000 poles per year	15.0
Transmission and Feeder Circuit Breaker Replacement in Substations	4-6 per year	3.0	8-10 per year	5.0
Substation Protection and Relay Replacements	4 per year	1.5	10 per year	3.0
Total		25.9		49.0

Path 5: Bolder Environmental Initiatives

Description

Seattle City Light has a long and proud history of environmental stewardship. City Light was the first electric utility in the United States to achieve zero-net carbon emissions and is setting the standard for reducing harmful emissions that lead to global warming. In addition, City Light plans to meet all future load growth through conservation and energy efficiency. City Light's current five-year conservation plan – assumed in the Current Level of Service (Baseline) path – exceeds I-937 mandated conservation goals.

One of the important shifts in the Bolder Environmental Initiatives path moves City Light into a new role of being the catalyst for new environmentally positive consumption of electricity for vehicles and non-vehicle uses, deployment of alternate forms of energy, highly aggressive conservation goals, and acceleration of PCB cleanup.

The Strategic Initiatives (Preferred Option) path includes a core theme on environmental leadership, including continued improvements in conservation and environmental stewardship and compliance with I-937 requirements to purchase renewable power or renewable energy credits.

Under the Bolder Environmental Initiatives path, City Light would promote electrification where it meets customer needs, reduces greenhouse gas and local air emissions and has financial and economic benefits for the Utility and its customers. Key investments would include:

- **Shift the purchase of greenhouse gas offsets to support state and local electrification projects (\$3.5 M):** Purchase local and state greenhouse offsets which are considered to be more expensive than those purchased elsewhere but would help build the local electrification industry market.
- **Encourage electricity for appropriate non-vehicle uses (\$1 M):** City Light has worked on pilot projects to use electricity to replace traditional gas or diesel generated power. City Light worked with the Port of Seattle to create a system where cruise ships use on-dock electricity rather than run engines to produce power. This path would continue that and similar work and move forward with other non-vehicle uses such as electric forklifts, dredges and other equipment.
- **Assist in the development of infrastructure for electric vehicles (\$0.5 M):** The City would encourage purchase of electric passenger vehicles by City Light customers and assist in the analysis and siting of fast chargers.

Additional key investments for the Utility to reflect a bolder and more aggressive commitment to environmental stewardship and leadership would include:

- **Provide incentives for customer solar PV installations (\$1.14 M):** This initiative would use ratepayer funds to provide incentives for customer installation of solar systems.
- **Build a large solar project in Eastern Washington (\$1 M):** City Light would build a utility-scale solar photovoltaic project in Eastern Washington.
- **Intensify customer energy efficiency goals (\$15.8 M):** City Light has an aggressive goal in energy efficiency in the Strategic Initiatives (Preferred Option) path, exceeding the Utility's I-937 regulatory target by two megawatts per year. The Bolder Environmental Initiatives path would increase the conservation goals by another four average megawatts per year to a total annual average of 18 megawatts.
- **Accelerate PCB-free utility initiative (\$1 M):** Much has been done in this area already, but the Bolder Environmental Initiatives path would accelerate the testing and replacement of transformers with even smaller parts per million of PCB's.

Analysis and Rate Implications

The Bolder Environmental Initiatives path maximizes investments to further reduce climate change impacts and further reduce environmental risk of City Light operations. It also aggressively increases energy efficiency and solar resources for customers.

The Bolder Environmental Initiatives path would increase the rate to customers by 0.4 percent annually. Combined with the Strategic Initiatives (Preferred Option), the average annual rate increase would be 5.1 percent.

Preferred Option Recommendation

A Shared Plan for the Future

Choosing a Strategic Path

Seattle City Light's vision for 2018 is to provide the best customer experience of any public utility in the nation. Achieving this will not be easy. In the coming years, City Light will confront a multitude of challenges to improve its power systems, especially transmission and distribution which are the nuts and bolts of delivering power. The realities of the aging distribution system and an aging workforce will require additional infrastructure investments and changes in how the Utility retains, attracts and trains its workforce.

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 Utility recommends the Strategic Initiatives option as the "preferred path" for policy changes and investments necessary in the 2013-2018 period. It is the best approach to position the Utility to deliver the best customer service in an affordable, predictable and environmentally responsible manner.

The Strategic Initiatives (Preferred Option) path includes new efficiencies and additional investments in reliability, technology and workforce development, and it incorporates modern and best business and financial practices. These are aimed at achieving a more streamlined, affordable and stable management of the Utility that will result in better productivity and superior services for all classes of City Light customers.

Implications of the Preferred Option

The Strategic Initiatives (Preferred Option) path begins with the investments and business practices outlined in the Current Level of Service (Baseline) and New Efficiencies paths but takes the Utility one step further to make intentional choices that will bring economic and productivity returns for the Utility and its customers. The Baseline and New Efficiencies options address past and current policy choices regarding debt, workforce productivity, and capital projects for the Alaskan Way Viaduct, Mercer Corridor, Boundary Dam and system substation and power distribution replacements (poles, cables, streetlights and metering). The Preferred Option adds the four following large initiatives:

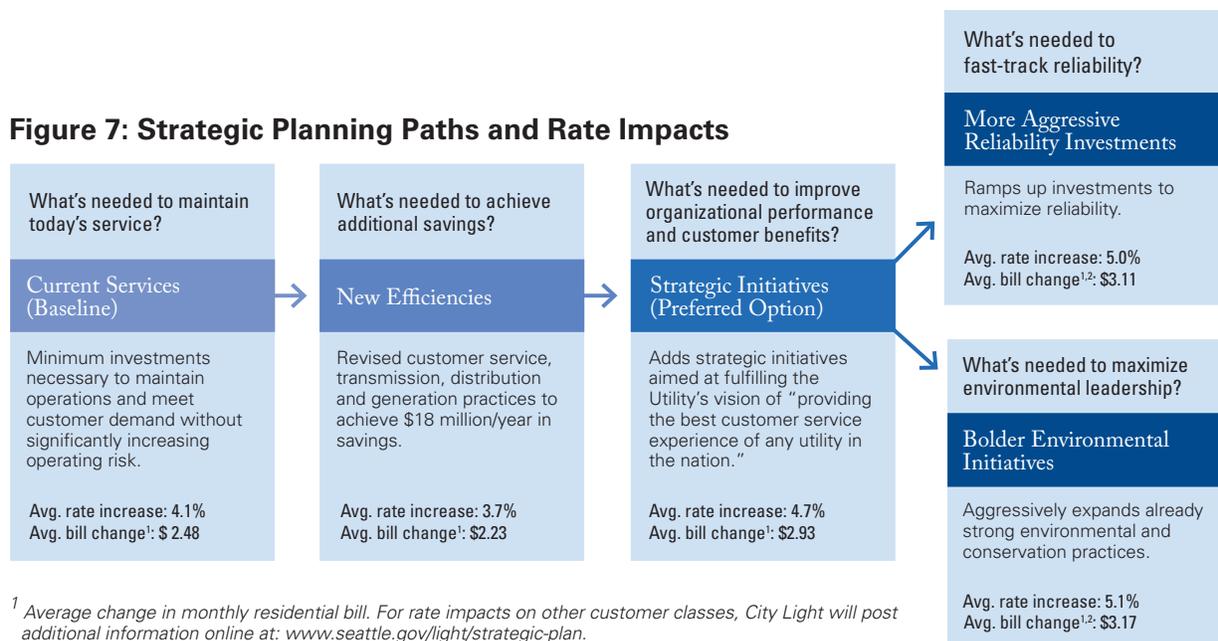
- Creation of the first new substation in over 30 years to provide additional flexibility and reliability to the City's power grid, located in North Downtown.
- Implementation of Advanced Metering Infrastructure (AMI) to address the existing aging metering system. This will allow for a more flexible rate system and interactive real time use by the Utility and its customers to reduce costs and shorten outages when they occur.
- Establishing a new wholesale revenue target adjustment to reduce the likelihood of unscheduled surcharges and make rate increases predictable and less costly over time.

- Attracting, training and retaining the workforce at Seattle City Light to increase productivity, improve management and accountability, and bring a sharper and stable business approach to the working of the Utility.

There are additional initiatives that are as important but have very little immediate impact on rates as most are internal practices that once implemented will improve customer service, reliability and long-term staffing and business costs.

The Strategic Initiatives (Preferred Path) envisions rate increases averaging 4.7 percent per year through 2018. It is estimated that the average residential monthly bill would rise from \$55.05 in 2012 to \$72.62 in 2018.

Figure 7: Strategic Planning Paths and Rate Impacts



¹ 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.

² The More Aggressive Reliability Investments and Bolder Environmental Initiatives paths could be pursued together, with an average annual rate increase of 0.7 percent.

Appendices

Technical documents

1. Strengths Weaknesses Opportunities Challenges (SWOC) Results
2. Financial Baseline Report
3. Priorities, Objectives and Outcomes

Public and stakeholder input

1. Outreach Summary (2011)
2. Outreach Strategies (2012)

Letter from City Light Review Panel (to be included with final Strategic Plan)

