Chapter 2 – The Policy Context: Setting the Stage for Planning

City Light's actions, including resource decisions, are determined within a policy framework. This framework includes State and federal laws as well as internal policies established by the Mayor and City Council and the Utility, and policies and guidelines of regional power planning organizations and agencies. This chapter describes the policies, laws and guidelines that have the most impact on City Light's Integrated Resource Planning (IRP) process, several of which are summarized below.

In August 2005, the first federal energy legislation in 13 years was passed. The Energy Policy Act of 2005 includes a wide range of provisions pertaining to energy efficiency, generating resources and fuel supply, energy research and development, transmission and climate change. The Western Governors Association adopted an initiative to develop renewable resources and build transmission. The Pacific Northwest region is developing resource and transmission adequacy standards and engaging the Bonneville Power Administration (BPA) in a dialogue about long-term delivery of power from the federal Columbia River power system.

Washington State recently passed a law requiring all large utilities to perform integrated resource plans, and another law that designated the Washington State Energy Facility Site Evaluation Council as the State authority for purposes of siting transmission facilities under the new federal energy legislation. Voters approved a renewable portfolio standard with passage of Initiative 937 in November.

Locally, the City of Seattle and Seattle City Light have maintained long-standing policies encouraging energy conservation and use of renewable resources, as well as prudent financial policies and the Utility's basic mission of providing reliable service. More recently, the City launched an initiative to reduce greenhouse gas emissions.

Meeting all the policy goals simultaneously is not possible, since they may conflict or overlap and may change rapidly. With so many organizations involved in creating laws and policies, there will always be significant uncertainty about the rules and environment under which City Light must plan to meet the electricity demand of its customers.

Table 2-1 summarizes the types of resource planning issues impacted by the various policies described in this chapter.

Table 2-1. Policies Affecting Resource Planning

Policy/ Issue	Energy Efficiency	Renewable Resources	Planning Methods	Transmission	Resource Adequacy	Power Supplies	Tax Credits	CO2 Offsets	Climate Change
Resolution 30144	❍	❍						❍	❍
Resolution 30359								❍	❍
Initiative 937	❍	❍	❍						
ESHB 1010			❍						
HB 1020				❍					
RCW 80.60		❍							
SSB 5101		❍					❍		
BPA Regional Dialogue						❍			
NPCC Policies	❍		❍		❍				
WGA Resolution 06-10	❍	❍		❍			❍		
EPACT 2005	❍	❍	❍	❍			❍		❍

City of Seattle

City Light planning and operations are guided by City and internal Utility policies relating to the environment and greenhouse gas emissions. In addition, City Light has been developing policies to manage the risks of being short or long on resources, and strategies to deal with energy surpluses and deficits.

Environment

City of Seattle and City Light environmental policies help guide the resource planning and acquisition process. These policies give general and specific direction about protecting natural resources and minimizing impacts in serving Seattle's electricity needs. City Light's Environmental Policy Statement calls for the Utility to avoid, minimize or mitigate impacts to the ecosystems that it affects and to consider environmental costs, risks and impacts when making decisions.

The Utility's Vision, Mission, Values Statement reaffirms that minimizing environmental impacts and enhancing, protecting and preserving the environment are key parts of Utility's goals. The potential for minimizing and mitigating environmental impacts in operating resources is also a consideration in evaluating specific energy resource opportunities.

Conservation and Renewable Resources

In 1992, City Council made responding to climate change an environmental priority. Out of its concern for the negative effects of greenhouse gases, the City Council passed Resolution 30144 in 2000 (see Appendix B). The resolution states that City Light should "use cost-effective energy efficiency and renewable resources to meet as much load growth as possible."

City Light has subsequently continued its long-term practice of acquiring conservation through Utility programs at an annual rate of 7 aMW, and contracted for the purchase of approximately 45 aMW of wind power (175 MW of capacity) from the Stateline Wind Project. The Council, as part of the annual reporting of Council Metrics, monitors Utility compliance with Resolution 30144.

Greenhouse Gases and Climate Change

Resolution 30144 also directed City Light to mitigate for greenhouse gas emissions from any fossil fuel use, and set a long-term goal of "Net Zero" annual greenhouse gas emissions, which City Light achieved in 2005. In 2001, the Greenhouse Gas Mitigation Strategy Resolution 30359 was passed, setting standards for calculating greenhouse gas emissions and mitigation projects. The climate change policy does not prevent City Light from acquiring electricity from resources that produce greenhouse gas, but does require that the Utility fully offset those emissions.

In February 2005, the Mayor proposed that the City achieve reductions in greenhouse gas emissions based on the Kyoto Protocol goal for the United States – a 7 percent reduction in greenhouse gas emissions compared to 1990 levels, to be achieved by the year 2012. See the news release at **http://www.seattle.gov/news/detail.asp?ID=4973&dept=40**.

To develop guidelines for meeting the goal, the Mayor appointed the Green Ribbon Commission on Climate Protection. The Commission, which includes 18 leaders from Seattle's business, labor, non-profit, government and academic communities, was specifically charged with developing local solutions to global climate disruption and developing a Climate Action Plan. The Action Plan calls on City Light to continue meeting load growth with conservation and renewable resources and offsetting emissions. It identifies other actions, including efficient use of natural gas and coordination between local gas and electric utilities in delivering efficiency services. See **http://www.seattle.gov/climate/** for more information.

To meet the requirement to offset greenhouse gas emissions, City Light estimates Utility emissions each year, and then purchases offsets; emission counts are trued up at the end of the year. Offsets are the result of actions that avoid, reduce or sequester greenhouse gas. Currently there are no federal or State laws regarding how offsets are defined, created and sold.

However, City Light has tracked guidelines being developed by non-profit and state government organizations and, with the assistance of external stakeholders, has established its own guidelines for counting emissions and selecting offsets. Some states, including California and several in the East (through the Regional Greenhouse Gas Initiative), are capping greenhouse gas emissions from power plants and other sources, and are planning for a market-based trading system for greenhouse gas offsets. City Light's sales to California utilities could be impacted by these regulations.

In the IRP analysis, the amount of greenhouse gas emissions of various resources and alternative portfolios has been calculated. The cost of offsetting those emissions are based on a range of potential mitigation costs that City Light would pay under its Council mandate, or that might be imposed through greenhouse gas regulation or taxes.

State of Washington

State laws and policies affecting resource planning are the recently passed Renewable Portfolio Standard (Initiative 937); requirements for integrated resource planning, facilities siting and net metering; and incentives for development of renewable resources.

Renewable Portfolio Standard Initiative

Passage of Initiative 937 in November 2006 requires Washington utilities with more than 25,000 customers to acquire cost-effective conservation and renewable resources for meeting their load. It also requires these utilities to evaluate the potential for cost-effective conservation in their service territories, and establish and make public an acquisition target for conservation.

The renewable resource portfolio requirements in the Initiative increase over time: at least 3 percent of a utility's load by January 1, 2012; 9 percent by 2016; and 15 percent by 2020. This requirement can also be met by using Renewable Energy Credits, often called green tags. A financial penalty would be imposed for failing to meet the requirement. Existing hydropower is not counted toward the target.

Two City Light resources are eligible resources for meeting the target: the Stateline Wind Project, at approximately 3 percent of current load; and efficiency upgrades resulting in additional power output at City Light hydropower plants (completed after March 31, 1999), at just under 1 percent of current load.

Integrated Resource Planning

The Legislature passed ESHB 1010 (Chapter 195, Laws of 2006) in the 2006 session requiring certain Washington utilities, including City Light, to regularly prepare Integrated Resource Plans (IRPs). Under this statute, IRPs must describe the mix of energy supply resources and conservation needed to meet current and future needs at the lowest reasonable cost to the utility and its ratepayers. They are also to consider cost-effective conservation and a wide range of commercially available generation technologies including renewable technologies.

Facilities Siting

HB 1020 (Chapter 196, Laws of 2006), passed during the 2006 Legislative session designates the Energy Facility Site Evaluation Council (EFSEC) as the State's authority for siting transmission facilities under the federal Energy Policy Act of 2005. The law extends EFSEC jurisdiction to electrical transmission facilities that operate in excess of 115 kilovolts within national interest transmission corridors and also to electrical transmission lines in excess of 115 kilovolts that connect a power plant to the grid.

Net Metering

Under RCW 80.60, Washington State requires utilities to provide net-metering service to encourage development of renewable and distributed resources by measuring the difference between the electricity supplied by a utility and electricity generated by a customer. The Legislature reviewed and amended the net metering statute during the 2006 session to raise the maximum allowable generating capacity for net metering systems to 100 kilowatts.

The list of qualified generating sources for net metering (solar, wind, water, fuel cells) was expanded to include biogas from animal waste. The definition of a net metering system was expanded to include combined heat and power (CHP) or cogeneration, where heat is "useful and used". The cap on the total amount of net metering generation allowed in a utility's system was also raised from the current level of 0.1 percent of a utility's peak demand in 1996 to 0.25 percent. In 2014, the cumulative net metering generating cap is raised again from 0.25 percent to 0.5 percent of a utility's 1996 peak load.

Incentives for Renewables

In 2005, the Legislature passed SSB 5101, an investment cost recovery incentive to support certain renewable energy projects. Customers generating electricity from a renewable energy system may seek an annual incentive payment from their participating electric utility up to $2,000 annually. Utility participation is voluntary. Participating utilities, such as City Light, are allowed a credit against their public utility tax equal to the incentives paid to customers.

Regional

Regional policies and guidelines relevant to utility resource planning are summarized below, including those of the Bonneville Power Administration, Northwest Power and Conservation Council and the Western Governors Association.

Bonneville Power Administration (BPA)

BPA is the federal power-marketing agency for electricity generated from projects owned and operated by the Army Corps of Engineers and the Bureau of Reclamation. Because City Light purchases approximately 40 percent of its power supply from the BPA, decisions affecting the marketing of this power at the federal level can significantly impact City Light's resource portfolio cost, risk and reliability. City Light also relies heavily on purchases of significant amounts of transmission from BPA to transfer power from City Light's remote generating resources to its load.

BPA customers, including City Light, have joined to promote long-term, cost-based contracts to restore and protect low-cost regional power in the face of periodic attempts to divert the benefits of BPA from the Pacific Northwest.

After many years of discussions, Pacific Northwest utilities have concluded that BPA should only sell the output of the Federal Base System (federal hydropower plus the Energy Northwest nuclear power plant). All publicly owned utilities should be responsible for acquiring new resources to meet any of their loads in excess of what is allocated to them from BPA. Investor owned utilities should get a financial settlement of

their residential exchange rights. Significant issues remain to be resolved.

City Light's contract with BPA expires in 2011. BPA is preparing a Policy Proposal about what new 20-year contracts will look like. In April 2006, BPA proposed that 16-year contracts be signed in November 2007 for service beginning in October 2011 and terminating in November 2027.

Northwest Power and Conservation Council

The Northwest Power and Conservation Council (NPCC) is a public agency created by the Pacific Northwest Electric Power Planning and Conservation Act of 1980. The agency is responsible for developing a regional power plan and implementing fish and wildlife programs. Its three major functions are to:

- Develop a 20-year electric power plan for the Northwest that will guarantee adequate and reliable energy at the lowest economic and environmental cost.
- Develop a program to protect and rebuild fish and wildlife populations affected by hydropower development in the Columbia River Basin.
- Educate and involve the public in the Council's decision-making processes.

Power Planning

The NPCC's 5th Power Plan (December 2004) forecasts a surplus of power for the next few years and predicts that no generation resources will be needed until at least 2010. A power surplus resulted when loads declined due to the recession after the West Coast power crisis of 2000-2001 and the decline in consumption by the aluminum industry. Regional loads fell to their early 1990s levels while many new power plants were built to respond to the power shortages experienced in 2000-2001. The Plan recommends that the region begin an aggressive conservation program, and lay the groundwork for building a large amount of wind generation and a relatively small amount of coal-fired generation that will be needed later.

Regional Resource Adequacy Standard

On May 10, 2006, the NPCC adopted a new regional standard that is intended to ensure an adequate supply of electricity for the Pacific Northwest. The regional standard is also expected to be included for the Northwest region within the broader West-wide efforts on resource adequacy by the Western Electricity Coordinating Council (WECC).

A letter dated May 1, 2006, from NPCC Chair Tom Karier described the new regional resource adequacy standard as follows:

> "The Pacific Northwest Resource Adequacy Forum (Forum) has developed a regional standard to be used for guidance in long-term resource planning. The Council adopts this standard for its own planning process and recommends that other entities in the region incorporate it into their planning efforts. The Council also recommends that this regional standard be submitted to the Western Electricity Coordinating Council (WECC) for inclusion in its development of West-wide adequacy standards.
>
> "The term 'standard' in this context does not mean mandatory compliance nor does it imply an enforcement mechanism. Rather, it is meant to be a gauge used to assess whether the Northwest power supply is adequate in a physical sense, that is, in terms of 'keeping the lights on.' It can be thought of as the minimum threshold for resource acquisition. However, the Council encourages utility planners to think beyond this minimum (as the Council did in its 5th Power Plan) and consider strategies that also protect against potentially bad economic outcomes.
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> "The regional standard consists of a metric (something that can be measured) and a target (an acceptable value for that metric) for both energy and capacity capabilities of the system. One of these targets will be the limiting constraint for a region or sub-region in the West. For the Northwest, the energy target is most likely the limiting factor."

NPCC's regional adequacy standard is intended to address the unique characteristics of the Pacific Northwest, including the region's winter-peaking loads (compared to summer-peaking loads across most of the West) and heavy dependence on

hydroelectric generation. The energy target for the Pacific Northwest is for resources to equal the expected annual load.

Western Governors Association

In June 2004, Western Governors adopted a resolution in which they agreed to examine the feasibility of developing 30,000 MW of clean and diverse energy by 2015, to increase energy efficiency 20 percent by 2020, and to provide adequate transmission to meet the region's needs through 2030.

In 2005, they created the Clean and Diversified Energy Advisory Committee (CDEAC) to oversee the work of seven task forces that examined the feasibility of reaching those goals. The task forces prepared reports with recommendations in the following areas: energy efficiency, advanced coal, geothermal, wind, biomass, solar and transmission.

At the June 2006 annual meeting, the Western Governors adopted Resolution 06-10 agreeing to draw upon the full range of recommendations contained in the CDEAC report as a basis on which to advocate for energy policy changes at the federal and regional levels and their respective states, where appropriate. Further, they agreed to support, among other things, federal energy polices that:

- Provide for a long-term (10-year) extension of the production tax credit for all renewable energy technologies, with complementary policies for consumer-owned utilities and tribes.
- Provide tax credits for energy efficiency investments.
- Raise the cap on the residential investment tax credit to $10,000 for renewable energy or distributed generation systems.
- Support improvements in national appliance efficiency standards.
- Encourage adequate funding for state programs, including energy efficiency, clean generation and storage technology research, development and demonstration programs.
- Encourage federal agencies to collaborate with Western states and regional organizations on facility siting and infrastructure planning, consistent with sound, sustainable environmental practices.
- Extend the federal Integrated Combined Cycle Combustion Turbine (IGCC) tax credit for five years and provide a tax credit program for carbon capture and sequestration for at least five years.
- Support increased federal support and tax incentives for the construction of multiple pilot facilities that demonstrate IGCC in the Western United States in high altitude areas using western coal.
- Encourage proactive, transparent, stakeholder-driven regional transmission expansion planning, defer to existing regional and sub-regional processes that meet such standards, and reform imbalance penalties to allow for greater use of the existing transmission system.

Federal

The primary federal statutes relevant to energy resource planning are the Clean Air Act, Clean Water Act and Energy Policy Act of 2005.

Environmental Regulations

At the federal level, recent EPA regulations (the Clean Air Interstate Rule and the Clean Air Mercury Rule) will set tighter limits for emissions of common air pollutants from power plants: oxides of sulfur and nitrogen, and mercury. Other regulations will further limit emissions of particulate matter. These regulations may become more restrictive during the planning period of the IRP, and states may set their own more restrictive standards as well. Meeting these limits can be a significant technical challenge, as well as a significant additional cost, for power plants that burn fossil fuel.

Federal Clean Water Act regulations are also becoming more stringent. Power plants that use water for cooling could be affected by these changing regulations, as restrictions increase on removing water from, and discharging cooling water into, surface and groundwater sources. These restrictions are often related to protecting habitat for fish and wildlife, as well as protection of human health.

The Endangered Species Act (ESA) can affect the potential to site new power plants and transmission facilities. Currently, hydropower operations are significantly regulated because of their potential impacts on ESA-listed fish species. As new

species are listed, and as new information about hydropower operations' effects on those species becomes available, the operational rules may change. Consequently, this could possibly change both the amount and the timing of hydropower output. This issue is extremely important to City Light given its reliance on both its own hydropower facilities and on the Bonneville Power Administration's supply.

Energy Policy Act of 2005

In 2005, the first federal energy legislation in 13 years addressed a wide range of issues including energy efficiency, generating resources and fuel supply, the environment and transmission (**http://energycommerce.house.gov/108/energy_pdfs_2.htm**).

Energy Efficiency

Several provisions related to energy efficiency may influence the acquisition of conservation resources within City Light's service area. The Act authorizes $50 million in funding annually between 2006 and 2010 for state-administered energy efficient rebate programs for "residential Energy Star products". These include appliances, heating and cooling systems, home electronics, lighting, and windows, doors and skylights. The legislation establishes financial grants for state-run programs to achieve at least 30-percent efficiency improvements in new and renovated public buildings.

The Act provides for a number of tax deductions or credits in 2006-2007, including the following:

- A $2,000 tax credit to contractors who build new homes using 50 percent less energy for cooling and heating than a comparable home built to the 2003 International Energy Conservation Code.
- Tax credits of varying amounts to homeowners for energy efficiency improvements made to their primary residence. Qualifying improvements include efficient windows, doors, insulation, electric heat pumps, geothermal heat pumps, electric heat pump water heaters, central air conditioners, and natural gas, propane or oil water heaters.
- Varying tax credits to manufacturers of qualifying efficient appliances manufactured in the U.S. Eligible appliances include Energy Star dishwashers, clothes washers and refrigerators.
- A tax deduction of $1.80 per square foot for commercial buildings that achieve a 50-percent reduction in annual energy cost subject to certain conditions.

Generation Resources and Fuel Supply

Renewable Energy

The Production Tax Credit (PTC) for certain renewable generation was modified and extended through December 31, 2007. The credit covers facilities producing electricity from wind, closed- and open-loop biomass, geothermal, solar, small irrigation power, landfill gas, trash combustion, and certain hydropower facilities that meet placed-in-service deadlines. For most renewable resources, the PTC is currently equal to about 1.9¢/kWh for electricity produced over a 10-year period. The Act also created the Clean Renewable Energy Bond program, which can be issued to construct renewable generating resources by rural electric cooperatives, municipal governments and tribes.

Hydroelectricity

The Act authorizes $100 million for hydroelectric efficiency improvements at existing dams and modernizes the hydropower laws to allow increased production. It creates a 10-year tax credit that will apply to "qualified hydropower production" if placed in service prior to January 1, 2008. Relicensing provisions are amended to allow applicants or other parties to propose alternatives to conditions set by the agencies.

Natural Gas

The Act confirmed that the Federal Energy Regulatory Commission (FERC) has exclusive authority over siting, construction, expansion and operation of liquified natural gas (LNG) import terminals located onshore or in state waters. In addition, it confirms FERC's role as the lead agency for National Environmental Policy Act compliance and for purposes of coordinating all applicable Federal authorizations. The Act also confirms existing rights of states to review LNG terminals under the Coastal Zone Management Act, Clean Water Act and Clean Air Act.

Coal

The Act authorized $200 million per year from 2006 to 2014 for a federal government cost-share program to conduct demonstrations of commercial-scale advanced clean coal technologies. It also authorized $3 billion in the form of loans,

cost sharing or cooperative agreements to encourage new sources of advanced coal-based power generation, and to upgrade existing sources of coal-based generation to improve air quality to meet current and future obligations of coal-fired generation units regulated under the Clean Air Act. The Act authorized a total of $1.095 billion over three years in funding for the Department of Energy (DOE) clean coal research and development program, and $75 million over three years for a DOE program to develop carbon capture technologies that can be applied to the existing fleet of coal units.

Innovative Technologies

The Act established a loan guarantee program to provide incentives for "innovative energy technologies" that avoid, reduce or sequester air pollutants or greenhouse gases and use technologies improved in comparison to those in commercial use. Eligible projects include renewable systems, advanced fossil energy technologies (including coal gasification), hydrogen fuel cell technology, advanced nuclear energy facilities and others. There is no cap on the amount of funds used for this program.

Nuclear Energy

The Price-Anderson Act was re-authorized for commercial nuclear power plants and DOE contractors for 20 years; it increases the indemnification for DOE contractors to $500 million. In addition, it authorizes construction of a nuclear reactor at the DOE Idaho National Laboratory that will generate both electricity and hydrogen, and creates a federal loan guarantee program to encourage the design and deployment of innovative technologies including advanced nuclear power plants.

Transmission

To promote investment in electric transmission infrastructure, FERC is directed to do an incentive rate rulemaking and provide for participant funding. In addition, it provides for expedited siting processes on both federal and private lands, and for the use of advanced transmission technologies. The Act established an Electric Reliability Organization to develop and enforce reliability standards for the bulk transmission system. The Act also requires FERC to identify the steps needed to make available real-time information on the functional status of all transmission lines within each of the transmission interconnections, and to implement such a transmission information system.

DOE is directed to study electric transmission congestion and possible designation of "national interest electric transmission corridors." The designation of such corridors could have a significant impact on the development of new electric transmission facilities. Congress has given FERC "backstop" authority to grant permits for the construction or modification of electric transmission facilities within these corridors in certain situations, including where the state siting authority has withheld approval. (In Washington, HB 1020 designates the State EFSEC to prevent a FERC backstop, as described above under State statutes.)

Climate Change

Climate change actions directed by the Act include forming a Climate Change Technology Advisory Committee charged with integrating existing federal climate change reports and activities. The Committee is to submit a national strategy to promote the deployment and commercialization of greenhouse gas intensity reductions, and to identify barriers to these technologies and ways to remove those barriers. Best Management Practices are also to be developed for calculating, monitoring and analyzing greenhouse gas intensity.

Amendments to the Public Utility Regulatory Policy Act (PURPA)

The Act amended PURPA to repeal the requirement for mandatory purchase from qualifying facilities by electric utilities if a competitive market exists, and established new criteria for qualifying cogeneration facilities.

The Act also amended PURPA to require state regulators and certain non-regulated electric utilities to consider five new standards based on the purposes of PURPA: net metering, fuel sources, fossil fuel generation efficiency, smart metering and interconnection. Washington's IRP law and City Light's IRP process meet the consideration and determination requirements required under PURPA. City Light does not anticipate the need for substantial discussion on the fuel sources and fossil fuel generation efficiency standards, since they are covered by existing State law.