

Seattle City Light Review Panel Role in Reviewing Rates and Rate Policy

Document dated June 10, 2011

This document sets forth the portions of Ordinance 123256 (Creating Review Panel) that relate to the Review Panel's role in reviewing rates and rate policy. The text in boxes is language from the Ordinance. Below each text box is an explanation to provide context and define terms used.

Section 4. Role of the Panel

(d) **review changes to City Light's rates not already authorized by the Seattle Municipal Code** and provide an opinion to the Mayor and the Council on the adequacy and prudence of such rate changes in light of **adopted planning assumptions and financial policies**.

What does this mean?

"Changes not already authorized by the Seattle Municipal Code" means changes to rates not included in the "automatic rate change authorizations" now in place. There are two such "automatic rate change authorizations." These include:

1. **Pass through of BPA rate changes:** City Light is authorized to adjust rates to pass through BPA contract cost changes without further Council authorization (SMC 21.49.081, Council ordinance 120247 of January 2001).
2. **Adding Rate Stabilization Account (RSA) surcharges** within certain prescribed limits—this does not require further Council authorization.*

Accordingly, matters that would be brought to the Review Panel would include the creation of any new automatic type rates, **or** changes in existing "standard" rates. For example, "standard" rates could increase or decrease as a result of budget changes, cost allocation methodology changes, or changes in rate design components. .

Adopted planning assumptions are assumptions in the approved budget, financial and rate policy resolutions, and, eventually, the strategic plan—all adopted by the City Council.

There are two core *financial policies*:

1. City Light's electric rates must be set at levels sufficient to achieve a debt service coverage ratio of 1.8.
2. City Light must manage its capital improvement program so that on average over any given six-year capital improvement program it will fund 40% of the expenditures with cash from operations.

* The limits on RSA surcharges that can be added without Council action are increments of 1.5% up to a total of 4.5%. The level of the surcharge authorized depends on the level of funds in the RSA (which in turn is dependent on quarterly net wholesale revenue received by City Light).

Section 4. Role of the Panel

(e) in its second year or earlier, and at least once every three years thereafter, **assess City Light's rate design** to ensure that rates send the appropriate signals to customers to **use electricity efficiently**; and

What does this mean?

Rate design means the way City Light structures its rates to recover costs from customers in accordance with adopted rate policies. Assessing rate design means examining both the rate policies and the more detailed decisions that are made to implement these policies. The focus of this requested review is on promoting *efficient use of energy/conservation*.

For example, one of the Council's rate policies (as previously approved and reflected in current residential rates) says that rates should be designed on the basis of ascending charges for increasing amounts, or *blocks*, of energy where blocks are feasible. This rate design policy is intended to send price signals that encourage conservation. To implement this policy, the City has a variety of rate design options, including:

- Which *rate schedules* (also called "tariffs") should incorporate pricing by energy blocks?
- How many blocks of energy should be established?
- How big should each block be?
- How much should rates increase from block to block?

The most common price elements in electric rate schedules are:

- "*energy charges*" --prices per kilowatt-hour used
- "*demand charges*" --prices per kilowatt for the *maximum level* of energy consumed during a fixed period of time (for example, during a billing month); and
- "*base service charges*" or "*customer charges*"-- prices per day or month that do not vary with consumption

Current elements of City Light's rate design that send conservation price signals are the first and second block structure of residential rates, and the peak and off-peak structure of large commercial/industrial customer rates. Other types of rates that might send similar signals include interruptible rates (which might help the utility limit the amount of infrastructure it must install to meet demand), or baseline rates where a customer is allowed to use a set amount of energy at "normal" rates and additional energy use carries a very high price.

Section 4. Role of the Panel

(f) in its second year or earlier, and at least every three years thereafter, **assess City Light's implementation of marginal cost allocation among customer classes** to ensure that it provides a fair allocation of costs among customer classes and takes account of changes in costs and consumption.

What does this mean?

The Review Panel is being asked to consider how *fairly* the *marginal cost allocation* approach used by City Light is working.

Every electric utility needs to establish a “*revenue requirement*,” i.e., what customers need to pay in order for it to cover its authorized expenditures. One goal of the strategic plan is that it will help map out this revenue requirement over the planning period. The revenue requirement needs to be spread out in some way to customers. All utilities divide their customers up into groups called “*customer classes*.” These groups have some consumption characteristics in common which distinguish them from members of other groups. Differences include when they use the most energy, how much equipment it takes to provide that energy to them, and the cost of the meter that measures their use. These differences affect the cost to provide service. The goal is for the cost allocation to reflect these differences.

“*Fair allocation of costs*” among customer classes is something of an art in the utility industry; everyone does it slightly differently. Again, generally speaking, the goal is to allocate the revenue requirement among customer classes based on the costs of providing service to those customer classes. City Light uses a “*marginal cost allocation*” approach for cost spreading. Marginal costs measure how a utility’s cost picture changes when new load is added or new customers join the system. Per Council direction, City Light has used a marginal cost of service study as the basis for apportioning the revenue requirement to customer classes since 1980. The intent behind this approach is to send the appropriate cost signals to users to be efficient in the use of the resources. City Light calculates marginal costs for all customer classes and allocates the revenue requirement to them by percentage shares of marginal costs. For example, if a given customer class is responsible for 20% of marginal energy costs, it will be allocated 20% of the revenue requirement related to energy.

Taking account of changes in costs and consumption means that the utility should perform a cost of service study at least every few years. City Light last did a cost of service study in 2006.

Section 6. Rate Setting.

The Council will not adopt rate changes proposed by the Mayor for at least sixty days after the Council Bill authorizing the rate change has been referred by the Council to the relevant standing Committee to allow the Panel sufficient time to review the proposed change and sufficient opportunity for the public to provide input to both the Panel and the Council. However, this restriction does not apply to rate changes initiated by the Council to address emergent issues or to protect the financial integrity of the utility.

What does this mean?

The Council expects the Review Panel to provide input on proposed rate changes, unless there is an emergency.

The *sixty day* waiting period is a new requirement adopted to give more time for rate review and to highlight the Review Panel’s role in this process, making sure there is sufficient time to receive public comment. The Review Panel will, of course, have its own calendar of activities and will begin considering any new rate proposals long before they get to the Council’s designated committee.

When City Light wants to change rates, it first discusses them with the Mayor and the Mayor makes the actual proposal to the Council's Energy, Technology and Civil Rights committee (ETCR). This committee reviews and discusses the proposals with City Light, sometimes making minor changes and other times proposing significant alternatives. The Full Council considers the alternatives and adopts one after providing hearings in which the public can comment.

Occasionally, the Council adopts City Light rate changes without allowing much time for public review. This happened, for example, during the 2001 energy crisis, when power costs were increasing exponentially from one day to the next and the utility could not continue to provide energy to customers without more revenue to cover the cost.

Notes on the policy framework (proposed Council resolution) for City Light rate setting objectives, rate design policies, and marginal cost allocation among customer classes.

The boldface text below is the operative part of a proposed resolution that is expected to come before the Council for approval within the next two months. It would reinstate prior rate and cost of service policies that have been in place for many years, but which were repealed by Council Resolution 31187 of March 22, 2010, which established new financial policies for City Light. These rate and cost of service policies were enshrined in Council Resolutions 30933 of 2006, 30685 of 2004, and 28004 of 1989. The most recent of these, 30933, was very comprehensive, including not only rate and cost of service policies but also financial policies and various work plan items for 2007. It had been effectively changed by other resolutions and was in part obsolete, so the Council preferred to re-establish the relevant rate and cost of service policies in a new resolution. In contrast to ordinances, which amend the Seattle Municipal Code, where legal changes are retained in their most recent form, there is no repository for Council resolution changes. Therefore, the Council creates a new resolution when it wants to change prior policy direction.

Differences between Resolution 30933 and the proposed one, with respect to rate and cost of service policies are minor: the proposed resolution includes a reference to the strategic plan, “conservation” in the old resolution becomes “efficient use” in the new one (with the addition that the policy is meant to promote conservation), rate “stability” becomes rate “predictability,” and the policy paragraphs are in some cases a little more explanatory. A comparison of the language of Resolution 30933 and the proposed resolution, with respect to the rate and cost of service policies in the proposed resolution, is attached as Appendix A. An Appendix B, which highlights the sections of 30933 not included in the proposed resolution, is also attached.

Section 1. Long-Term Rate Setting Objectives

The following long-term rate setting objectives for City Light are hereby adopted. The objectives are intended to provide a general policy framework that can be consistently applied to future rate reviews. Because some policy objectives may unavoidably conflict with others, they should be considered in their entirety to strike an appropriate balance among them when developing, reviewing, and prescribing electric rates for customers of City Light.

A. Revenue Requirement

City Light’s revenue requirement should be consistent with the strategic plan and financial policies established for it by the City, and electric rates should be sufficient to meet its annual revenue requirement.

The revenue requirement equals the revenue that City Light plans to receive from customer rates. However, it should be noted that the utility does not get all the revenue it requires solely from customer rates. About 18% of its revenue comes from other sources, such as sales of wholesale power to other utilities, grants, rental of space on its utility poles to wireless service providers, and late bill payment fees. The strategic plan proposes that the annual revenue requirement, the annual budget and the strategic plan should all be in alignment. Although this point may seem

obvious, it has not always been the case. For example, the budget has sometimes been increased when rates and other sources of revenue have remained the same or even decreased.

Consistency with financial policies means that the revenue requirement is to be set a level that satisfies the Council's direction about policies that are meant to insure the utility's financial strength. The most recent financial policy resolution is #31187 of March 2010. The two policies that City Light is to follow are:

1. Electric rates should be set to achieve 1.8 debt service coverage (i.e., 1.8 times the amount of interest and principal City Light owes to bondholders in a year).
2. Over any given six-year capital improvement program City Light will fund 40% of the expenditures with cash generated from its own operations (i.e., City Light is not to rely exclusively on debt/bonds to fund its capital expenditures).

Policy options:

- Debt service coverage (DSC) can be decreased in order to decrease the customer revenue requirement in the short term but that means more capital will be funded with debt, and most likely at a higher interest cost, leading to higher rates in the future. Likewise, DSC can be increased, leading to higher customer rates in the short term but lower rates in the long term. Interest cost tends to decrease with higher DSC ratios because bond rating agencies give higher ratings to entities with more conservative financial policies. City Light's DSC policy has been as high as 2.0, e.g., 2005-2009. Many utilities with credit ratings as high as City Light's have higher debt service coverage targets.
- The mix of funding of capital expenditures could also be changed. Funding more capital with debt can provide lower rates in the short term but higher rates in the longer term, whereas funding more capital with cash from operations provides the reverse. The current policy ensures that City Light's overall debt to capitalization ratio stays at or below 60%, which represents a reasonable debt burden for the utility to carry. In contrast, as a result of the 2000-2001 energy crisis, the Utility's debt to capitalization ratio increased to 84% in 2003-2004. That put stress on the Utility's credit ratings, and would have made further borrowing difficult or very high cost.

B. Customer Payment of Costs of Service

Rates should be based on the costs of service to the customer, and should reflect changes in the cost of service over time.

In most rate reviews, City Light performs a cost of service analysis to determine if costs among customer classes have changed. Costs of service include energy, transmission, distribution, metering/billing, etc. These costs of service are the basis for determining what constitutes a fair apportionment of the total customer revenue requirements to the different classes and, therefore, the rates that each class pays. The emphasis of this policy as compared to the Equity policy mentioned below is on making sure the costs of service are reviewed periodically.

Policy options:

Decisions are sometimes made not to conduct a new cost of service study when rates are changed. This occurred in the rate changes for 2010-2012. For these years, the Council preferred across-the-board (same percentage for each class) rate increases. Implicitly, that means

that today's rates continue to be based on the cost of service study done in 2006 as the basis for 2007-2008 rates.

C. Equity

Rates should reflect a fair apportionment of the different costs of providing service, such as providing energy or distribution, among groups of customers, generally referred to as "customer classes" or "customer rate classes."

Historically, "fair apportionment" and "equity" have been interpreted to mean that customer rates should be based as closely as possible on the costs City Light incurs to serve each customer class. The emphasis of this policy as compared to the policy above on Customer Payment of Costs of Service is on the apportionment of such costs. It is recognized that perfect assignment of costs to customers would mean an individual rate for each customer, if such perfect assignment were possible. However, recognizing that most costs must be shared and that customer classes must be established for reasonable and cost-effective administration of rates, this policy notes that the cost apportionment methodology should be as fair as possible even though not perfect.

Policy options:

Decisions are sometimes made not to charge some customer class(es) the full cost of service in their rates as determined by the analysis. An obvious example is the lower rates charged to low-income customers. In the past, but not since 2006, the Council sometimes adopted a policy of "gradualism," which meant that if a particular policy change (e.g., changing the customer classification system) ended up causing large disparities in rate increases or decreases among rate classes, the transition to rates based strictly on the calculated costs of service could take place gradually, over two or more rate change periods. Since ratepayers must cover all of the revenue requirement, the effect of this policy was that temporarily some customer classes paid more and some paid less than strict costs of service would dictate.

D. Efficiency

Rates should provide incentives for the efficient use of power and power distribution resources.

"Efficiency" means that customer rates should be designed to encourage customers to conserve energy and reduce peak demand where it is reasonable for them (as they decide) to do so. It has been Council policy since the 1980s that customers should pay energy prices that reflect the cost to society of their energy use. That means that City Light sets various elements of rate schedules as close as possible to marginal cost; currently, these elements include the second block rate in residential rate schedules and the time-of-use rates in large customer rate schedules. Time-of-use rates are higher during high cost (Monday-Saturday daytime) periods and lower during low cost (nighttime and Sunday) periods. Marginal cost means the cost of adding (or subtracting) one more kilowatt hour of energy, kilowatt of peak demand, or customer.

Policy options:

Sometimes it happens that other rate-setting goals conflict with that of setting rates at the highest level, to achieve the maximum conservation. For example, the revenue requirement constrains

full use of marginal costs to set rates. City Light is not allowed to recover more than the approved revenue requirement but marginal costs generally total to an amount greater than the revenue requirement. If City Light actually set all rates at marginal cost, it would collect too much revenue. Another example is that maintaining a base service charge (also called a “customer charge”) and a low first-block energy charge for residential rates may not allow the second-block charge to be set as high as the marginal cost because that might cause the total average rate multiplied by consumption to exceed the total customer class revenue requirement target. A third example, which has applied in past rate changes, is that in the interest of rate stability, rates might be changed more slowly in relation to each other than a strict application of the marginal cost principle might dictate.

On the other hand, it could be decided that certain elements of rates should be set even higher than marginal cost to stimulate more conservation. That could mean, for example, that energy rates would be set at or higher than marginal cost, with a negative customer charge to make sure the revenue collected does not exceed the revenue requirement.

E. Rate Predictability

The levels and structures of base rates (that is, before application of any surcharges) should be changed in an orderly manner over time, so as to avoid disproportionate rate changes in any given year for some customers or customer classes. For example, the results of changes in costs of service that might cause some customer classes to receive large rate increases whereas other classes would receive little or no rate increase should be phased in gradually.

In the past (Resolutions 30685 and 30933), this goal was phrased as rate “stability.” However, in both instances it refers to the goal of moderating rate changes, by phasing in large rate increases over time so as to provide ample customer notice and not cause undue hardship.

Policy options:

While customers clearly want predictability in electric rates, it sometimes happens that rate changes justified by cost changes are delayed, for example, due to the state of the economy. After several years of little or no rate increases, this can lead to larger rate increases than envisioned by this policy directive, as occurred in 2010.

F. Public Involvement

City Light customers should be provided clear and understandable information and opportunities for meaningful participation in the City’s electric rate decision process.

In the past, public involvement has taken the form of temporary citizen rate review committees and public forums on rate changes. We now have the Review Panel which began its work in 2010 and Web pages where customers can find information on rates as well as provide their views on proposed rate changes. In addition, the Council typically schedules several meetings in which citizens are invited to comment on proposed rate changes. City Light also sends information on proposed changes to rates through its bill stuffers and monthly newsletter to large customers.

Policy options:

Timetables and media for the provision of rate change information to customers could be established. Likewise, the type of information to be provided could be explicitly specified. Some have also suggested appointing a rate advocate for customers, or adding process steps to ensure greater involvement by the Review Panel in rate setting.

Section 2. Rate Design Policies

To further the City's desire to encourage the efficient use of both power and power distribution resources, City Light's base rates should be designed and structured to include the following principles:

A. Ascending Rates for Energy Blocks

Rates should be designed on the basis of ascending charges for increasing amounts, or blocks, of energy, where blocks are feasible.

In order to encourage energy conservation, City Light has had blocks of energy priced at ascending charge amounts for residential rate schedules for many years. It has been considered feasible to design rates for the residential classes this way, but not for non-residential classes, because the variation in residential consumption among customers is much less than that of other classes. Residential rate schedules currently have two blocks: a small first block of energy provided at a low price to all customers, and a higher price for all energy consumed in excess of that first block. Currently, the first block of energy amounts to 10 kWh/day April-September and 16 kWh/day October-March. In the recent past, City Light had three residential energy blocks with ascending energy charges (July 2001-December 2006).

Policy options:

- Residential block sizes could be changed; e.g., more or less energy could be included in the first block and first block energy amounts could be equalized or more differentiated in different seasons of the year.
- More blocks for the residential class could be re-established, or the block structure could be eliminated in favor of one energy charge.
- A block structure could be extended to other customer classes, though it might be difficult to determine and justify block sizes.
- Declining block rate schedules could also be established. Prior to the Public Utility Regulatory Policies Act (PURPA) of 1978, declining block rate structures were common, i.e., customers paid more for the first block of energy they used and less for higher levels of consumption. This kind of structure made sense when utilities were trying to encourage more use of electricity. It does not make sense now, when utilities are trying to encourage less, i.e., conservation. In fact, PURPA forbids the use of declining blocks for the energy portion of rates (i.e., prices per kilowatt-hour) unless a utility can show that costs actually decline as more energy is used.

B. Demand Charges

Rate schedules with demand charge components should not contain declining demand charges.

“Demand charges” are prices in rate schedules that bill the customer for the maximum energy use over a very short time period (City Light uses the highest 15 minutes) in a month. This type of charge is in addition to “energy charges,” which are prices for every kilowatt-hour of energy used in the month. This policy is similar to that above with respect to ascending blocks of energy. It is meant to encourage conservation of energy, and especially to encourage larger customers to reduce their maximum energy demand. With reduced maximum demand, the utility can avoid purchasing more energy in higher cost periods and building more line carrying capacity.

Policy options:

Demand charges that decrease as demand increases could be established, though this would be difficult, if not impossible, to justify on a cost basis.

C. Residential First Block

The residential first block of electricity is intended to meet the essential needs of residential customers and should be priced at or below the average cost of service to those customers. Essential needs include the electricity used by a typical residential customer for cooking, refrigeration, and lighting.

While PURPA required that rates be set based on costs of service, it allowed a low-priced residential first block of energy as a “lifeline” rate to cover essential needs. City Light has had this type of residential rate structure since 1980. The amounts of energy sold at the lower first block price have not changed since that time (300 kWh in summer months, 480 kWh in winter months), except that they are now expressed in kWh per day.

Policy options:

- As noted above, the size of the residential first block of energy could be changed.
- The first block price can and does fluctuate depending on policies regarding base service charges and the pricing of additional consumption.

D. Rate Discounts

When a customer provides a portion of City Light’s service infrastructure (such as a transformer owned and maintained by the customer), or when the customer is metered for technical reasons on the utility’s side of the transformer (instead of the customer’s side, like most customers), a discount from the customer’s normal rates will be provided.

Except for amounts collected from individual customers via installation charges for new service connections, City Light sets rates as if the utility purchased all equipment needed by a customer for electric service, including transformers. A few customers, however, require specialized transformers which the utility does not purchase. Since the utility does not have to provide and maintain these transformers, the customers that have them receive a billing discount equal to the marginal cost savings to City Light.

Rates are also set as if all customers had their energy consumption metered on the customer’s side of the transformer, i.e., after energy flows through the transformer. Transformers increase or decrease voltage from one circuit to another. In the case of City Light transformers, they

reduce the voltage of energy flowing into a customer's service to a level that can be used effectively by the customer. Since a small amount of energy is lost as it flows through a transformer, the few customers that are metered on the utility's side of the transformer (called "primary metering") would be paying for energy they are not receiving if they did not receive a discount. The discount reduces the kilowatt-hours for which the customer is billed, based on a formula that calculates the losses through the transformer.

Policy options:

A decision could be made not to provide discounts, but that would be contrary to the policy regarding customer payment of costs of service (Section 1, B).

E. Time-of-Use Rates

Cost-effective time-of-use rates, whether seasonal, daily, or hourly, shall be implemented where such differentiation options are feasible.

This policy comes from a PURPA standard. City Light had seasonally differentiated rate schedules (i.e., higher winter rates, based on higher marginal energy costs) for all customer classes except streetlights from the 1970s through early 2001. The only remnant of seasonal differentiation that remains today is the amount of energy in the first block for residential rate schedules.

Hourly time-of-use rates can be implemented where meters capable of recording consumption at different times of the day are installed. City Light has had such rates for customers with maximum monthly demands of 1,000 kilowatts or greater since the mid-1980s. The goal of hourly time-of-use rates is to provide an incentive to customers to shift energy consumption and/or peak demand use from higher cost to lower cost periods by charging higher prices (rates) during the utility's higher cost periods. Currently, customers in the Large and High Demand General Service classes pay higher "peak" rates Monday-Saturday 6 a.m.-10 p.m., excluding major holidays, and "off-peak" rates at all other times.

Policy options:

- Seasonally differentiated rates could be re-established if warranted by differential costs.
- Medium Network General Service customers (with maximum demand of 50-999 kW/month) located in downtown have time-of-use meters capable of hourly consumption measurement; hourly time-of-use rates similar to those of large customers (with maximum demands of 1,000 kW/month or more) could be established.
- More hourly time-of-use periods or periods which are different from those in effect today could be established if warranted by differential costs.
- If all City Light customers had time-of-use meters, such as "smart" meters, the utility could offer all customers the option of time-of-use rates, thus providing greater customer choice and more opportunities for them to reduce their bills by operating certain home appliances or parts of their business during lower priced off-peak hours.

F. Low Income Rates

In all of its actions, the City has an interest in protecting the most vulnerable members of the community. Rates for qualified low-income residential customers shall continue to be lower than regular residential rates by at least 50%.

Residential customers that qualify for low-income rates currently receive a 60% rate discount. From 1993 through early 2001 they received a 50% discount per Council policy. However, during the energy crisis of 2001, when most City Light rates were raised four times, low-income rates were raised only twice, and half as much as standard residential rates. This led to the 60% discount which remains today. In the 2007-2008 rate case, which resulted in a comprehensive rate decrease averaging -8.4%, the Council decided to continue setting low income rates at 40% of the standard residential rates. They did not "true up" the low income rates to 50% of the residential rates because that would have meant that the low income customers would get little to no rate decrease. Since then, rate increases have been across-the-board (equal percentages for all rate classes), which has continued the 60% discount. City Light has provided low-income rate schedules since 1986 and a low-income discount of some sort since 1977.

What other local utilities offer:

- Snohomish PUD provides a three-tiered discount graduated by income level, offering 20%, 40% and 60% subsidies to low-income customers. The discount is available to customers who have a household annual income that is below 125% of the federal poverty level, or senior citizens who are 62 years of age or older and have a combined household disposable annual income of less than \$25,988.
- Tacoma offers low-income senior and /or low-income disabled customers a 30% discount. Eligibility is limited to customers who:
 - Are 62 years of age or older, and have a maximum household annual income of not more than 150 percent of the poverty guidelines or
 - (b) Receive Supplemental Security Income pursuant to 42 USC Sections 1381 through 1383; or
 - (c) Are disabled and receive income from a disability program as a result of a disability.
- Puget Sound Energy qualifies residential customers as low income if the household income does not exceed 150% of federal poverty guidelines; however, in areas where 50% of the median income falls below 125% of federal poverty guidelines, eligibility is capped at 125% of federal poverty guidelines. When queried, Puget staff was unable to determine what percentage discount is provided to their low-income customers.

Policy options:

- City Light could return to setting residential low-income rates at the 50% subsidy level, though if rates increase, returning to the 50% level would mean a one-time higher percentage rate increase for low-income customers.
- There could be a sliding scale of low-income rate schedules according to income, though this would be more difficult to administer than the current structure.
- A different level of subsidy could also be offered.

Section 3. Marginal Cost Allocation Among Customer Classes

The cost allocation methodology used by City Light shall allocate energy, demand, and customer costs of providing electric service among customer classes in a manner that is equitable and consistent with the rate setting objectives listed in Section 1 of this resolution.

A. Marginal Cost of Service Study

City Light rates shall be based on a marginal cost-of-service study, which shall be the primary basis for allocating the costs of providing electric services among the customer classes.

Per Council direction, City Light has used a marginal cost of service study as the basis for apportioning the revenue requirement to customer classes since 1980. At present, City Light calculates marginal costs for all customer classes but allocates the revenue requirement to them by proportionate shares of marginal costs. Both marginal costs and the revenue requirements are separated into groups, or “bundles,” of costs, e.g., all costs related to energy production and purchase in one bundle, all costs related to transmission in another bundle, all costs related to transformers in a third bundle, etc. This process is called “unbundling.” It started in the mid-1990s when the Washington State legislature was thinking about requiring utilities to offer unbundled customer rates, i.e., a rate for energy, a rate for distribution services, a rate for billing/customer account services, etc.

While looking at two sets of “costs” (the customer revenue requirements and the marginal costs) could appear to be double counting, in reality the only costs faced by customers are the revenue requirements; each customer class pays a share of the revenue requirements based on that class’ share of marginal costs. For example, a given customer class might be responsible for 35% of energy-related marginal costs and 25% of substation-related marginal costs, and would, therefore, be allocated 35% of the energy-related revenue requirement and 25% of the substation-related revenue requirement.

Marginal costs measure how a utility’s cost picture changes when new load is added or new customers join the system. They do not include all the types of costs that the utility incurs. For example, the utility’s average cost of energy is a combination of the very low cost of its owned generation plants plus the cost of purchasing power at a higher cost from outside sources. Thus, its average cost of energy is lower than its marginal cost of energy. For purposes of allocating the energy-related revenue requirement, forecasted energy consumption for each customer class is valued by City Light at the marginal cost, not at the average cost.

In the last rate review, the marginal cost of energy was based on a purchase from the wholesale market at a forecasted market price (from a third part industry expert); and an additional amount was added to this price to cover the cost to society of “environmental externalities” (costs paid by society for the results of such things as air, water and soil contamination but not reflected in the utility’s accounting costs). The main environmental externality cost affecting City Light’s wholesale market energy purchases was the cost of carbon dioxide emissions (CO₂), which added about 2 cents/kWh to forecasted market energy prices ranging from 4 to a little over 7 cents/kWh for 2007, depending peak or off-peak period and month of the year. These marginal energy costs were multiplied by each customer class’ forecasted energy consumption, in the

same periods and months, to calculate total marginal energy cost for that class. Total marginal energy costs were summed. Then each class' percentage of total marginal energy costs determined the percentage of energy-related revenue requirements that the class should pay through its rates.

City Light uses the most current and short-term future costs in its marginal cost estimates. Marginal costs are an ideal tool for evaluating the costs and benefits of generation and conservation projects. They also provide guidelines for "economically efficient" rate design, which means that rates are set to mirror marginal costs where possible in order to provide customers a price signal that reflects the true social cost of their energy use decisions. For hourly metered customers, those that use more of their energy during high cost periods pay higher average rates than those which use more of their energy at low cost periods. For residential customers, those who use less energy beyond the first block amount pay lower average rates (and, of course, bills) than those who use more. Likewise, average rate savings are greater the more energy conserved.

Many utilities use some aspect of marginal cost in setting their rates, but most in the United States are subject to the requirement of their regulators that they use an average (also called "embedded") cost methodology for their basic cost allocation. This is not true for all countries. City Light's methodology is, for all practical purposes, a hybrid because, while the revenue requirement is apportioned according to marginal costs, the revenue requirement itself reflects the utility's average costs for a forecast year.

Policy options:

- Policies regarding which of City Light's costs should be considered "marginal" and the extent to which the utility should continue to use short-term marginal costs vs potentially using longer-term marginal costs can be changed.
- The way in which marginal costs are used to allocate the revenue requirement to customer classes could be modified. For example, a decision could be made not to separate the revenue requirement into bundles but, rather, to add up all marginal costs for each customer class and use that percentages of total marginal costs to allocate the total revenue requirement. Or, costs might be grouped into different bundles. City Light's method of unbundling has been approved by the City Council but there is no specific policy that requires it. The percentage of the revenue requirement allocated to customer classes may change depending on the degree of bundling or unbundling practiced.

B. Gradualism Adjustments

If a change in the cost-of-service allocation results in extreme bill fluctuations for a particular customer class compared to other customer classes, a method of mitigating these bill impacts may be considered and implemented. Such mitigation may include gradually moving to rates based on full costs of service over two or more rate change periods.

"Gradualism" is a method, adopted by the Council from time to time, to move rates toward a desired policy goal, in which changes are implemented slowly in order to allow affected customers time to adjust. For example, when it changed its system of customer classification from end-use to demand size in the 1980s, City Light began a process of gradually moving lower

“industrial” rates toward the level that would collect their full cost of service under the new system. A similar process occurred after City Light began charging higher network rates in late 1999. The Council has adopted a policy of “gradualism” for several rate changes that it deemed to have a disproportionate effect on some customer classes vs others. The form it took was a decision that a cap would be established for the maximum percentage increase for any customer class; e.g., a cap of 1.5 meant that the maximum percentage increase for any customer class could be no more than 1.5 times the average system rate increase. There has been no gradualism element in City Light rates since 2006 because the Council made a decision that from that time on all customer classes should pay their full share of the revenue requirement as determined by the cost of service study.

Policy options:

When a new cost of service study is completed, a gradualism cap could be implemented again if costs of service have changed to the extent that some customer classes receive much larger rate changes than others, or if some other policy change leads to such differentials.

C. Conservation Expense

Since the City Council considers that conservation is a power resource, conservation expenditures shall be allocated to all customer rate classes.

It has been City of Seattle policy since 1982 to avoid new physical power resource costs by funding cost-effective conservation. Costs of conservation are allocated to all customer classes, in the same proportion as all other energy costs (i.e., generation and purchases), because all benefit from the lower energy costs that City Light incurs. Costs of installed conservation measures (such as compact fluorescent light bulbs, home and business weatherization, and industrial heat recovery systems) are amortized (spread out) over 20 years; therefore, they are treated like capital expenditures and partially funded with bonds. Other costs of City Light’s conservation program are treated as annual operating costs.

Policy options:

Conservation costs could be allocated according to the individual rate classes that directly benefit, although in many cases that would be hard to determine.

D. Low Income Rates and Bill Payment Assistance Expense

The costs of providing low income rates and bill payment assistance to low-income residential customers shall be allocated to all customer rate classes.

While only residential customers are eligible for low-income rate and bill payment assistance, the Council has taken the position that providing assistance to these customers is a social responsibility that all City Light customers should share. City Light’s current methodology is to allocate the cost of low-income assistance across all rate classes according to their share of total marginal costs; for example, if the residential class is responsible for 35% of all marginal costs, it will be allocated 35% of the low-income portion of the revenue requirement.

Policy options:

The costs of low-income assistance could be subsidized only by the residential class, or such costs could be apportioned to all customer classes in some other way.

Appendix A

Comparison of Resolution 30933 with Proposed Rate and Cost of Service Policy Resolution

Resolution 30933	Proposed Resolution
<p>Section 1. Long-Term Rate Setting Objectives</p> <p>The following long-term rate setting objectives for the City Light Department are hereby adopted. The objectives are intended to provide a general policy framework that can be consistently applied to future rate reviews. Because some policy objectives may unavoidably conflict with others, they should be considered in their entirety to strike an appropriate balance among them when developing, reviewing, and prescribing electric rates for customers of the City Light Department.</p>	<p>Section 1. Long-Term Rate Setting Objectives</p> <p>The following long-term rate setting objectives for City Light are hereby adopted. The objectives are intended to provide a general policy framework that can be consistently applied to future rate reviews. Because some policy objectives may unavoidably conflict with others, they should be considered in their entirety to strike an appropriate balance among them when developing, reviewing, and prescribing electric rates for customers of City Light.</p>
<p>A. Revenue Requirement</p> <p>Electric utility rates should be sufficient to meet the City Light Department's revenue requirements, while charging the lowest possible cost to the ratepayer over the long run.</p>	<p>G. Revenue Requirements</p> <p>City Light's revenue requirements should be consistent with the strategic plan and financial policies established for it by the City, and electric rates should be sufficient to meet its annual revenue requirements.</p>
<p>B. Customer Payment of Costs of Service</p> <p>Rates should be based on the costs of service to the customer. Rates should reflect changes in the costs of service over time.</p>	<p>H. Customer Payment of Costs of Service</p> <p>Rates should be based on the costs of service to the customer, and should reflect changes in the cost of service over time.</p>
<p>C. Equity</p> <p>Rates should reflect a fair apportionment of the different costs of providing service among groups of customers.</p>	<p>I. Equity</p> <p>Rates should reflect a fair apportionment of the different costs of providing service, such as providing energy or distribution, among groups of customers, generally referred to as "customer classes" or "customer rate classes."</p>
<p>J. Efficiency</p> <p>Rates should provide incentives for cost-effective conservation of electricity and the efficient use of power resources.</p>	<p>D. Efficiency</p> <p>Rates should provide incentives for the efficient use of power and power distribution resources. This means that rates should be structured so that customers face price incentives to conserve energy and reduce peak capacity requirements.</p>

<p>E. Rate Stability</p> <p>Rate levels and structures should be changed in an orderly manner over time.</p>	<p>E. Rate Predictability</p> <p>The levels and structures of base rates (that is, before application of any surcharges) should be changed in an orderly manner over time, so as to avoid disproportionate rate changes in any given year for some customers or customer classes. For example, the results of changes in costs of service that might cause some customer classes to receive large rate increases whereas other classes would receive little or no rate increase should be phased in gradually.</p>
<p>G. Public Involvement</p> <p>Citizens should be ensured clear and understandable information and opportunities for meaningful citizen participation in the City's rate decision process.</p>	<p>F. Public Involvement</p> <p>City Light customers should be provided clear and understandable information and opportunities for meaningful participation in the City's electric rate decision process.</p>
<p>Section 4. Rate Setting Policies D. Rate Design Policies</p> <p>The Rate Design Study shall be based on the following principles:</p>	<p>Section 2. Rate Design Policies</p> <p>To further the City's desire to encourage the efficient use of both power and power distribution resources, City Light's base rates should be designed and structured to include the following principles:</p>
<p>1. Ascending Energy Blocks.</p> <p>Rates should be designed on the basis of ascending charges for amounts, or blocks, of energy, where blocks are feasible.</p>	<p>G. Ascending Rates for Energy Blocks</p> <p>Rates should be designed on the basis of ascending charges for increasing amounts, or blocks, of energy, where blocks are feasible.</p>
<p>2. Demand Charges.</p> <p>Rates with demand components should not contain declining demand charges.</p>	<p>H. Demand Charges</p> <p>Rate schedules with demand charge components should not contain declining demand charges.</p>
<p>3. Residential First Block.</p> <p>The first block of electricity for the essential needs of residential customers should be priced below the average cost of service to those customers. Essential needs include the electricity used by a typical residential customer for cooking, refrigeration, and lighting.</p>	<p>I. Residential First Block</p> <p>The residential first block of electricity is intended to meet the essential needs of residential customers and should be priced at or below the average cost of service to those customers. Essential needs include the electricity used by a typical residential customer for cooking, refrigeration, and lighting.</p>

<p>4. Discounts.</p> <p>Discounts shall be provided to customers with customer-owned transformers and to customers who are metered before transformation.</p>	<p>J. Rate Discounts</p> <p>When a customer provides a portion of City Light's service infrastructure (such as a transformer owned and maintained by the customer), or when the customer is metered for technical reasons on the utility's side of the transformer (instead of the customer's side, like most customers), a discount from the customer's normal rates will be provided.</p>
<p>5. Time-of-Use and Seasonal Rates.</p> <p>The City Light Department shall investigate cost-effective real time, time-of-use, and seasonal differentiation options where they can be implemented.</p>	<p>K. Time-of-Use Rates</p> <p>Cost-effective time-of-use rates, whether seasonal, daily, or hourly, shall be implemented where such differentiation options are feasible.</p>
<p>7. Low Income Customer Costs.</p> <p>The impacts of the costs of electricity shall continue to be mitigated for the City Light Department's low income customers.</p>	<p>L. Low Income Rates</p> <p>In all of its actions, the City has an interest in protecting the most vulnerable members of the community. Rates for qualified low-income residential customers shall continue to be lower than regular residential rates by at least 50%.</p>
<p>Section 4. Rate Setting Policies</p> <p>C. Cost of Service and Cost Allocation Policies</p> <p>The cost allocation methodology used by the City Light Department shall allocate the City Light Department's energy, demand, and customer costs among customer groups in a manner that is equitable and consistent with the long-range objectives listed in Section 1 of this Resolution. The allocation of costs among rate groups shall be determined by a cost of service study.</p>	<p>Section 3. Marginal Cost Allocation Among Customer Classes</p> <p>The cost allocation methodology used by City Light shall allocate energy, demand, and customer costs of providing electric service among customer classes in a manner that is equitable and consistent with the rate setting objectives listed in Section 1 of this resolution.</p>
<p>1. Marginal Cost of Service Study.</p> <p>A marginal cost of service study shall be filed with the next rate proposal. This study shall be the primary basis for allocating the cost of providing electric service to the rate groups.</p>	<p>D. Marginal Cost of Service Study</p> <p>City Light rates shall be based on a marginal cost-of-service study, which shall be the primary basis for allocating the costs of providing electric services among the customer classes.</p>

<p>3. Gradualism Adjustments.</p> <p>If a change in the cost of service allocation results in rates that would cause extreme impacts on a particular rate group, a method of mitigating the rate impact may be considered and implemented.</p>	<p>E. Gradualism Adjustments</p> <p>If a change in the cost-of-service allocation results in extreme bill fluctuations for a particular customer class compared to other customer classes, a method of mitigating these bill impacts may be considered and implemented. Such mitigation may include gradually moving to rates based on full costs of service over two or more rate change periods.</p>
<p>4. Conservation Expense.</p> <p>Conservation expenditures shall be allocated to all rate groups.</p>	<p>F. Conservation Expense</p> <p>Since the City Council considers that conservation is a power resource, conservation expenditures shall be allocated to all customer rate classes.</p>
<p>5. Rate Assistance Expense.</p> <p>The costs of rate assistance shall be allocated to all rate groups.</p>	<p>E. Low Income Rates and Bill Payment Assistance Expense</p> <p>The costs of providing low income rates and bill payment assistance to low-income residential customers shall be allocated to all customer rate classes.</p>

Appendix B
Full Text of Council Resolution 30933
Highlighted Sections Not Included in Proposed Rate and Cost of Service Policy Resolution

A RESOLUTION adopting long-term rate setting objectives and electric rate policies for the City Light Department and superseding Resolution 30685.

WHEREAS, the City Council adopted Resolution 30685 in 2004 establishing long-term rate setting objectives and policies for the City Light Department; and

WHEREAS, the City Council intends to make every effort to ensure that adopted electric rates remain unchanged for at least a two year period; and

WHEREAS, the City Council also intends to adopt long-term rate setting objectives and electric rate policies for the City Light Department that supersede the policies established by Resolution 30685;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THAT:

Section 1. Long-Term Rate Setting Objectives

The following long-term rate setting objectives for the City Light Department are hereby adopted. The objectives are intended to provide a general policy framework that can be consistently applied to future rate reviews. Because some policy objectives may unavoidably conflict with others, they should be considered in their entirety to strike an appropriate balance among them when developing, reviewing, and prescribing electric rates for customers of the City Light Department.

A. Revenue Requirement

Electric utility rates should be sufficient to meet the City Light Department's revenue requirements, while charging the lowest possible cost to the ratepayer over the long run.

B. Customer Payment of Costs of Service

Rates should be based on the costs of service to the customer. Rates should reflect changes in the costs of service over time.

C. Equity

Rates should reflect a fair apportionment of the different costs of providing service among groups of customers.

D. Efficiency

Rates should provide incentives for cost-effective conservation of electricity and the efficient use of power resources.

E. Rate Stability

Rate levels and structures should be changed in an orderly manner over time.

F. Financial Stability

Revenue recovery from rates should promote financial stability, consistent with financial policies of the City Light Department, as adopted by the Seattle City Council.

G. Public Involvement

Citizens should be ensured clear and understandable information and opportunities for meaningful citizen participation in the City's rate decision process.

Section 2. Rate Review Process

The following process is hereby adopted. The process is generally comprised of three steps, which are described below. While the documentation of each of the steps is done separately, the documents are the basis of a single rate proposal made by the Mayor, reviewed by the public, and reviewed and acted upon by the Seattle City Council.

A. Revenue Requirement Analysis

The first step in the rate review process is analysis of the revenues required to meet the operating and maintenance expenses, and to finance a portion of the City Light Department's Capital Improvement Program consistent with financial policies described in Section 4 below. The Revenue Requirements Analysis documents the City Light Department's estimates of all relevant financial information over the period to be covered by the rate review. The analysis includes a recommendation for a City Council decision on a revenue level that determines the total dollar amounts to be included in rates to the City Light Department's customers.

B. Cost of Service and Cost Allocation

In the second step of the rate review process, the cost of serving each rate group is analyzed. From this analysis, the share of the total revenue requirement to be collected from each group is determined. The Cost of Service and Cost Allocation Report, which serves as a basis for cost allocations, is prepared by the City Light Department and supplemented by independent consultants as deemed appropriate by the Mayor and City Council.

C. Rate Design

In the third step of the rate review process, rate schedules are designed to recover the revenues from each rate group as determined by the cost allocation procedure. In designing rates for each group, the structure, components, and the relationship of the components of each rate are determined. A Rate Design Report is prepared by the City Light Department, which includes recommendations on the rate design for each rate group and documentation of where the proposed rate design departs from cost-based rates.

Section 3. Information to Customers and Participation in the Rate Process

Consistent with previous resolutions, establishing the general policy of the City of Seattle governing the provision of public information and opportunities for citizen participation in the City's decision-making process, the City Council adopts the following policy for provision of information to customers and opportunities for participation by City Light ratepayers. To ensure citizen participation, City Light shall seek input from multiple ratepayer sources. One mechanism for citizen participation shall be a Rates Advisory Committee. The Rates Advisory Committee shall review and make recommendations to the City Light Superintendent, the Mayor, and the City Council on issues associated with the rate review. Pursuant to the PURPA Information to Consumers Standard, as adopted by Ordinance 109461 and revised in Ordinance 111528, the City Light Department shall comply with the policies and procedures listed below:

A. Summary of Existing Rate Schedules

The City Light Department shall transmit to each of its customers a clear and concise summary of existing electric rate schedules applicable to each of the major rate groups.

B. Explanation of Proposed Rate Schedules

The City Light Department shall transmit to its customers a clear and concise explanation of the first set of proposed rate schedules submitted by the Mayor to the City Council. The explanation shall be communicated no later than sixty days after the Mayor submits his/her initial set of rate schedule proposals to the City Council.

In addition, at least one other time during the rate review process, the City Light Department shall transmit to its customers a clear and concise explanation of the relevant set of rate schedule proposals under consideration by the City Council. The explanation shall precede the relevant City Council public hearing on said rate schedule proposals.

C. Information on Residential Bills

The City Light Department shall transmit, on each of its residential bills, a clear and concise statement of the customer's actual consumption of electricity for the corresponding billing period during the prior year unless the consumption data are not reasonably ascertainable by the utility. The itemized bill shall also clearly and concisely explain the basis upon which the customers is charged per unit of consumption.

Section 4. Rate Setting Policies

The following electric rate setting policies are adopted. These policies are intended in their entirety to strike an appropriate balance among the long range objectives identified in Section 1 of this resolution. These policies are intended to provide overall guidance for the development, review, and enactment of new electric rate structures. However, the policies may be revised in subsequent electric rate reviews and/or as a result of the work performed pursuant to the studies and analyses prepared for the next rate review.

A. Rate Proposal

City Light Department shall submit a rate proposal for City Council review every two years. The proposed retail Revenue Requirements Analysis and a flow of funds statement shall be submitted with the proposed budget for the following two years. The Cost of Service and Cost Allocation Report and the Rate Design Report shall be submitted no later than thirty days following submission of the Revenue Requirements Analysis.

In order to be considered by the City Council, the Revenue Requirements Analysis must also include all supporting information needed or requested by the City Council or it will be deemed incomplete and not be reviewed. Assuming all required documentation has been received, the City Council's review of the rate proposal will commence no later than sixty days after the budget review concludes with a goal of reaching a decision no later than ninety days following the start of the review.

The rate proposal submitted to the City Council shall also include a summary of the recommendations from the Rates Advisory Committee described in Section 3 and a table showing all proposed changes in assumptions and methodology from the prior rate proposal.

B. Financial Policies

The City Light Department's revenues from electric rates shall be sufficient to meet the following financial policies established in Resolution 30761. These policies shall serve as the basis for developing the City Light Department's revenue requirement analysis, unless modified by subsequent Council action.

1. Rate Setting Guideline. It is the policy of the City of Seattle to set electric rates at levels which will ensure that net revenue available to fund capital requirements in each calendar year will be positive with a probability of at least 95%, taking into account the variability of cash flows resulting from the uncertainty of water conditions, market prices, and system load. For purposes of implementing this financial policy, net revenue available to fund capital requirements is defined as the amount of revenue remaining after payment of operating and maintenance costs, principal and interest on outstanding debt, taxes, all other current obligations and deposits to the Contingency Reserve Account described below. It is also the policy of the City of Seattle that rates shall be set to ensure that the first and second lien debt shall achieve a debt coverage ratio of 2.0.

2. Contingency Reserve Account. A Contingency Reserve Account in the amount of \$25 million will be maintained in the Light Fund. Funds in the Contingency Reserve Account may be used to cover current obligations in any year in which the amount of net revenue available to fund capital requirements is not positive. Within two years of the withdrawal of funds from the Account, available net revenues shall be deposited in the Account until the targeted balance of \$25 million is restored.

3. Operating Cash Balance. In addition to funds in the Contingency Reserve Account, the City Light Department shall maintain sufficient operating cash balances in the Light Fund to absorb fluctuations in its operating cash flow. In its rate proposals, the City Light Department shall target a minimum month-end operating cash balance of \$30 million.

4. Debt-to-Capitalization Ratio. The City Light Department shall set rates to achieve a debt-to-capitalization ratio of 60% by year end 2010. The debt-to-capitalization ratio is the total amount of debt outstanding divided by the sum of the accumulated equity and debt outstanding.

C. Cost of Service and Cost Allocation Policies

The cost allocation methodology used by the City Light Department shall allocate the City Light Department's energy, demand, and customer costs among customer groups in a manner that is equitable and consistent with the long-range objectives listed in Section 1 of this Resolution. The allocation of costs among rate groups shall be determined by a cost of service study.

1. Marginal Cost of Service Study. A marginal cost of service study shall be filed with the next rate proposal. This study shall be the primary basis for allocating the cost of providing electric service to the rate groups.

2. Average Embedded Cost of Service Study. The City Council shall oversee the preparation of an average embedded cost study using data from the rate proposal for 2007 and 2008 rates submitted by the City Light Department. All materials necessary for this study to be performed by a Council funded consultant shall be provided by the City Light Department in a timely manner. After reviewing the results of the average embedded cost study, the City Council will determine whether the City Light Department should use this method in the future.

3. Gradualism Adjustments. If a change in the cost of service allocation results in rates that would cause extreme impacts on a particular rate group, a method of mitigating the rate impact may be considered and implemented.

4. Conservation Expense. Conservation expenditures shall be allocated to all rate groups.

5. Rate Assistance Expense. The costs of rate assistance shall be allocated to all rate groups.

6. Bonneville Power Administration Rates. Bonneville Power Administration rate increases and decreases shall be passed through to customers administratively as described in Section 5 of Resolution 30428.

7. New Network Service. Prior to the date of the submission of the next rate proposal or the expenditure of City Light Department funds for the design of new network service, whichever comes first, the City Light Department shall develop estimated rates and charges for new network service that reflect the potential full cost of this service. The City Light Department shall propose, for City Council consideration, network rates, surcharges, other charges, assessments, and/or contributions in aid of contribution, and the anticipated cost recovery period. Such proposal shall recover the cost of (i) planning, engineering, and design work, (ii) constructing an underground distribution system and a new substation if required, and (iii) equipment necessary for network service. Other charges, for example, increasing the power factor rate shall also be considered when these will better reflect the costs that network service customers impose on the electric system. The City Light Department may also consider creation of a Local Improvement District to finance all or part of the network improvements, including construction of a new substation and an underground distribution system. In its network rate proposal, the City Light Department shall analyze the impact of load growth and costs associated with residential and small business customers located within a network service area.

8. First Hill and University District Study. No later than the date of submission of the next rate proposal, the City Light Department shall conduct a study of the First Hill and University District network areas and submit a recommendation on whether the existing network service rates should be applied to those areas. The City Light Department shall also conduct an analysis of the impact of load growth and costs associated with serving residential and small business customers located in First Hill, the University District, and the existing Downtown network. The results of this analysis shall be presented with the next rate proposal along with a recommendation on whether residential and small business customers in any of these three network areas should be charged network rates.

9. Interruptible Rates. The City Light Department may propose an interruptible rate at any time. However, any such proposal must (i) be based on the cost of service, (ii) provide demonstrated benefits for both the customer and other City Light Department ratepayers, (iii) be based on actual interruption of the customer, and (iv) be voluntary on the customer's part.

D. Rate Design Policies

The Rate Design Study shall be based on the following principles:

1. Ascending Energy Blocks. Rates should be designed on the basis of ascending charges for amounts, or blocks, of energy, where blocks are feasible.

2. Demand Charges. Rates with demand components should not contain declining demand charges.

3. Residential First Block. The first block of electricity for the essential needs of residential customers should be priced below the average cost of service to those customers. Essential needs include the electricity used by a typical residential customer for cooking, refrigeration, and lighting.

4. Discounts. Discounts shall be provided to customers with customer-owned transformers and to customers who are metered before transformation.

5. Time-of-Use and Seasonal Rates. The City Light Department shall investigate cost-effective real time, time-of-use, and seasonal differentiation options where they can be implemented.

6. Fixed Charge. The City Light Department shall consider setting a fixed charge for all rate classes to stabilize revenues and bills taking into account other rate elements, but at a level that sends the appropriate price signals to customers.

7. Low Income Customer Costs. The impacts of the costs of electricity shall continue to be mitigated for the City Light Department's low income customers.

8. Contract Demand. In order to balance demand and energy price signals, the City Light Department shall propose a contract demand charge for large and high demand general service customers to send price signals to customers with new or expanded service requests that will encourage those customers to manage their loads.

Section 5. Resolution 30685 Superseded

Resolution 30685 is hereby superseded and will have no further force or effect.