RESOLUTION No. 31365

A RESOLUTION endorsing the City Light Department's Wholesale Energy Risk Management Policy; establishing it as the policy governing wholesale energy risk management at the City Light Department; and superseding Resolution 31230.

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Full Council Action

May 14, 2012 Adopted 8-0 (Excused: Godden)

LAW DEPARTMENT

Smead 107 YSP17704

# RESOLUTION 31365

A RESOLUTION endorsing the City Light Department's Wholesale Energy Risk Management Policy; establishing it as the policy governing wholesale energy risk management at the City Light Department; and superseding Resolution 31230.

WHEREAS, in order to provide electricity to its customers economically, the City Light Department routinely buys and sells wholesale energy products; and

WHEREAS, the City Light Department's participation in wholesale energy markets necessarily exposes the City Light Department to risk, including market and credit risk; and

WHEREAS, the utility industry Best Practices require that the City Light Department have a clear and binding statement of policy to govern the management of those risks; and

WHEREAS, the utility industry Best Practices further require that such policies be endorsed by the City Light Department's governing body; and

WHEREAS, periodic review and amendment to risk management policies are necessary and a product of good governance and oversight; and

WHEREAS, the Wholesale Energy Risk Management Policy was initially adopted by the City Council on September 8, 2008 by Resolution 31053; and

WHEREAS, the Wholesale Energy Risk Management Policy was updated by the City Council on August 9, 2010 with the passage of Resolution 31230; and

WHEREAS, the attached Wholesale Energy Risk Management Policy dated August 30, 2011 contains updates including, among others, clarification allowing for the purchase of physical calls and puts; requirement of employees to immediately report potential non-compliance with the Wholesale Energy Risk Management Policy; requirement of hedging plans to conform to the risk limits in the Policy; establishment of the conditions under which forward sales for any future calendar quarter are to be suspended; and establishment of the amount of the Risk Tolerance Band for the current calendar year and the prompt year; NOW, THEREFORE,

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



DIS CITY CLERK

Section 1. The Wholesale Energy Risk Management Policy as developed by the City Light Department's management and attached hereto as Attachment A supersedes the Policy endorsed by Resolution 31230, is endorsed by the City Council and is established as the City of Seattle's policy governing the conduct of wholesale energy risk management at the City Light Department.

Adopted by the City Council the 14th day of May, 2012, and signed by me in open session in authentication of its adoption this 14th day of May, 2012.

President _____ of the City Council

THE MAYOR CONCURRING:

Michael McGinn, Mayor

Filed by me this 17th day of May, 2012.

for Monica Martinez Simmons, City Clerk

(Seal)

Attachment A: Seattle City Light Wholesale Energy Risk Management Policy



DIS CITY CLERK

Phil Leiber
SCL Risk Management Policy RES ATT A
08/08/2011
Version #3a

**Attachment A**

# SEATTLE CITY LIGHT

## Wholesale Energy Risk Management Policy

April 23, 2012

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# 1. Introduction

City Light faces significant uncertainty regarding both the quantity of energy available to the utility and the range of prices prevailing in the wholesale power market. Under all but the most extreme low water conditions, City Light's supply of power exceeds its retail demand. This excess, or surplus, power is sold in the wholesale power market, and the revenue is used to offset costs that would otherwise be borne by City Light's retail ratepayers. City Light can sell its surplus power in the "spot market" as this surplus power becomes available, or City Light can sell some of its expected surplus power in the "forward market" for future delivery. Both practices involve risks. Waiting to sell surplus power in the spot market exposes City Light to the possibility of selling at low prices if the wholesale market is flush with power. Selling expected surplus power in the forward market mitigates this risk, but exposes City Light to the possibility of having to purchase power at high prices in order to meet these forward commitments (as well as retail demand) in the event actual supplies turn out to be significantly less than projected at the time the forward sale was executed. The policies outlined below are designed to establish the framework for City Light to manage the risks that are inherent in the wholesale energy markets it participates in. These policies specify: a risk metric; a set of rules to guide decisions concerning the sale and purchase of energy and related products in the spot and forward markets; and a clear statement of roles and responsibilities of City Light's Divisions and personnel.

## 1.1. AUTHORITY

The City Light Department of the City of Seattle (City Light) operates under the authority of the Mayor and City Council of the City of Seattle (City). City Light is charged by the City with operating its power supply resources, transmission agreements, and electric system to meet the power needs of its customers. The City recognizes that because of the nature of its customer demand and power supply portfolio, City Light will experience imbalances between the two and must therefore transact in the wholesale energy markets for energy services and products to achieve balance.

By endorsing this Wholesale Energy Risk Management Policy (Risk Policy) document by City Resolution, the City approves this Risk Policy and affirms the authority and responsibility of the Superintendent of City Light and his or her designees to comply with it, consistent with the authority granted by Seattle Municipal Code Section 21.49.130.

## 1.2. SCOPE

This Risk Policy applies to all physical wholesale energy purchases and sales, transmission services, and ancillary services pursuant to Seattle Municipal Code Section 21.49.130. Descriptions of physical transactions commonly utilized by the Power Operations & Marketing Division are maintained in the Wholesale Energy Risk Management Procedures Manual ("Procedures Manual").

This Policy expressly prohibits the use of financial energy derivative transactions which are defined as transactions that cannot be settled with the physical delivery of energy and/or capacity. Accordingly, , it is a violation of this policy to enter into a financial energy derivative contract. All Western System Power Pool (WSPP) and bi-lateral power purchase agreement (PPA) transactions are physical transactions.

This Policy permits the purchase, but not sale, of physical calls and puts where the intent at the time of execution is for physical delivery of the associated energy. Such execution would be limited as further defined in Section 3.3.1.4.

### 1.3. PURPOSE

The purpose of this Risk Policy is to formally establish a Wholesale Energy Risk Management program and document the organizational structure (Appendix B) utilized by City Light to meet the electricity needs of its customers, manage the risks inherent in its wholesale energy markets portfolio, and minimize the variance in the value of surplus power and transmission assets. As such, this document describes City Light's energy risk management roles and responsibilities, and delegations of authority that will govern how City Light conducts business in the wholesale energy markets.

The specific operating procedures and parameters for implementing this Risk Policy are detailed in the Procedures Manual to be reviewed and approved by the Risk Oversight Council (ROC), a body within City Light established by this Risk Policy that reports to the Superintendent. The existing procedures are attached for informational purposes only as Appendix A.

Please refer to Appendix C, Glossary of Terms, for definitions of terms contained in this Policy and as used by City Light.

All City Light employees in relevant functional areas are expected to comply with and acknowledge their understanding of both this Risk Policy and the associated Procedures Manual as it applies to their current position at City Light. For additional information please refer to Section 2.11. Policy Violations and Exceptions.

# 2. Organization & Governance

### 2.1. INDEPENDENCE AND SEGREGATION OF DUTIES

An effective risk management and compliance program requires clear segregation of duties, reporting lines, and incentives between functions and personnel who originate and manage risk, and those who analyze, monitor, and report risk.

City Light has developed a risk management and risk oversight organizational structure to support this requirement (see Appendix B). The core elements of the structure for risk management purposes are:

- Superintendent

- Chief Financial Officer (CFO)
- The Risk Oversight Council (ROC)
- The Power Operations & Marketing Division (POM)
- The Power Contracts & Resource Acquisition Division (PCRA)
- The Risk Oversight Division (ROD)

The following sections define the wholesale energy risk management roles and responsibilities of the individuals and groups listed above.

## 2.2. ROLE OF THE SUPERINTENDENT

Concerning wholesale energy risk management efforts, the Superintendent is responsible for:

- Ensuring compliance with this Risk Policy;
- Ensuring adequate internal controls exist to safeguard City Light's financial integrity and its retail customers with respect to wholesale energy purchase and sales activities;
- Ensuring that all wholesale energy purchase and sales activities are monitored by City Light staff not directly involved in executing the transactions;
- Resolving Risk Oversight Council vacancies in the best interests of the Utility; and
- Making final decisions on risk management issues when the Risk Oversight Council cannot reach a consensus.

## 2.3. ROLE OF THE CHIEF FINANCIAL OFFICER (CFO)

In regards to wholesale energy risk management efforts, the CFO is responsible for:

- Serving as the Chair of the Risk Oversight Council, leading the ROC meetings;
- Briefing the Superintendent on City Light's risk exposures and ROC actions on a regular basis during the monthly financial review and as necessary;
- Presenting requests for changes in volumetric and risk metric limits contained in this Policy to the Superintendent;
- Setting the counterparty credit limit threshold; this is defined as the maximum secured and unsecured credit limit that may be extended to any counterparty pursuant to this Risk Policy;

- Recommending to the ROC the methodology used to compute the credit that will be extended to any counterparty; and

- Suspending transacting with a counterparty at any time due to concerns about the counterparty's credit-worthiness or ability to fulfill the terms of a transaction.

## 2.4. ROLE OF THE RISK OVERSIGHT COUNCIL (ROC)

The ROC has the authority and responsibility for approving and implementing the procedures and parameters contained in the Procedures Manual consistent with this Risk Policy. It is also responsible for setting City Light's target risk profiles, and oversight of the Risk Working Group (RWG), leading City Light's energy risk management efforts on a path of continuous improvement, and directing the development of City Light's risk management strategy.

### *2.4.1. RISK OVERSIGHT COUNCIL STRUCTURE*

Voting Membership:

The ROC shall be comprised of three voting members and two non-voting members. The Chief Financial Officer (Chair), the Power Supply & Environmental Affairs Officer, and the Director of Risk Management shall each have a single vote on matters that come before the ROC and all three, or their designees, must participate in the ROC meeting in order to vote and approve a proposed action.

The two non-voting members are the Director of Power Operations & Marketing and the Director of Power Contracts & Resource Acquisition, or their equivalent as determined by the Superintendent.

Meeting Timing and Frequency:

The ROC shall meet no less than twice per calendar month. Attendance at ROC meetings shall be mandatory for appointed members. Member attendance shall be recorded in the ROC meeting minutes. Any member of the ROC can request an emergency meeting of the ROC to address circumstances or issues that may require immediate attention.

In the event a voting member is unable to attend a ROC meeting in person or by telephone, the member may designate an alternate to attend and vote in his absence, including one of the non-voting members. If any two of the voting members, or their designees, are not present at a ROC meeting, a vote on a proposed action cannot take place. The ROC will make decisions and take actions by a simple majority vote. If the ROC reaches an impasse that cannot be addressed through a vote, the Chair will refer the issue to the Superintendent by the end of the next business day for resolution.

Member Vacancies:

In cases where a member of the ROC leaves the employ of City Light, the Superintendent will resolve the ROC vacancy by making an interim appointment at his discretion.

The Director of Risk Management will act as Secretary to the ROC and will document all meetings and actions taken by the ROC in meeting notes that will be distributed to ROC members for their review and acceptance. Meeting notes approved by the ROC will be distributed by the Director of Risk Management to the Superintendent, ROC members, Mayor, and Council central staff.

### 2.4.2. RISK OVERSIGHT COUNCIL RESPONSIBILITIES

The ROC is responsible for:

- Reviewing and approving the Procedures Manual and changes to it;
- Reviewing and approving risk management strategies and hedging plans to be implemented by the Power Operations & Marketing Division;
- Reviewing and providing comment to the CFO concerning the methodologies used to establish counterparty credit limits;
- Monitoring and assessing compliance with this Policy and associated procedures;
- Discussing and pre-approving limit exceptions when appropriate;
- Discussing Policy violations or exceptions and taking corrective action to minimize related losses or increased risks as appropriate;
- Reviewing this Policy on an annual basis and recommending changes to the Superintendent by July 1;
- Discussing elements of energy risk management best practices and developing a City Light opinion of their specific practicality;
- Conducting other activities relevant to the implementation and oversight of this Policy and related procedures; and
- Providing a timely summary of ROC accomplishments for the past year and setting of goals for the upcoming year to the Superintendent by March 15th. This summary will also be provided to Mayor and Council staff.
- Oversight of the Risk Working Group (RWG), providing direction and assigning projects as conditions require.
- Review and approve expected, recurring, and material changes to all modeling inputs used by the ROC to ensure that market, operational and credit risks are accurately quantified.

### 2.4.3. RISK WORKING GROUP (RWG)

The RWG is a technical work group which primary role is to examine methods and procedures used to calculate City Lights forward portfolio position, wholesale market

pricing and risk position. The RWG will be comprised of employees from both the finance and power marketing divisions with familiarity of the models used to perform this work. The RWG will be chaired by the Risk Director and membership in the RWG will be confirmed by the ROC.

## 2.5. ROLE OF THE POWER OPERATIONS & MARKETING DIVISION (POM)

The POM is led by the Director of Power Operations & Marketing and manages the generation portfolio on behalf of City Light. It transacts in the physical wholesale energy market as needed to balance the supply of electricity to demand and to mitigate the risks inherent in managing the system, subject to the limitations established by this Risk Policy and the ROC and in accordance with the Procedures Manual.

### *2.5.1. POWER OPERATIONS & MARKETING DIVISION RESPONSIBILITIES*

The responsibilities of the POM include:

- Meeting City Light's customer load obligation;
- Managing City Light's generating resources, short-term contracts and transmission agreements to meet its hourly, daily, balance of month, and forward month obligations (up to 24 months forward);
- Extracting value from City Light's power supply portfolio and transmission contracts with due consideration of risk;
- Formulating and recommending risk mitigation strategies and hedging plans to the ROC that are consistent with City Light's objectives and this Risk Policy;
- Implementing strategies and hedging plans approved by the ROC; and
- Other activities relevant to the daily management of a power system.

### *2.5.2. POWER OPERATIONS & MARKETING DIVISION REPORTING RELATIONSHIP*

The Director of Power Operations & Marketing reports directly to the Power Supply & Environmental Affairs Officer of City Light.

## 2.6. ROLE OF THE POWER CONTRACTS & RESOURCE ACQUISITION DIVISION (PCRA)

The PCRA is led by the Director of Power Contracts & Resource Acquisition and manages the long-term contract portfolio and procures new, renewable resources on behalf of City Light. It transacts in the Renewable Energy Credit (REC) and Greenhouse Gas (GHG) markets as needed to balance the supply of environmental attributes to maintain compliance with City policies, state law, and potential federal law, subject to the limitations established by this Risk Policy and the ROC and in accordance with established procedures.

### *2.6.1. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION RESPONSIBILITIES*

The responsibilities of the PCRA include:

- Meeting City Light's customer load obligation by managing long-term contracts and acquiring new resources consistent with City Light's Integrated Resource Plan, City policies, state law, and federal law;
- Extracting value from City Light's environmental attributes portfolio with due consideration of risk;
- Formulating and recommending resource acquisition and environmental attribute risk mitigation strategies to the ROC that are consistent with City Light's objectives and this Risk Policy;
- Implementing strategies approved by the ROC; and
- Other activities relevant to the management of City Light's long-term contracts and environmental attributes portfolio.

### *2.6.2. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION REPORTING RELATIONSHIP*

The Power Contracts & Resource Acquisition Director reports directly to the Power Supply & Environmental Affairs Officer of City Light.

### *2.6.3. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION RESPONSIBILITY FOR MAINTAINING THE TABLE OF EXPECTED, RECURRING, MATERIAL CHANGES TO MODELING INPUTS*

The Power Contracts and Resource Acquisition Director shall be responsible for updating the wholesale energy risk management procedures manual, Exhibit K – The Table of Expected, Recurring, Material Changes to Modeling Inputs as required, from time to time.

## 2.7. ROLE OF THE RISK OVERSIGHT DIVISION (ROD)

The ROD is led by the Director of Risk Management and, among its responsibilities, serves as the "middle office" in City Light's energy risk management organization. For the purposes of this Risk Policy, these responsibilities include preparing reports covering City Light's energy portfolio position, credit exposures, and Risk Policy and Procedure Manual compliance. The ROD also leads the development of business process and internal control improvements throughout the energy transaction lifecycle; provides settlement services; documents the required accounting treatment of forward transactions; and provides the related valuation of these transactions to enable the Accounting Division to prepare invoices, bill customers, and report forward transactions in City Light's financial statements in accordance with prevailing accounting rules. The

ROD will provide risk assessment input to the POM, but will maintain a strict separation of duties. Under no circumstances will members of the ROD be given the authority to enter into wholesale energy transactions on behalf of the utility.

The Director of Risk Management will meet with City Council's staff as requested to review recent City Light risk management activities and will offer to appear before the Energy, Technology, & Civil Rights Committee or its functional equivalent on a quarterly basis to inform Council members of recent ROC activities and risk management project updates.

The Director of Risk Management will act as temporary chair of the ROC if the CFO is absent.

### *2.7.1. RISK OVERSIGHT DIVISION RESPONSIBILITIES*

The responsibilities of the ROD include the following:

- Assess and monitor compliance with the Risk Policy and Procedure Manual;
- Report violations or exceptions of Risk Policy or Procedure Manual limits and recommend remediation as necessary;
- Monitor market and counterparty events in order to anticipate changes in City Light's risk profile;
- Develop and propose practical improvements to business processes and internal controls within the transaction lifecycle;
- Recommend specific risk limits consistent with the utility's risk management objectives and risk tolerance;
- Engage the ROC in discussions regarding events or market developments that could expose the utility to potential opportunities and losses;
- Conduct credit scoring and analysis of City Light's existing and proposed counterparties;
- Recommend credit limits for counterparties to the Chief Financial Officer;
- Negotiate and manage counterparty credit enhancements;
- Document proper accounting treatment of power and transmission transactions and any associated attributes, and provide reports, disclosures, and related information to the Accounting and Finance Divisions for their end use;
- Issue periodic reports on Risk Policy compliance, hedging plan status, market positions, and risk profile (for additional detail please refer to Section 3.8 Risk Reporting);
- Report the utility's transaction prices daily to specific index price developers;
- Evaluate the effectiveness of the risk metrics employed;

- Validate and test models used in risk management to ensure that market and credit risks are accurately quantified; and
- Research, develop, test, and implement risk measurement methodologies and models

### *2.7.2. RISK OVERSIGHT DIVISION REPORTING RELATIONSHIP*

The head of the ROD, the Director of Risk Management, reports directly to the Chief Financial Officer and also has a direct line of communication to the Superintendent.

## 2.8. RISK POLICY APPROVALS AND AMENDMENTS

This Risk Policy will become effective upon the expressed approval of the City. Each year prior to July 1, the ROC will review the elements of this policy and present any recommended changes to the Superintendent or provide notification that no changes are necessary. If changes have been recommended, the utility will present the proposed changes to the Council by September 1. In reviewing the policy and recommending modifications, the ROC will consider any material changes in the markets in which City Light transacts, in City Light's business activities and in the financial circumstances of the utility. Recommendations shall include a complete description of the reason for such proposed changes and their anticipated impact.

## 2.9. COMPLIANCE WITH LAWS AND REGULATIONS

Employees shall comply with all applicable laws and regulations including, but not limited to, Anti-Market Manipulation rules established by Congress and implemented by state and/or federal agencies. Employees should be familiar with the relevant laws and regulations and seek clarification from the City's legal department as required. The City's legal department shall maintain up-to-date legal and regulatory guidelines that govern the purchase and sale of all authorized products, and train employees as needed. However, it shall remain City Light's responsibility to ensure that its employees are adequately trained.

## 2.10. MISREPRESENTATION & CONFLICT OF INTEREST

City Light personnel shall not withhold or conceal information regarding transactions or risk management activities from any person responsible for the accurate recording and reporting of such activities, nor shall they misrepresent any such information.

Employees shall always put the interests of City Light ahead of any interest they may have in entities with which they transact. Further, employees authorized to place or execute wholesale energy transactions on behalf of City Light may not engage in such activities for their personal accounts. Employees will disclose to their supervisor any interest in an entity that could reasonably be construed as preventing them from acting solely in the interests of City Light. Failure to do so is a violation of this Risk Policy.

### 2.11. POLICY VIOLATIONS AND EXCEPTIONS

All persons engaged in the implementation, management, or administration of these policies and associated procedures, as detailed in the Procedures Manual, will sign the Compliance Statement (see Appendix D), stating that they have read, understood, and agree to comply with them.

Any person found in direct violation of these Risk Policies and the Procedure Manual may be subject to disciplinary action, including possible termination, at the discretion of the ROC. Inadvertent exceedances of risk limits (deemed an "exception"), upon notice to the ROC, shall be corrected in a timely manner.

Employees who become aware of potential non-compliance with these policies are obligated to immediately report such events to City Light's Risk Oversight Director, Chief Financial Officer or Power Supply Officer.

# 3. Risk Management Approach

### 3.1. RISK MANAGEMENT PHILOSOPHY

City Light's current power supply portfolio consists primarily of hydro-based generation (approximately 90%). Historically, City Light's combined generation output has exceeded its retail customer demand by approximately 30% on an expected annual basis. Hydro uncertainty, coupled with wholesale energy market price volatility, leads to significant variability in City Light's net wholesale revenue from the sale of that surplus energy.

To manage this revenue risk and thereby protect the interests of the ratepayers, City Light hedges its exposure by buying and/or selling physical energy and associated products in the wholesale energy market up to 24 months prior to, and all the way up to, and including the hour of delivery. While City Light's principal objective is to ensure that it meets its retail customer demand obligation, it tries to do so in a way that generates additional value from its generation portfolio, with due consideration of risk.

By participating in the wholesale energy markets, City Light is exposed to, and needs to manage, a variety of risks including:

- Market price risk – the risk of loss due to wholesale price changes;
- Credit/performance risk – the risk of loss due to default or failure by counterparties to perform on contracts;
- Volumetric risk – the risk of loss due to unpredictable variations in the output of the generation fleet or in retail demand;

- Modeling risk – the risk of loss due to a model's failure to match reality sufficiently well;

- Operations risk – the risk of loss due to physical assets failing to perform; and

- Operational (Commercial) risk – the risk of loss due to flawed or inadequate business processes.

While all of these are under the jurisdiction of the ROC, only the approaches to market and credit risks are discussed here as they are specifically focused on energy market events. The other risks are viewed as operational risks and their management is covered in the Enterprise Risk Management Policy[1].

### *3.1.1. MARKET RISK POLICIES*

The following market risk policies shall govern City Light's participation in wholesale energy markets. Specific limits, methodologies, reports, operational procedures, and approval processes are detailed in the Procedures Manual.

- City Light will meet its native retail customer demand obligation with a high level of certainty.

- Subject to the constraints of the system, City Light shall not engage in any transactions that are purely speculative in nature or that cannot be tied directly to managing its underlying purchase power agreements, generating plant, transmission asset positions, or price risk.

- City Light will ensure that it has full knowledge of its position in all transacted products and the resulting exposure, and understands the implications of its hedging activities.

- Only personnel authorized by the Superintendent pursuant to a written Delegation of Authority Agreement can transact on behalf of City Light in the wholesale energy market.

- City Light may only transact in physical wholesale energy-market products approved by the ROC.

- City Light may only transact within limits approved and defined in this Risk Policy and the Procedure Manual.

- Metrics for assessing City Light's market risk exposure will be specified, measured, monitored, and reported on a regular basis.

[1] Pending Council approval as of 2011.

- All wholesale energy transactions will be carried out on recorded phone lines or electronic trading platforms.

- On a daily basis, all wholesale transactions will be captured in the official system of record.

- Models and inputs for valuation and risk measurement shall be subjected to a validation and change control process. The models employed and associated processes shall be described in detail in the Procedures Manual.

- Periodic risk and policy compliance reports will be delivered to the ROC, Superintendent, Mayor and the Council's central staff.

## 3.2. FORWARD HEDGING STRATEGIES AND PLANS

Successful management of the price and volumetric risks faced by City Light requires analysis, monitoring, and communication. Analysis of published hydrological and weather forecasts and market price data serve as key inputs to several internally developed models and ensure that the appropriate data is converted into useful information.

One of the statistical models used for this purpose is the Finance Division's Cash from Operations model, which produces a statistical distribution of revenues from the sale of surplus power. The average of the 5% worst outcomes in this distribution is called the "5% Tail Risk" metric. This is a conservative risk metric and the use of it is intended to protect the utility and its ratepayers against the worst outcomes. The objective of City Light's hedging practices is to attempt to minimize risk, that is, to maximize the 5% Tail Risk metric.

In order to avoid frequent adjustments in the utility's forward position City Light may, within the limits established in Section 3.3.2, chose not to transact in the forward market in order to move it closer to the minimum risk position as defined by the Cash from Operations Model.

Furthermore, City Light may, at times, transact in forward positions that move it further from the optimal forward position projected by the Cash from Operations Model. Such actions are allowed only to address operational concerns or risks not captured by the Cash from Operations Model. This practice is actively monitored by the Risk Oversight Division's report on the Power Operations & Marketing Division's compliance with the risk tolerance band established in Section 3.3.2. The ROC will highlight in its minutes any transaction it approves that moves the utility further away from the minimum risk position, and will provide a clear rationale for approving the action.

As the water year progresses, increased certainty in our level of resources is attained. As greater certainty is achieved, the risk tolerance level for the 5% Tail Risk metric is reassessed and approved by the ROC through the planning process described below.

Changes to the 5% Tail Risk metric value are closely monitored to ensure City Light remains within its accepted level of risk tolerance.

The 5% Tail Risk metric calculation process is a cross functional effort. The Power Operations & Marketing Division provides the hydro forecast input and load/resource balance for the Cash From Operations Model, the Finance Division owns and runs the model, and the Risk Oversight Division leads the communication of the metric's results with City Light's stakeholders. In addition, the Risk Working Group led by the Director of Risk Management and comprised of Power Operations and Marketing, Finance, and Risk Oversight Division personnel work on the continued refinement of the model, while keeping a close eye on changes in the risk metric value.

Consistent with market risk policies defined herein and the risk limits defined below, the Power Operations & Marketing Division, in concert with the ROC, will develop annual hedging strategies with underlying hedging plans as a means to manage the volumetric and price risks faced by the utility. This will be achieved by hedging the resource portfolio within the constraints of the 5% Tail Risk metric and Risk Tolerance Band.

The following two sections describe the requirements for formal written communication of City Light's hedging strategies and detailed hedging plans.

### *3.2.1. STRATEGIES*

Prior to July 1, of each year, the Director of Power Operations & Marketing shall submit an initial written hedging strategy for the upcoming next two full calendar years to the ROC for review and approval. The Strategy will include:

- A timeline for presenting specific hedging plans for managing the expected surplus resource position throughout the next two years;
- A write-up of the likely usage of structured transactions (approved transaction types other than forward purchases and sales) including probable time periods and volumes;
- A recommendation for each years' initial 5% Tail Risk metric limit; and
- Price targets and triggers, and transaction types anticipated to be used in the hedging plans..

### *3.2.2. PLANS*

As a hedging strategy is finalized by the end of July of the preceding year it will remain in effect until such time as it is modified and approved by the ROC. Due to the amount of uncertainty concerning the hydrological conditions over such a time period, the document will require approximately five to six hedging plans to be developed and approved during each year.. Hedging plans are designed to contain specified effective

dates and cover a particular transacting period of time in the future. For expected surplus energy revenue hedging and volumetric risk hedging plans, each plan will:

- Refer to the specific hedging strategy document it is applicable to;
- Be labeled or numbered consistent to the applicable hedging strategy;
- Have a specified start and end date;
- Cover a clearly specified forward time period;
- Document a volumetric limit for purchases and sales;
- Document transaction types to be used to carry out the Plan; and
- List price triggers that will enable hedging activity within the Plan's limits to be completed earlier than that which is contained in the Power Operations & Marketing Division's purchase and sales orders to their Power Marketing staff.

The Director of Power Operations & Marketing may, at any time, request that the ROC consider changes to the current Hedging Strategy or Plan. Any approved changes to the Hedging Strategy or Plan shall be recorded in the ROC meeting minutes and an updated written Hedging Strategy or Plan document will be prepared as soon as practical incorporating such changes. On occasion, it will become apparent to Power Operations & Marketing management that additional transactions to reshape expected monthly forward positions are necessary given changes in generation forecasts, market conditions, and load forecasts. The Director may enter into and execute such transactions to rebalance the forward position as long as the net energy position resulting from these transactions is close to zero. These transactions will be discussed in ROC meetings ahead of time if conditions allow, or reported after the fact and documented in the ROC meeting minutes. The effect on the tail risk metric, specifically a potential transaction(s) impact on risk tolerance band compliance will be evaluated prior to transaction execution. The benefit of evaluating the rebalancing-type transactions with risk tolerance band compliance is to provide management with quantitative assurance that the benefit (reduction in volumetric risk) is not adding an undesirable level of market risk to the portfolio.

## 3.3. RISK LIMITS

The Power Operations & Marketing Division will manage City Light's exposure consistently with the Risk Limits as defined below. In the event of a potential conflict between a specific hedging plan and these risk limits, the risk limits will control and the hedging plan will be modified to bring it into compliance with these risk limits. Under normal operating conditions, if such limits are exceeded, the Power Operations & Marketing Division will take immediate corrective action. Corrective action will start with written notification to the ROC of any limits that are exceeded, the reasons and

conditions that caused such exceedance, and the actions being undertaken to return the utility to within approved risk limits. The Chair of the ROC will then notify the Superintendent in writing of the risk limit exception and the cause of the exception. The Power Operations & Marketing Division's corrective action may include purchasing power to eliminate forecasted deficits in any month or calendar quarter, or re-balancing City Light's forward portfolio position through a combination of purchases, exchanges, or other products available from the market. There may be occasions when it will be necessary to change the risk limits listed below. The process for changing these risk limits are documented in Section 3.3.3 Risk Limit Changes.

### *3.3.1. VOLUMETRIC LIMITS*

#### *3.3.1.1. Prompt and Within the Month*

The Power Operations & Marketing Division will maintain City Light's power portfolio position for any prompt month or any Balance of the Month period so that such position shall not exceed a 50 average megawatt deficit during such period. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any call options (daily or monthly) that City Light has purchased for such month. If this limit is exceeded, the Division will take immediate action to reduce the deficit to under 50 average megawatts.

#### *3.3.1.2. Forward Month's Resource Requirement*

The Power Operations & Marketing Division will immediately suspend any further forward sales for any future calendar quarter, within the next full 24 months, if the forecasted net combined system energy projected surplus for that quarter is less than zero when calculated on a 75% probability of occurrence. Further, the POM Director will take immediate corrective action to purchase for a specific future calendar quarter if the net combined system energy position for that specific future calendar quarter, which includes the next full 24 months, is less than zero when calculated on a 50% probability of occurrence. This corrective action shall reduce said deficit to zero at the 50% level of confidence for that specific future calendar quarter. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any physical call options (daily or monthly) that City Light has purchased for such month.

#### *3.3.1.3. Forward Sales Limit*

The Power Operations & Marketing Division will not sell forward a quantity of more than 1,750,000 net megawatt hours over a rolling four full calendar quarter year period. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any physical call options (daily or monthly) that City Light has purchased for such period.

#### *3.3.1.4. Physical Options Limits*

As the utility introduces physical "put" and "call" options into its portfolio it will do so in a conservative manner. This will allow for the refinement of business practices and

internal controls that these transactions will impact. The Power Operations & Marketing Division will limit its option volumetric position so that it will not transact more than the lesser of 300 average megawatts in physical put and call options (including daily and monthly options) or spend more than $2 million for option premiums for any calendar year.

### 3.3.2. RISK METRIC TOLERANCE LIMITS

For the current calendar year, the Power Operations & Marketing Division will conduct its hedging activity to maintain the Utility's position within a $8 million Risk Tolerance Band (RTB) around the calculated 5% Tail Risk metric. For the prompt year (the year immediately following the current calendar year), the Utility's position will remain within a $10 million RTB around the 5% Tail Risk metric.

The prompt year's RTB will change to current year's RTB with the first calculation of the 5% Tail risk metric in the month of November. This coincides with the start of City Light's Finance Division running the prompt year's Cash from Operations model on a bi-weekly rather than a monthly basis.

Under normal operating conditions, in the event the approved 5% Tail Risk metric limit is exceeded or would become exceeded if the remainder of the active hedging plan was executed, planned hedging activity will stop until a revised Plan is approved by the ROC.

### 3.3.3. RISK LIMIT CHANGES

The risk metric and volumetric limits described above may be exceeded from time to time for reasons beyond City Light's control including, but not limited to unexpected or extreme market events (weather, system constraints, prices), resource underperformance, and other system conditions (prolonged plant outage, transmission line availability). To ensure that the limits contained in this Policy can be changed in a timely manner, the following protocol will apply:

1. Should the ROC desire to have an existing limit changed, a request to revise a limit along with a corresponding justification for the requested change shall be communicated to the Superintendent in writing and logged in the meeting minutes of the ROC.

2. The Superintendent will approve or disapprove the requested change in writing within 2 business days of receiving such request.

3. If approved, the chair of the ROC will promptly transmit the request, with all necessary supporting information, to the chair of the City Council's Energy, Technology, & Civil Rights Committee (ETCRC) or its functional equivalent.

4. The chair of the ETCRC, after consulting with the other members of the Committee, will notify the chair of the ROC and the Superintendent in writing within two business days of the ETCRC's decision. An email through the City's

email system will suffice as written notification. If the chair of the ETCRC does not respond within this time period, the requested change to the limit will be deemed to have been approved by the ETCRC.

5. During the period from the exceedance of the risk limits to 2 business days following the notification of the chair of the ROC by the ETCRC of its decision, the POM will not be considered an exception of the risk limits.

Should the Superintendent disapprove the requested limit change per #1 above, the Chair of the ROC will notify the Power Operations & Marketing Division to transact as needed in order to bring City Light's portfolio of forward positions back into approved risk limits.

Should the Superintendent be unavailable to respond in the time frame required by this Policy (#2 above), the chair of the ROC will transmit the request directly to the chair of the ETCRC.

On an annual basis, timed to coincide with the exit conference of the annual external assessment of policy compliance (refer to Section 3.9 External Assessment), the limits contained in this policy as modified during the course of the year per this Section will be reviewed and reaffirmed by the City Council's Energy, Technology, & Civil Rights Committee.

## 3.4. DELIVERY POINTS

City Light may transact in the Western Electricity Coordinating Council markets at the following points of delivery:

- Mid Columbia (Mid-C)
- Points of Interconnection with the Bonneville Power Administration (BPA), Avista Utilities, Idaho Power, B.C-U.S. Border, Pacificorp, Alberta Power Pool, and Puget Sound Energy
- California - Oregon Border (COB)
- Nevada - Oregon Border (NOB)
- Palo Verde (PV)

## 3.5. TRANSACTION TYPES

The following table summarizes the authorized products for each of the three transacting segments of the Power Operations & Marketing Division.

| Product | Real Time (Intra day) | Day-ahead through Balance of the month of the M of the | Forward |
|---|---|---|---|
| 1. Electrical Energy | Yes | Yes | Yes |
| 2. Reserve Transactions | Yes | Yes | Yes |
| 3. Transmission | Yes | Yes | AR |
| 4. Locational Transactions | Yes | Yes | Yes |
| 5. Transmission Losses Provider | No | No | Yes |
| 6. Capacity | Yes | AR | AR |
| 7. Exchange Capacity Service | AR | AR | AR |
| 8. Energy Exchanges | Yes | AR | AR |
| 9. Parking | No | AR | AR |
| 10. Lending | No | AR | AR |
| 11. Scheduling Services | AR | AR | AR |
| 12. Regulation & Frequency Response Service | AR | AR | AR |
| 13. Reactive Supply & Voltage Control Services | AR | AR | AR |
| 14. Energy Imbalance Service | AR | AR | AR |
| 15. Dynamic Scheduling Service | AR | AR | AR |
| 16. Intra-Hour Balancing Service | AR | AR | AR |
| 17. Purchase of PhysicalCall | N/A | AR | AR |
| 18. Purchase of Physical Put | N/A | AR | AR |
| | | | |
| **AR = Approval required by the Manager of corresponding desk.** | | | |

**1. Electrical Energy**: The sale or purchase of wholesale electric energy with the following general attributes: a fixed commodity quantity; a defined commodity price; and, a point of delivery within the allowed geographic boundaries as specified under Section 3.4 Delivery Points.

**2. Reserve transactions** are the sale or purchase of capacity for a fee with the right to delivery of energy up to the amount of the capacity reserved during the period covered by the contract. The commodity price is either fixed or indexed to Mid-C, COB, or Palo Verde. The point of delivery is fixed. The sale of Third Party Operating Reserves Service (TPORS) per BPA Transmission's Operating Reserves Business Practice is one example of a reserve transaction.

There are two specific sub-categories of capacity reserve products which are differentiated by the notice required for delivery of the energy:

- Spinning Reserves: Capacity transactions where the buyer may call for delivery of the commodity with less than 5 minutes' notice through an automated generation control or other electronic signal;

- Operating Reserves: Capacity transactions where the buyer may call for delivery of the commodity with no less than 15 minutes' notice;

**3. Transmission**: The sale or purchase of rights to transmission capacity. These transactions have a fixed capacity, a fixed price per unit of capacity, and fixed path. The sale of surplus PTP BPA Transmission through the TransAssign function is one example.

**4. Locational Transactions**: The simultaneous purchase and sale of energy with one or more counterparty but at different points of delivery. The intent of the transaction is to either move a position from point A to point B or to lock in the spread between the two points where City Light has access to and is indifferent as to which location the position is located. At the time of transaction entry, the intent of the transaction will be clearly documented on the Risk Oversight Division's Pre-deal Risk Assessment Form.

**5. Transmission Loss Provider**: Providing transmission losses for a counterparty in return for a fee plus payment for the energy required to meet the obligation.

**6. Capacity**: Energy that is committed to be available relative to a forward schedule. The energy may not be purchased by the counterparty so a fee is charge for making the commitment of resources (capacity fee). Should the energy by needed, a price per megawatt hour will be charged. The contract will state a capacity fee and an energy price. The transaction will be with a single counterparty. The delivery of energy may be less than the amount of capacity purchased. The buyer has the choice of determining the amount (up to a stated maximum volume) and timing (within stated parameters) of when the energy deliveries will be made. Maximum deliveries and receipts are set by contract. Capacity sales terms must include that capacity payments will be structured to be due no later than 3 business days after the signing of the transaction confirmation. This capacity charge will be non-refundable. If the capacity is called upon by the purchaser and the energy is not available, energy will be purchased and delivered or deemed to have been purchased and delivered at a stated index price. Acceptable variations to the general terms of this transaction are:

- Buyer may be restricted as to amounts of delivery and which hours may be chosen for deliveries and/or seller may be allowed some choices.

- May be combined with a locational transaction or exchange or transmission deal.

- Any forward capacity sales shall be compared against the most recent capacity position report as prepared by the POM Division to ensure City Light has sufficient resources.

**7. Exchange Capacity Service**: Seller will exchange energy with the Buyer by delivering energy during defined hours in exchange for energy returned during other hours; within each stated time period these transactions will be energy neutral with the amount of energy delivery to the purchaser equal to the energy returned to Seller. The Buyer will pay a fixed Exchange Capacity fee for the amount of capacity made available no later than 3 business days after signing the transaction confirmation.

**8. Energy Exchanges**: Transactions of energy with a single counterparty at two different points in time and possibly location. The implicit price is defined by the ratio of quantity delivered to quantity received and the forward price differential at the time of transaction entry.

**9. Parking**: A transaction in which the purchaser delivers energy to the seller on a pre-scheduled basis according to WECC Preschedule Calendar. The seller of the service is then required to deliver a like amount of energy on a real-time basis on the pre-scheduled flow day(s) to parties or locations specified by the purchaser.

**10. Lending**: A transaction in which the purchaser directs the seller to deliver energy to specific parties or locations on a preschedule basis according to WECC Preschedule Calendar. The purchaser then delivers a like amount of energy in real-time to the seller on the pre-scheduled flow day(s).

**11. Scheduling, System Control, and Dispatch Service**: A transaction where the seller provides the service required to schedule the movement of power through, out of, within, or into a Balancing Authority Area, usually including electronic tagging service. There may be a need for additional communication gear or other hardware. If purchased through an Open Access Transmission Tariff (OATT), this service can be provided only by the operator of the Balancing Authority in which the transmission facilities used for transmission service are located.

**12. Regulation and Frequency Response Service**: A transaction where the seller commits on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) as necessary to follow the moment-by-moment changes in load. All transmission providers must offer this service, but others may offer it as well.

**13. Reactive Supply and Voltage Control Service**: A transaction where the seller supplies reactive power support based on the amounts necessary to maintain transmission voltages within limits that are generally accepted in the region. All transmission providers must offer this service, but others may offer it as well.

**14. Energy Imbalance Service**: A transaction where the seller provides the difference in energy between the scheduled and the actual delivery of energy to a load located within a Balancing Authority over a single hour. All transmission providers must offer this service, but others may offer it as well. An example is providing third-party supply of

Energy Imbalance service per BPA Transmission's Energy Imbalance Service Business Practice, Version 3.

**15. Dynamic Scheduling Service**: The selling or buying of Ancillary services through the dynamic transfer of energy through a common communications protocol to allow participants to exchange dynamic schedules with any number of participants simultaneously for both short-term and long-term transactions.

**16. Intra-Hour Balancing Service**: Seller provides within-hour incremental or decremental service where a fixed amount of energy can be received or delivered in the Seller's Balancing Authority from another Balancing Authority. The capacity quantity, number of times within any hour, number of hours within the day, and total number of hours during the term of the contract must be specified. Buyer will pay Seller, within 3 business days of signing, the capacity fee for the amount of incremental and decremental capability provided during the hours in the term. Any energy received or delivered will be settled by an exchange or energy index price.

**Physical Options**: Forward physical transactions, contracted under the WSPP enabling agreement, that give the buyer a right, but not an obligation, to perform and give the seller the obligation to perform. The following define the types of Option transactions that City Light may enter into. Volumetric limits for options are listed at Section 3.3.1.4.

**17. Purchased Physical Call Option**: Purchase the right but not the obligation to "call" on (buy) a fixed quantity of energy at a fixed delivery point, for a fixed price. This transaction type serves as a form of energy supplye insurance. Calls can be useful to City Light for obtaining additional resources, at a known price, that may be needed in times of anticipated supply deficit and in forward markets that City Light has previously sold forward. City Light will not sell call options.

**18. Purchased Physical Put Option**: Purchase the right, but not the obligation to "put" (sell) a fixed quantity of energy at a fixed delivery point for a fixed price. This transaction type serves as an additional surplus resource sales tool that will be used to lock in a floor price (guaranteed bottom). This is a useful tool to protect from the market price dropping below a stated price for a specified quantity of energy. City Light will not sell put options.

## 3.6. CREDIT RISK MANAGEMENT PHILOSOPHY

To protect its financial integrity, City Light will actively manage its credit risk by making risk informed decisions regarding which counterparties to transact with and how much business it will conduct with them. Credit risk is defined as the risk of counterparty nonperformance, or failure to deliver its obligation (whether that is an energy product or payment of amounts owed). Credit risk is especially important to City Light due to the volume it transacts in the wholesale energy market, and the seasonal peak activity (the spring run-off) that requires it to increase its risk tolerance to avoid spilling water and thereby wasting the resource.

City Light manages its credit risk by:

- Incorporating the expected sales volumes, timing of such sales, and expected energy prices, and estimated counterparty probability of default when establishing a credit risk tolerance for a calendar year;

- Allocating the credit risk tolerance among approved counterparties based on the individual counterparty's estimated likelihood to perform;

- Assessing counterparty creditworthiness and establishing credit limits for counterparties based on that assessment;

- Requiring a counterparty to be assigned a credit limit prior to transacting with it;

- Monitoring and assessing market and counterparty events to adjust credit limits as appropriate;

- Calculating and reporting counterparty credit exposures; and

- Requiring Power Marketers transacting in the forward markets (full prompt month up to 24 months forward) to discuss term deals from a risk perspective with the Risk Oversight Division prior to deal entry. A completed Pre-Deal Risk Assessment Sheet (PDRA) or a memorandum transmitted through the recently installed Trading and Risk Management ("TRM") system listing the requested counterparties to transact with satisfies this requirement.

### *3.6.1. CREDIT RISK POLICIES*

City Light sells significant quantities of power in the wholesale market. Industry practice dictates payment no sooner than 20 days after the end of the delivery month, requiring that City Light extend credit to its counterparties. Further, as noted earlier, City Light seeks to manage its volumetric and price risk by transacting in the forward market, resulting in its extending credit to counterparties for periods up to 24 months.

The following policies shall govern City Light's credit exposure management efforts. Specific limits, methodologies, reports, operational procedures, and approval processes will be detailed in the Procedures Manual.

The Chief Financial Officer sets the following on an annual basis:

- Credit risk tolerance. This is determined by considering wholesale revenue goals, available counterparties, and these counterparties' estimated probabilities of default.

- The maximum secured and unsecured credit limit a counterparty may be given (Credit Threshold).

- A credit limit table that will be used by the Director of Risk Management during the year to manage counterparty credit.

- The methodologies used for establishing specific counterparty credit limits.

- Initial counterparty credit limits. This ensures that at the beginning of each year credit limits are aligned with risk tolerance and that the Risk Oversight Division has prepared a comprehensive analysis of counterparties and market conditions.

The above decisions and any changes to them during the year will be documented in the ROC meeting minutes. The Director of Risk Management will utilize these decisions and any additional parameters documented in the Procedures Manual to develop and adjust counterparty specific credit limits to present to the CFO for approval at the ROC and to manage credit limits during the year.

Credit limits will be based on a number of factors including the counterparty's probability of default, and credit score that focuses on liquidity, profitability, and cash flow.

SPECIAL CONDITIONS

Except under the following circumstances, City Light will not extend unsecured credit to counterparties having a net worth of less than $2.5 million:

- 'must sell' (spill conditions); or

- Negative priced energy transactions that result in City Light receiving payment for taking the counterparty's energy (a seasonal event driven by a combination of high wind and high water flow).

- Renewable Energy Credit (REC) purchases for periods greater than 24 months where a transaction-specific Ordinance is approved by the Mayor and City Council.

During spill events the Director of Power Operations & Marketing and the Power Supply & Environmental Affairs Officer may take action to extend credit to parties that currently do not have credit or do not have sufficient credit for a proposed transaction. In the case where neither of these two members of the senior leadership team can be reached, the real time marketer may sell to a specific counterparty that has no available credit once per shift to minimize lost opportunities. The real time marketer may not make more than three such sales (different counterparties) per shift. Before the end of the shift, the real time marketer will notify the Director of Power Operations and Marketing and the Power Supply & Environmental Affairs Officer of each transaction including dollar amount. Each of these transactions will be discussed and documented at the next regularly scheduled Risk Oversight Council meeting. These are expected to be low frequency events. By anticipating and documenting that such events may happen, opportunities

are not lost. The post transaction discussion will cover the underlying drivers of the event's occurrence and the effectiveness and results of the decisions that were made.

CREDIT ENHANCEMENTS

In establishing credit for counterparties, City Light may consider credit enhancements that meet the following criteria:

- Prepayment for the product or service. Prepayment is due within 5 business days of signing the confirm or contract; or

- An irrevocable standby letter of credit for the benefit of City Light from a United States office of a commercial bank or trust company organized under the laws of the United States of America or a political subdivision thereof or a foreign bank with a branch office located in the United States with at least an "A" credit rating from two or more major credit rating agencies; or

- An acceptable payment guarantee from a parent or otherwise qualified entity having investment grade credit ratings of at least 'BBB' or 'Baa2' from S&P and Moody's, respectively. The Guarantor must meet City Light credit qualification requirements and qualify for the amount of credit support to be provided; or

- Other credit enhancement deemed acceptable by the CFO.

REPORTING

City Light will measure and report its counterparty credit exposure in the following ways:

Settlement Exposure: A rolling 60-day notional value. This is equal to the higher of existing Accounts Payable (AP) plus current delivered but unbilled plus scheduled to be delivered through the end of the current month (CM) or the CM plus next month notional value.

Mark to Market Exposure (MTM): The change in market value of undelivered obligations.

Current Exposure: The sum of Settlement Exposure plus Mark to Market Exposure.

A credit exposure that exceeds a credit limit due to the MTM component will be considered a passive exception by the Power Marketers; however, this excess credit exposure will be managed by the Risk Oversight Division.

The ROD will provide such reports to the ROC no less than once per month or more frequently if conditions warrant.

## 3.7. PROCEDURES MANUAL

The specific operating procedures and parameters for implementing the policies in this document are detailed in the Procedures Manual. Changes to the Procedures Manual will be reviewed and approved by the ROC for consistency with this Risk Policy.

## 3.8. RISK REPORTING

The Risk Oversight Division will produce the following periodic reports:

- A monthly report documenting City Light's compliance with this Policy.
- A weekly report identifying Risk Policy violations or exceptions, if any, and summarizing the status of City Light's existing Hedging Plan, existing positions, forecast of resources, and credit exposures.

These reports will be distributed to the ROC, the Superintendent, the Mayor and the Council's central staff.

## 3.9. External Assessment

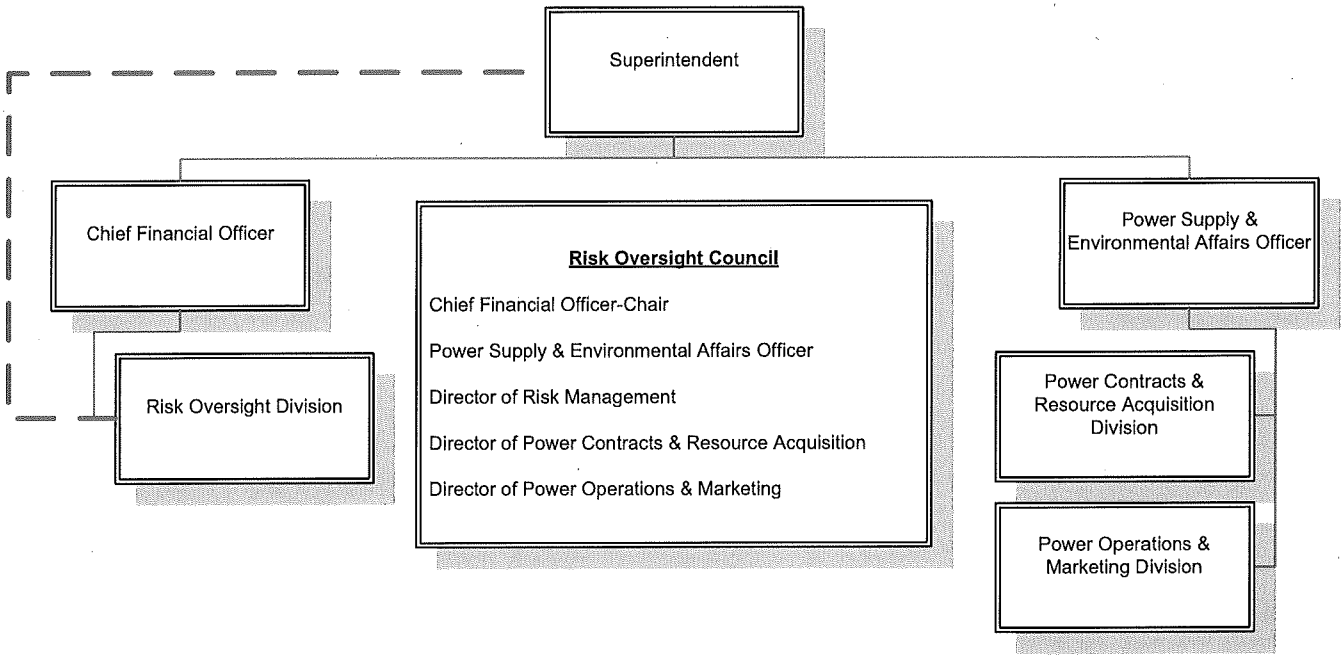
The Mayor's staff and the Council's central staff will consult with the Director of Risk Management regarding the selection of an external party to conduct a review of City Light's adherence to this Risk Policy. This compliance review will be performed and reported annually to the Mayor and Council. In alternate years the scope of this compliance review will be expanded to include an assessment of the adequacy of City Light's wholesale energy risk management controls.

# Appendix A

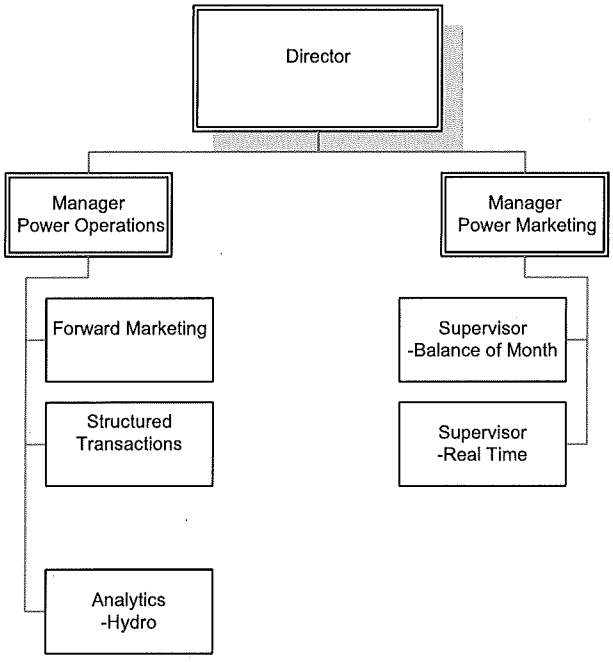
See Exhibit 1 to Attachment A of SCL Risk Management Policy RES

# Appendix B City Light's Energy Risk Management Organization Charts

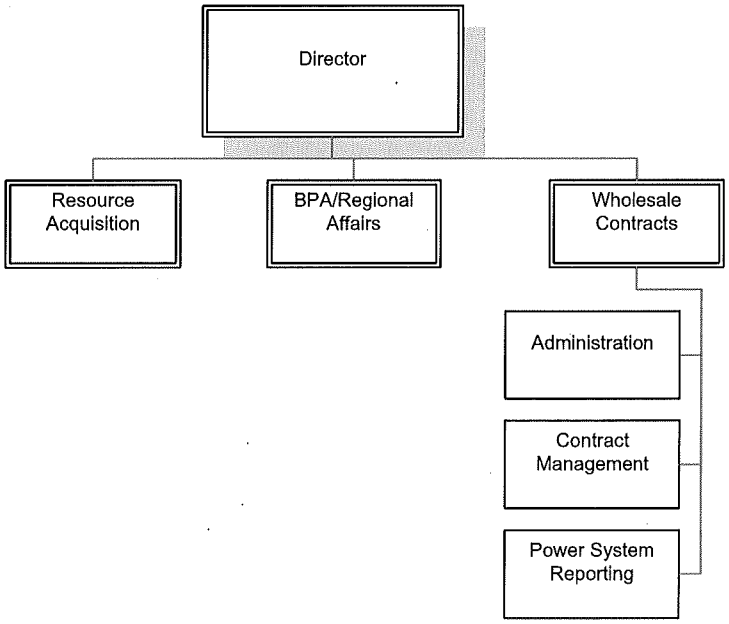
## Energy Risk Management Organization



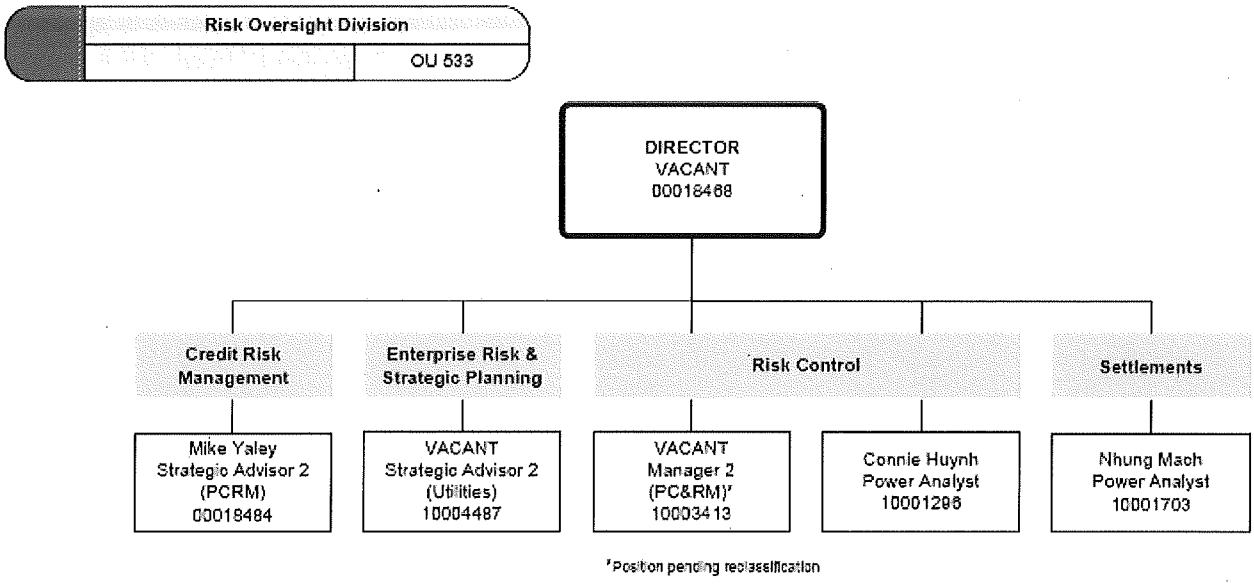
# Power Operations & Marketing Division



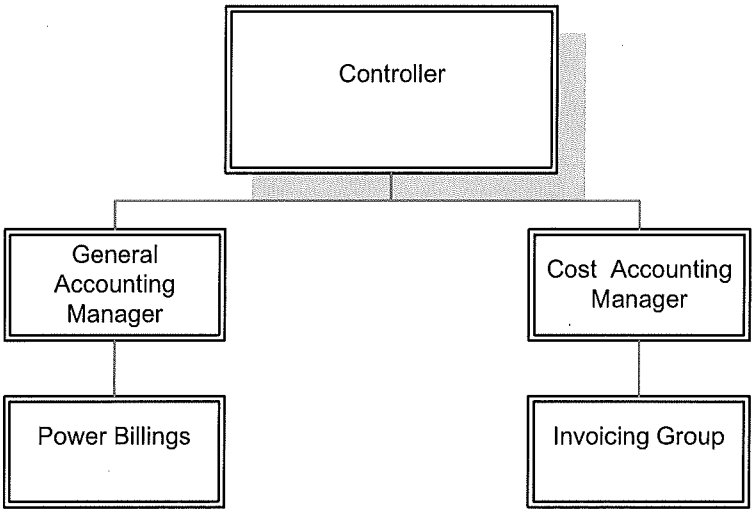

# Power Contracts & Acquisition Division



Structure of Risk Oversight Division organization is under review / reorganization




## Back Office: Accounting Division



# Appendix C Glossary of Terms

Risk Tolerance Band: An acceptable variance, in either direction (positive or negative), from the 5% Tail Risk's calculated optimal position.

Calendar Quarter: Three-month blocks of time, often referred to as "Q's." Q1 is comprised of January through March; Q2 contains April through June; Q3 contains July through September; Q4 contains October through December.

Call Option: The right but not the obligation to "call" on (buy) a fixed quantity of energy at a fixed delivery point, for a stated price, including the market index price. This transaction type serves as a form of energy supply resource insurance.

Cash From Operations: The net revenue expected from wholesale energy transactions, retail sales, other expenses, and incomes.

Cash From Operations Model: The Financial Division's model that estimates net revenue available to fund capital requirements taking into account the variability of cash flows resulting from uncertainty of water conditions, market prices, and system load.

Credit Risk: The risk of loss due to counterparty failure to perform contractual obligations including payment.

Hedge: Transaction entered into for a time period that covers the Prompt Month or further-forward time period for the purpose of reducing resource and/or price uncertainty or generating a return on City Light's investment in energy assets.

Hedging Plan: Specific plan of action derived from the Hedging Strategy.

Hedging Strategy: High level direction that serves as the framework for developing courses of action (Hedging Plans) that will lead towards achieving a goal.

Market Price Risk: The risk of loss due to changes in price,

Modeling Risk: The risk of loss due to a model's failure to sufficiently match reality.

Operational Risk: The risk of loss due to flawed or inadequate business processes.

Operational Transaction: Procurement or sale transaction entered into for the purpose of managing resources.

Operations Risk: The risk of loss due to physical assets failing to perform.

Procurement: Energy product purchase transaction in the Balance of Month or shorter time horizon for the purpose of serving City Light's native load.

Prompt Month: Closest calendar month that has not yet begun.

Put Option: The right, but not the obligation to "put" (sell) a fixed quantity of energy at a fixed delivery point for a stated price including the market index price. This transaction type serves as an additional surplus resource sales tool that will be used to lock in a floor price (guaranteed bottom). This is a useful tool to protect from the market price dropping below a stated price for a specified quantity of energy.

Volumetric Risk: The risk of loss due to variations in generation output and customer demand.

5% Tail Risk: The risk metric produced from the Cash From Operations Model. It is the average financial outcome of the worst 5% of all outcomes.

# Appendix D Compliance Statement

**Compliance Statement**

The undersigned employee hereby acknowledges receipt and review of City Light's Wholesale Energy Risk Management Policy dated _____ and corresponding Wholesale Energy Risk Procedures Manual version _____.

The undersigned further acknowledges that this risk policy and corresponding risk procedures manual defines the standards of City Light's energy risk management efforts that the employee is expected to comply with, and that failure to comply with the Policy and procedures may result in, among other things, disciplinary action up to and including termination.

As Utility compliance with the Wholesale Energy Risk Management Policy requires the involvement and support of many City Light staff, employees who become aware of non-compliance with these policies are obligated to report such anomalies to the Risk Oversight Director, CFO, or Power Supply Officer.

Acknowledged by:

_____
Employee Name (Print)

_____
Employee Signature

_____

Date

Eric Campbell/db
SCL Risk Management Policy RES EXH 1 to ATT A
6/18/10
Version #1

Exhibit 1
APPENDIX A to the Wholesale Energy Risk Management Procedures Manual

# SEATTLE CITY LIGHT

# Wholesale Energy Risk Management Procedures Manual

***Version v0161810***

***This Document Contains Proprietary Information. External Distribution Only With the Consent of the Chief Financial Officer***

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CITY CLERK

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# Introduction

This document, the Wholesale Energy Risk Management Procedures Manual ("Procedures") contains the procedures established by the Risk Oversight Council that apply to the conduct of Seattle City Light's wholesale energy risk management and wholesale marketing activities. The context, authority, and intent for them is established in Seattle City Light's Wholesale Energy Risk Management Policy document ("Policy") dated mm/dd/yy. Those charged with the operation, implementation, and oversight of City Light's wholesale energy risk management function shall consider the Policy and Procedures as a single statement under which they will operate.

The following Exhibits deal with specific aspects of City Light's wholesale energy marketing and risk management activities.

Abbreviations used throughout include:

ROC – Risk Oversight Council

ROD – Risk Oversight Division

POMD – Power Operations and Marketing Division

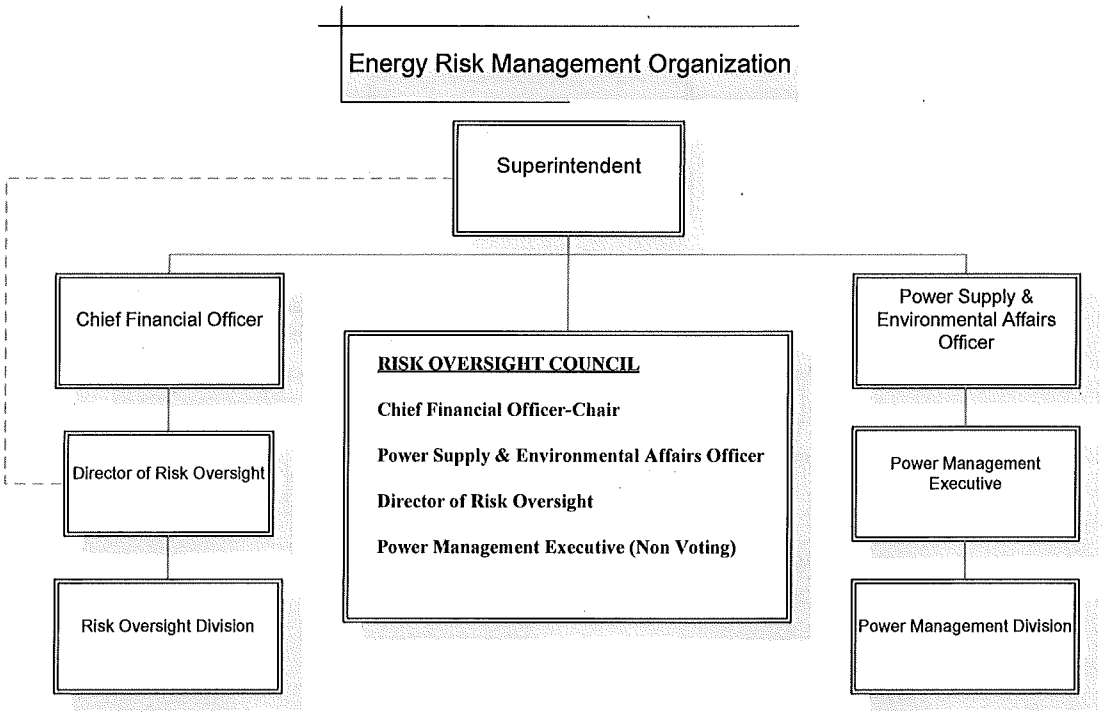
PME – Power Management Executive (head of the PMD)

CFO – Chief Financial Officer

MtM – Mark to Market

As used in this document, the term 'in writing' will include notification by email.

# Exhibit A Organization Charts



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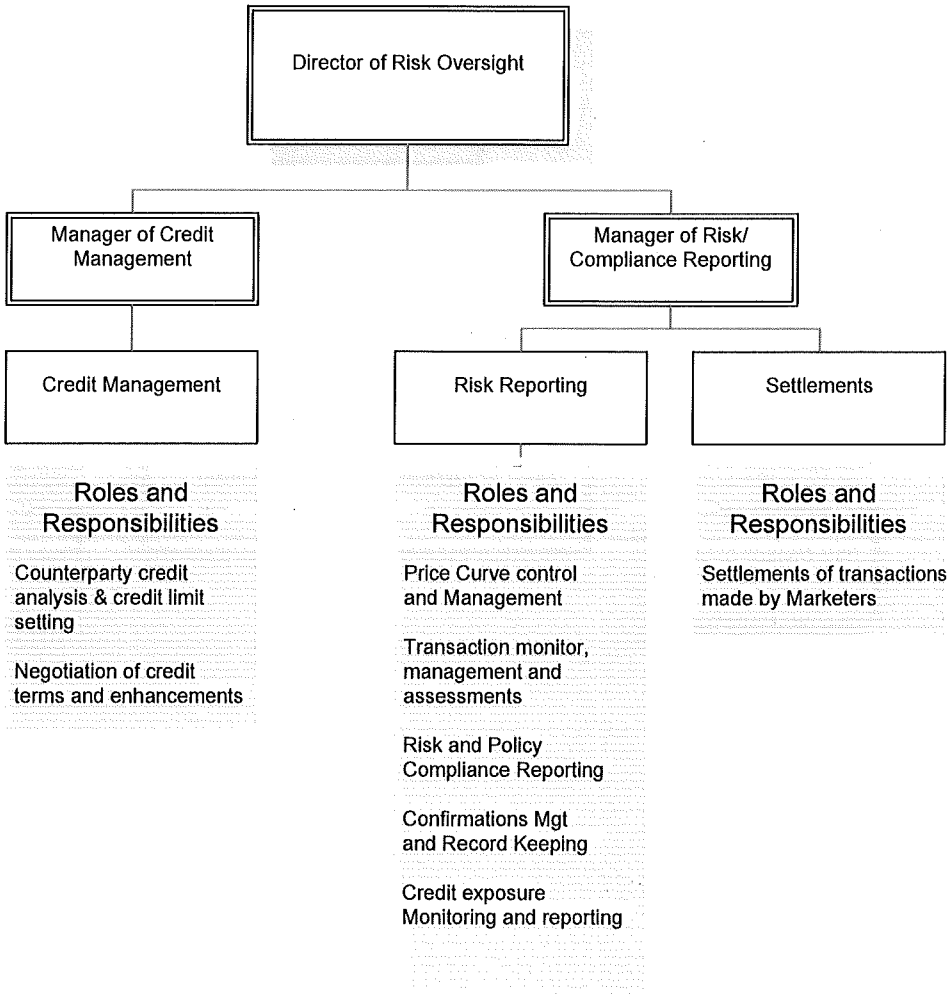
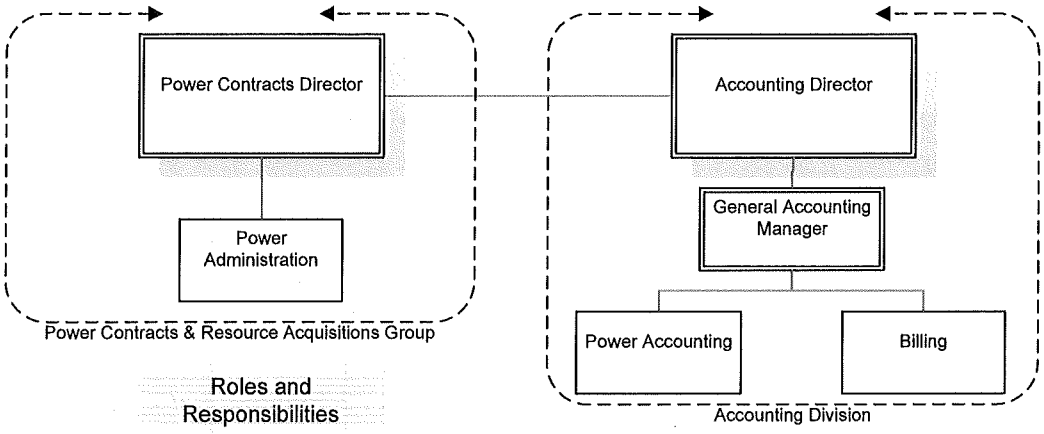
# Middle Office

## (Risk Oversight Division)



# Back Office

## (Accounting Division & Power Contracts & Resource Acquisitions Group)




### Roles and Responsibilities

Administration of contracts relating to long-term resources. (RECs and Carbon products)

Contract development and Negotiations.

Record and maintain RECs And carbon offsets

Work with Billing to ensure proper payment of long-term resource contracts

### Roles and Responsibilities

### Roles and Responsibilities

Process power related transactions.

Work with Settlements for verification of accounts receivable and payable amounts are reflective of actual transactions and what is in the system of records.

Track payments and perform collection of Non-payments when necessary



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# Exhibit B ROC Reports and Report Development

The Director of Risk Oversight will distribute the following reports to the members of the ROC and the Superintendent:

| Report | Source | Frequency |
|---|---|---|
| Annual Net Wholesale Revenue Distribution | CFOM | W |
| Actual/Forecast Physical Position By Month | Sybase | W |
| Hedge Plan Status | Sybase | W |
| Counterparty Credit Exposure Metrics | Sybase | W |
| Market Price Update | RODDB | W |
| Actual & Average Cumulative Precipitation, Snow pack, and Reservoir Elevation Information | Various | W |
| 5% Tail Risk Metric | CFOM | M |
| Policy Compliance | ROD | M |

CFOM = Cash From Operations Model RODDB = Risk Oversight Division Data Base

ROD = Risk Oversight Division W = Weekly M = Monthly

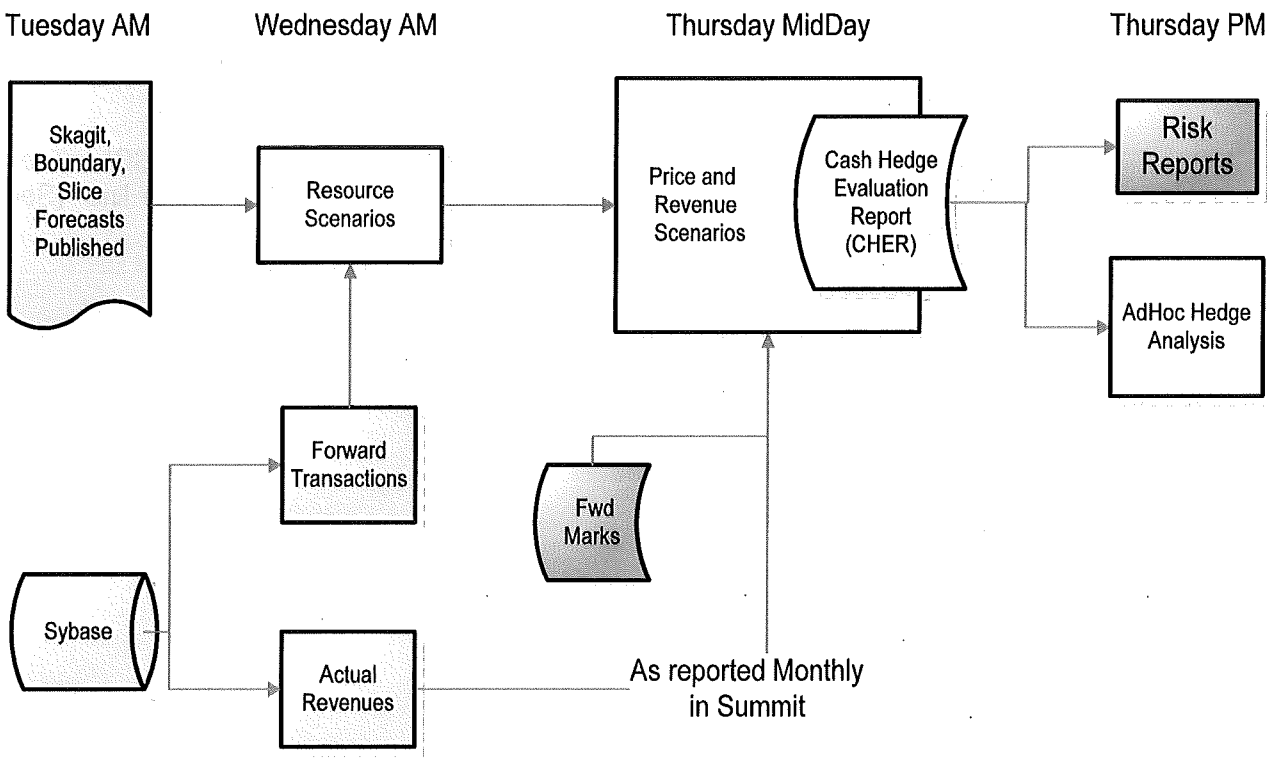
## RISK METRIC REPORTING AND ANALYSIS

**Tuesday AM**
New hydro forecasts available. Power Management uses forecasts from the Northwest River Forecast Center and 3Tier as inputs for the Resource Forecast Model.

**Wednesday AM**
Resource forecast completed for current water year. For time periods where no forecasts have been published, historical data is used instead. Forecast and summary of forward transactions are transferred to Finance for input into the Cash From Operations Model.

**Thursday Mid-Day**
Current Forward Marks and resource forecast are input to Wholesale Revenue Model to produce price scenarios and populate the Cash Hedge Evaluation Report (CHER).

**Thursday PM**
CHER outputs are used to populate reports and hedge analysis tools used by the Risk Oversight and Power Management Divisions.




A detailed documentation of the Wholesale Revenue Model & Risk Metric is attached to the end of this document as Appendix A to ensure adequate documentation of processes, procedures, responsibilities and segregation of duties among the separate divisions.



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## Exhibit C Authority to Transact

Only personnel that are specifically named in a Delegation of Authority document, materially similar to the example below, may enter into Energy related transactions for City Light.

No person authorized to transact on behalf of City Light will trade on behalf of any other entity at any time while employed by City Light.

No person authorized to transact on behalf of City Light will enter into transactions that violate any rules promulgated by the Federal Energy Regulatory Commission.

As personnel changes dictate, the Delegation of Authority-Energy Transactions document will be amended in writing from time to time. It is the Power Marketing Executive's responsibility to ensure that only authorized traders enter into transactions for City Light.

In addition, all energy transaction and activities will be executed only on SCL offices and locations with restricted access and on a secured, recorded phone line. (See Exhibit I for more details under recorded phone line.)

# Delegation of Authority
# Energy Transactions

Seattle Municipal Code (SMC) 21.49.130.B.2 authorizes the City Light Department to enter into contracts "...terminable on not more than (18) months' notice, providing for the acquisition, exchange or sale of energy on terms most favorable to the Department...." SMC 21.49.130.C further provides that the Department "may also enter into contracts of a general nature relating to the utility system."

As the Superintendent of the City Light Department of the City of Seattle, I hereby delegate the authority to execute agreements that are necessary or beneficial to performance of the functions and responsibilities of the Power Management Division. This authority extends to any form of agreement or amendment thereof, consistent with the SMC 21.49.130 to the following:

| Name | Primary | Secondary | Authority | Transaction Tenor Limit | Transaction MW & $$ Limit |
|---|---|---|---|---|---|
| | | | | | |
| Forward | | | | | |
| | | | Forward Marketing | Delivery term from 1 to 18 months | |
| Day Ahead and Balance of month | | | | | |
| | | | Monthly Marketing | Delivery term of next day to 45 days | |
| Pre-scheduling | | | | | |
| | | | Monthly Marketing | Delivery term of next day to 45 days | |
| Short Term | | | | | |
| | | | Short Term Marketing | Delivery term of today and tomorrow | |
| | | | | | |

These delegations allow staff to sell and/or market power, transmission, and ancillary services.

Because certain individuals are capable of multiple functions, the Interim Manager of Power Operations will communicate by e-mail to the Risk Oversight Committee the current individual assignments in effect.



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Either the Power Supply & Environmental Affairs Officer or the Interim Manager of Power Operations may amend this Delegation of Authority on a temporary basis (not to exceed 30 calendar days) to enable continuity of operations due to unplanned staffing contingencies including, but not limited to, weather, commuting difficulty and illness. Any such changes will be communicated to the Director of Risk Oversight by email as soon as practicable.

Recommended for Approval:

_____ _____

Date

Interim Manager of Power Operations

_____ _____

Date

Power Supply & Environmental Affairs Officer

This Delegation of Authority is effective on the date of the signature below, and shall remain in full force and effect until further amended, modified or revoked.

_____ _____

Superintendent Date

# Exhibit D Approved Products and Markets

## MARKETER RESPONSIBILITIES

Marketers are responsible for transacting on behalf of City Light in compliance with the Policy and Procedures established by the ROC.

## MARKETS

Marketers may transact in the Western Electricity Coordinating Council markets at the following points of delivery:

- Mid Columbia (Mid-C)
- Points of Interconnection with the Bonneville Power Administration (BPA), Avista Utilities, Idaho Power, and Puget Sound Energy
- California - Oregon Border (COB)
- Nevada - Oregon Border (NOB)
- Palo Verde Switchyard (PV)

## MARKET SEGMENTS

The products listed in the next section are approved for marketing by authorized personnel under the terms and conditions indicated. The following defines the market segments referenced throughout this Exhibit.

- **Hour-ahead**: transactions entered into in the current hour for the next hour. This segment reports to the Director of Power Supply;
- **Day-ahead**: transactions entered into during the current day for the next day or any portion of the balance of the current month. After the 20th of the month, Day-ahead also includes transactions for the prompt month. This segment reports to the Director of Power Supply; and,
- **Forward**: transactions for the prompt month through 18 months into the future. For the purpose of determining compliance with this specific limit, the calculation of how many months forward is being transacted, will start with the transaction entry date. This segment reports to the Director of Resource Operations & Portfolio Management.

Hour-ahead and Day-ahead transactions are conducted over the phone and through electronic medium and do not require written confirmations. However, Forward transactions of 7 days or longer require written confirmations. Transactions for terms in excess of 18 months are subject to prior review and approval by the City Council.



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For additional information on confirmations, please refer to Section I.

## DEAL TICKET & DEAL TICKET PROCEDURES

As each Hour-ahead, Day-ahead, and Forward transaction is scheduled, a "Deal Ticket" is produced in ACES. The deal ticket includes important information pertaining to the deal, such as: date, author, Counterparty, quantity, price, type of product, and duration of contract. Although all transactions scheduled via ACES are issued a Deal Ticket, only transactions of 7 days or longer are audited. Therefore Deal Tickets for Hour-ahead transactions will not be updated when changes to the transaction occur. Deal Tickets for any transactions of 7 days or longer will be audited and therefore, must be changed or corrected as needed to match the transaction in ACES. Transactions such as Third Party Operative Reserves (TPOR) where schedules are not entered by marketers, but by the EIDE system, will not have deal tickets assigned to them.

1. Power Marketer will complete the offer editor as normal for deal entry including the new field opposite the "Delivery Point" field. This new field is highlighted in red.
2. The choice of HUBS is in the drop-down menu and as follows:

BC
Big Eddy
COB
ConKelley
John Day
LaGrande
Mid-C
NP 15
Portland System
Puget System
PV
SCL System
SP 15
Unknown
N/A

3. Choice of Hub is based on where the product is being priced. For example, if the marketer is quoting or is quoted a price that they accept that is at Mid-C or COB market price, they would choose one of those Hub names. If the product is being priced at a premium over Mid-C or COB market and therefore considered to be priced at a "John Day" market price, then John Day is the Hub that should be chosen.

4. If the contract is priced at an established "Index", and the index price will be entered at a later date, the Hub should correspond with the market for this index.

5. If the Hub is not in the list, please notify me as soon as possible so I can arrange to have it added. Use the Hub entitled "**Unknown**" as placeholder until the new Hub can be officially added. If you are not sure which Hub is correct, please use "**Unknown**" and contact me to discuss options.

6. Any schedule where the Hub field is not automatically populated with "**N/A**" will require the user to select a Hub.

## PRODUCTS

The following table summarizes the authorized products for each of the three transacting segments of the Power Operations & Marketing Division.

| Product | Real-Time (Intraday) | Day-ahead through Balance of the Month | Forward |
|---|---|---|---|
| Electrical Energy | Yes | Yes | Yes |
| Reserve Transactions | Yes | Yes | Yes |
| | | | |
| | | | |
| Transmission Losses Provider | No | No | Yes |
| Capacity | Yes | AR | AR |
| | | | |
| | | | |
| Energy Exchanges | Yes | AR | AR |
| Parking | No | AR | AR |
| Lending | No | AR | AR |
| Scheduling Services | AR | AR | AR |
| Voltage Regulation | AR | AR | AR |
| Reactive Regulation | AR | AR | AR |
| Imbalance Regulation | AR | AR | AR |
| RECs | N/A | AR | AR |
| Off-sets | N/A | AR | AR |
| Call Options | N/A | AR | AR |
| Put Options | N/A | AR | AR |
| Collars | N/A | AR | AR |
| Exchange with Option | No | AR | AR |
| **AR = Approval required by the Manager of corresponding transacting segment.** | | | |

**segment**



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**May cut this entire piece and point to Policy**

Approval Required means approval from the head of trading for that market segment.

COMMODITY ENERGY

This is the sale and purchase of wholesale electric energy with the following general attributes:

1. A fixed commodity quantity;
2. A defined commodity price; and,
3. A point of delivery within the allowed geographic boundaries as specified under Points of Transaction, above.

Acceptable variations to the general terms of energy transactions are:

1. Suspension of deliveries, but only as provided for under WSPP contract terms;
2. Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

NEED NEW NAME AND LIKELY DESCRIPTION

This is the simultaneous purchase and sale of energy with **one or more counterparty** but at different points of delivery. Basis deals must net to zero energy. These deals will have normally have two confirmations - one issued by SCL that reference SCL's deal ticket number, the other presumably will not. The marketer will be responsible for making sure that both confirmations reference the correct deal ticket number. The value of the basis deal will be the price differential between the buy and the sell however the price on the confirmation and deal ticket will be the buy and sell contract prices.

Acceptable variations to the general terms of the Basis transaction are:

1. Suspension of deliveries, but only as provided for under WSPP contract terms.
2. Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

3. If one counterparty is involved, the deal can be written with one confirmation using a modified standard WSPP Schedule C Exchange confirmation with advance permission from the Power Management Executive.

### TRANSMISSION

This is the sale or purchase of rights to transmission capacity. These transactions have a fixed capacity, a fixed price per unit of capacity, and fixed path.

Acceptable conditions of the Transmission transaction are:

- The transmission rights may be firm or non-firm as mutually agreed by the contracting parties.
- Transmission may be sold as a transmission resale (where SCL is involved in scheduling and tagging, and SCL pays all fees to the transmission provider) or as a transmission assignment (where SCL is not involved in scheduling and tagging. In accordance to the transmission provider's tariff, SCL may or may not pay all fees to the provider).

### TRANSMISSION LOSS PROVIDER

This is the provision by City Light of transmission losses for a counterparty in return for a fee plus payment for the energy required to meet the obligation. There is generally no limit on amount of energy, however, as a practical matter, the amounts are small.

### RESERVE

Reserve transactions are the sale or purchase of capacity for a fee with the right to delivery of energy, up to the amount of the capacity reserved during the period covered by the contract.

The commodity price is either fixed or indexed to Mid-C, COB, or Palo Verde.

The point of delivery is fixed.

There are also two specific sub-categories of capacity differentiated by the noticed required for delivery of the energy:

> Spinning Reserves: Capacity trades where the buyer may call for delivery of the commodity with 5 minutes notice;
>
> Operating Reserves: Capacity trades where the buyer may call for delivery of the commodity with 15 minutes notice;

Acceptable terms and conditions of the Energy transaction are:



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- Suspension of deliveries, but only as provided for under WSPP contract terms.
- Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

### CAPACITY

This is the delivery of energy to a single counterparty where the buyer has the choice of determining the amount and timing of when the energy deliveries will be made. Maximum deliveries and receipts are set by contract.

Acceptable terms and conditions of this transaction are:

- Suspension of deliveries, but only as provided for under WSPP contract terms.
- Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

Acceptable variations to the general terms of this transaction are:

- Buyer may be restricted as to amounts of delivery and which hours may be chosen for deliveries and/or seller may be allowed some choices.
- May be combined with a basis or transmission deal

### EXCHANGE OPTION

This is the delivery and receipt of energy with a single counterparty during different hours of delivery and receipt on a single day. The buyer has the choice of determining the amounts and timing of when the energy deliveries and receipts will be made. Maximum deliveries and receipts are set by contract. Capacity trades must net to zero energy at the end of a negotiated time period (daily or weekly).

Acceptable terms and conditions of this transaction are:

- Suspension of deliveries, but only as provided for under WSPP contract terms.
- Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

Acceptable variations to the general terms of this transaction are:

- Buyer may be restricted as to amounts of delivery and which hours may be chosen for receipts and deliveries and/or seller may be allowed some choices for receipts.
- May be combined with a basis or transmission deal

### INTERRUPTIBLE PHYSICAL PUT

This is the delivery to a single counterparty of energy where the seller has the choice of determining the amount and timing of when the energy deliveries will be made. Under certain conditions, the delivery may be interrupted. This product is sold in order to avoid buying reserves. Maximum deliveries and circumstances when interruptions are allowed are set by contract.

Acceptable terms and conditions of this transaction are:

- Suspension of deliveries, but only as provided for under WSPP contract terms.
- Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

Acceptable variations to the general terms of this transaction are:

- Seller may be restricted as to amounts of delivery and which hours may be chosen for deliveries and/or buyer may be allowed some choices.
- May be combined with a basis or transmission deal

### ENERGY EXCHANGE TRANSACTIONS

Exchanges are trades of energy with a single counterparty at two different points in time and possibly location. The implicit price is in terms of the ratio of quantity delivered to quantity received. Since the transaction is with a single counterparty, there should be only one contract or confirmation.

Acceptable conditions of the Exchange transaction are:

- Suspension of deliveries, but only as provided for under WSPP contract terms.
- Changes or alterations of delivery points, but only as mutually agreed by the contracting parties.

### PARKING

This is a transaction in which the purchaser delivers energy to the seller on a pre-scheduled basis according to WECC Preschedule Calendar. The seller of the service is then required to deliver a like amount of energy on a real-time basis on the pre-scheduled flow day(s) to parties or locations specified by the purchaser. The specific terms and conditions are as negotiated by the parties and must be in the form of a written contract.



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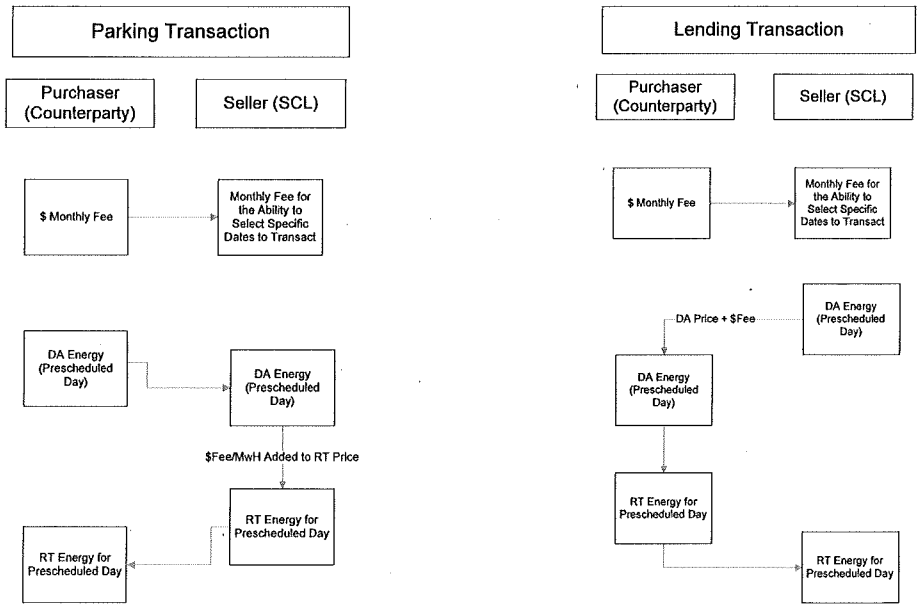
## LENDING

This is a transaction in which the purchaser directs the seller to deliver energy to specific parties or locations on a preschedule basis according to WECC Preschedule Calendar. The purchaser then delivers a like amount of energy on real-time to the seller on the pre-scheduled flow day(s) The specific terms and conditions are as negotiated by the parties and must be in the form of a written contract..

# Parking & Lending Transactions




## RECS AND OTHER RENEWABLE RESOURCES

**RECs**: Renewable Energy Credits are the environmental attributes associated with a renewable generating resources that qualify under RCW chp. 19.285 and which have been registered with WREGIS.

**Off-Sets**: GHG offsets are certificates or memorandums that document the exchange of money for the reduction, avoidance, or sequestration of GHG emissions from a specific project. Unless stated otherwise, one carbon offset represents the reduction of one metric ton of carbon dioxide or its equivalent in other greenhouse gases.

**Physical Options**: Forward transactions that give the buyer a right, but not an obligation to perform and give the seller the obligation to perform. The following define the types of Option transactions that City Light may enter into. Volumetric limits for options are listed at Section 3.3.1.d. These physical options can be settled monthly or daily.

**Purchased Call Option**: Purchase the right but not the obligation to "call" on (buy) a fixed quantity of energy at a fixed delivery point, for a stated price, including market price. This transaction type serves as a form of energy supply insurance.

**Sold Call Option**: In exchange for a single premium payment due within 5 business days of entering into the agreement, City Light will have a commitment to provide (sell) a stated quantity of energy at a stated price, for a fixed period of time at a stated delivery period. This type of transaction serves as means for City Light to provide resource insurance to others in the wholesale market while generating cash and revenue from generation asset operational capability.

**Purchased Put Option**: Purchase the right but not the obligation to sell a fixed quantity of energy at a fixed delivery point, for a stated price, including market price. This type of transaction will enable City Light to lock in a forward sales price without locking in a commitment to make the actual sale. This is useful in times when forward market prices are attractive but volumetric uncertainty makes a forward sale unattractive; this will happen most frequently during runoff season when it is known that spot prices can drop below zero.

**Sold Put Option**: In exchange for a payment due within 5 business days of entering into the agreement, City Light will have committed to purchase a stated quantity of energy at a stated price, for a fixed time period, including market price. This is a useful tool to lock in a fixed price for energy in the daily market. It is anticipated that this type of transaction will be combined with the purchase of a call as described below.

**Purchased Collar Option**: This is a single transaction that combines a purchase of a Call and a sale of a Put. The premium (sale price) for each component offset each other to some extent. The value of this transaction to City Light is it reduces price volatility for *purchased energy* to within a stated band, the purchased call strike price (ceiling price) and the sold Put strike price (floor price) for energy.

**Sold Collar Option**: This is a single transaction that combines a sale of a Call and a purchase of a Put. The premium (sale price) for each component offset each other to some extent. The value of this transaction to City Light is it reduces price volatility for *energy sales* to within the sold Call strike price (ceiling) and the purchased Put strike price (floor price) for energy

**Purchased Straddle Option**: This is a single transaction that combines a purchase of a Call and a purchase of a Put. The value of this transaction to City Light is it reduces the volatility of the forward price to a stated band or price: the purchased call



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strike price (ceiling price) and the purchased Put strike price (floor price) for energy. I think this is a harder sell as it doesn't clearly seem to benefit or serve as insurance for a long or short position: it sets a price you can purchase at and a price you sell at. This appears to me to be a trade you do when you don't really know if you are long or short and are looking to keep active in the market. This get's into a speculative position argument. We have a much better chance of getting approval for physical options if they set a band for power purchases (purchased collar) or a band for sales (sold collar).

Below is a reference table of obligations and rights for the Options defined above.

| | Sale | Purchase |
|---|---|---|
| Put | Obligation to Buy | Right to Sell |
| Call | Obligation to Sell | Right to Buy |

**NEW PRODUCTS**

Before a new product is traded it must be approved be included as an authorized product type in section 3.5 of the Wholesale Energy Risk Management Policy. The Power Management Executive will be responsible for developing and proposing new products. Proposals will be in writing and should clearly:

1. Describe the product;
2. How it will be traded;
3. What benefits it brings to City Light;
4. What risks it involves;
5. What changes, if any, it will require for settlement;
6. Whether this would require additions to the approved counterparty list; and,
7. Whether it would require changes to our trading support software and business processes or systems.

# Exhibit E Forward Hedging Strategy

## FRAMEWORK

The purpose of City Light's hedging strategy is to manage the utility's downside financial risk by entering into hedging transactions that improve its overall risk profile. According to the Risk Policy, the approved measurement of financial risk for hedging purposes is the 5% Tail Risk applied to the distribution of Cash from Operations.

With a predominantly hydro-electric based resource portfolio, SCL adheres to a conservative long-term planning process that utilizes only firm energy from those resources (the energy production resulting from worst-case flows). As a result, the utility is long a significant amount of power – between 10% and 70% of its native load, depending on hydro conditions – on an annual basis. Even under low flow conditions, City Light has surplus power in nearly every month of the year, and under normal hydro conditions it has significant surplus every month. Given this chronic surplus, it is must be recognized that the predominant activity of SCL in the nearer term markets is to sell this surplus as the certainty of the amount of surplus improves.

As used here, forward hedging is defined as covering market tenors of 2 to18 months into the future from the date of the transaction.

## STRATEGY

On an annual basis, prior to July 1, the Power Management Division will present to the ROC a hedging strategy for the upcoming calendar year. The strategy will contain two distinct Phases. Phase I deals with the initial identification of the forecast position, establishment of the 5% Tail Risk metric's initial limit (risk tolerance) and the execution of transactions necessary to keep City Light within the approved level of risk tolerance. Phase II and subsequent Phases will cover specific time periods for entering hedges enabling City Light to incorporate the increased certainty of hydro resources into its level of risk tolerance. For each Phase, the Power Management Executive will present to the ROC for approval, a written hedging plan in accordance to Policy.

## PHASE I – INITIAL PERIOD

City Light will run its forecasting models to develop a distribution of resources. This data, in addition to wholesale market prices and customer load forecasts will be input into the Cash From Operations Model. A distribution of cash from operations shall be created summarizing the potential range of outcomes resulting from these variations. Cash from Operations includes the following items:



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| SUBCOMPONENT | TYPE |
|---|---|
| Retail Power Revenue | Stochastic |
| Net Wholesale Revenue | Stochastic |
| Other Revenue | Fixed |
| | |
| Power O&M | Fixed |
| Other O&M | Fixed |
| Non-City Taxes | Fixed |
| | |
| Investment Income | Fixed |
| Other Income | Fixed |
| | |
| Debt Service | Fixed |
| City Taxes | Fixed |
| Bond Reserve Deposits | Fixed |
| Contingency Reserve Deposits (Withdrawals) | Fixed |
| Other Funds Required | Fixed |
| | |
| Cash from Operations | Sum |

*In this case "Fixed" means the model does not calculate a range of values. It is expected that these values will change from week to week, but they are not influenced by hedging activities ( with the exception of some components of "Other Revenue") and the variations are small relative to the stochastic variables.

By the end of June, the PMD will identify the gross expected position for the following calendar and the initial energy position that optimizes the 5%Tail Risk value for the year. In order to set the initial level of risk tolerance, the PMD will analyze the 5% Tail Risk value at different levels of purchases and sales. The hypothetical transactions may be made in 25 aMW increments or may be shaped into monthly HLH (Heavy Load Hours) and LLH (Light Load Hours) quantities. This information will be presented to the ROC for the purpose of setting the Phase 1 level of risk tolerance as applied to the 5% Tail Risk metric. Hedging transactions that serve a defined goal that are within the established 5% Tail Risk limit will be executed according to a Hedging Plan developed by the PME and approved by the ROC, but in no event shall this period extend beyond December 31st. Throughout Phase 1, the financial metric will be re-assessed at least monthly. If at any time City Light's net forecast position exceeds the approved level of risk tolerance the current hedging plan will be adjusted accordingly.

## PHASE II AND SUBSEQUENT PHASES– HEDGING WITHIN THE YEAR

Implementation of Phase II begins in January when Phase I activity has concluded. Throughout the year, the Cash From Operations model and the 5% Tail Risk metric will be updated at least monthly and evaluated. It is expected that the optimal 5% Tail Risk value will change as the amount of water supply for the runoff period becomes more certain and as forward wholesale prices change. As a result, these subsequent Phases are based on an evolving distribution of flow and market conditions and the specific Hedging Plans will incorporate this information. The value of the optimal 5% Tail Risk level will vary from week to week. In order to avoid a regular practice of having to move in and out of positions an optimal range will be set as part of each approved Hedging Plan. When the portfolio is within that range, no additional hedging transactions are needed – but neither are they prohibited.

## RISK LIMITS OVERRIDE RISK METRIC

The following triggers, which are included in the Risk Policy, are designed to protect against being short within any given month and adherence to these limits expressly override the Hedging Strategy. The triggers are staged by quarter first and then month.

- The PMD will take corrective action if at any time there is a forecasted net combined system energy deficit at the 75% confidence for any future calendar quarter over the following 12 month period. The corrective action shall reduce said deficit to zero.

- At no time will the PMD enter a month carrying a net combined energy deficit of more than 50 average megawatts under expected conditions.

- Because of the possibility of price spikes, the PMD will not enter the months of July, August, September, November, or December carrying a deficit under expected conditions.

- The above limits stipulate actions the PMD must take, the PMD may recommend more aggressive action to the ROC if conditions warrant additional concern of being short.



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# Exhibit F Near-term Transaction Planning

Near-term transaction planning covers real time out through the prompt month. The tool used for analysis is called STOMP (Short Term Operation and Marketing Plan), a model with daily granularity. STOMP uses the latest information available to modify the existing forecast, and if necessary, to take action. It also provides opportunity for what-if scenario plan analysis under different market, water, resource, and load conditions.

Historical data analysis shows a large volumetric volatility within months. There are many events that start or happen on a certain date. These could be changes in upriver operations or planned outages or transmission restrictions. Near-term analysis isolates the impacted period from the rest. Transacting decisions made based on this near-term analysis reduces the potential adverse effects of these events.

STOMP analyses is done at least once a week or as any noticeable changes are made to external forecast of flow or weather, and when City Light receives notification of changes in operation, energy delivery, or loads. These analyses are broken down to on-peak, off-peak, weekday, and weekends and holidays products. As a result the transacting decisions are made not only for a specific numbers of days, but also for a specific product.

## REAL TIME OPERATIONS

Daily & Balance of Month Operations prepare the Daily Marketing Strategy Instructions for Real-Time Operations on a daily basis. This instruction sheet includes price information in the daily, balance of month and forward markets. It provides an overview of the newly implemented contracts. Fishery/recreational constraints and special requests (from Boundary Relicensing, National Park Services, USGS, etc.) are also included on the sheet.

# Exhibit G Transaction Procedures

## PROMPT MONTH TRADING PROCESS

In accordance with SCL best practice, the decision to trade balance of the month will be determined by load requirements and outage risk rather than arbitrage opportunity. Analyses of the prompt month position are completed the Short Term Operations and Marketing Plan (STOMP) model. A monthly review of the prompt month scenarios takes place around the 20th of current month. If the internal discussion leads to a transaction execution decision, the Manager of Power Marketing will send a Transaction Execution Order to the Day-Ahead Trader with precise instructions on the quantity, product and timing of the trade to be done.

- Trader negotiates for best deal.
- Using the Pre-Deal Analysis Sheet, Trader fills in the parameters of each transaction execution order, using one document per trade.
- Submit the Pre-Deal Assessment Sheet to the Risk Oversight Group for an approval of potential counterparties' credit.
- Upon execution of the deal, trader enters the transaction into ACES, and notes the deal ticket number on the Pre-Deal Assessment Sheet.
- Trader records deal at enters transaction into Premonth.xls spreadsheet.
- When selling, Trader creates confirm of executed transaction for a signature of the Power Operations and Marketing Director.
- Upon receipt of confirmation by broker, check confirm for accuracy then give all of the documents to the admin staff.

## BALANCE OF THE MONTH TRADING PROCESS

In accordance with SCL best practice, the decision to trade balance of the month will be determined by load requirements and outage risk rather than arbitrage opportunity. Analyses of the Balance of Month position are completed by running the Short Term Operations and Marketing Plan (STOMP) model. The balance of month scenarios review is being review on a weekly basis. If the internal discussion lead to a transaction execution decision, the Manager of Power Marketing will send a Transaction Execution Order to the Day-Ahead Trader with precise instructions on the quantity, product and timing of the trade to be done.

- Trader negotiates for best deal.
- Using the Pre-Deal Analysis Sheet, Trader fills in the parameters of each transaction execution order, using one document per trade.
- Submit the Pre-Deal Assessment Sheet to the Risk Oversight Group for an approval of potential counterparties' credit.
- Upon execution of the deal, trader enters the transaction into ACES, and notes the deal ticket number on the Pre-Deal Assessment Sheet.
- Trader records deal at enters transaction into Premonth.xls spreadsheet.
- When selling, Trader creates confirm of executed transaction for a signature of the Power Operations and Marketing Director.



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- Upon receipt of confirmation by broker, check confirm for accuracy then give all of the documents to the admin staff.
- The trader enters the transaction into the scheduling spreadsheet for the Preschedulers to use for the next prescheduled day.

## DAY-AHEAD TRADING PROCESS

- Prior to the trading day, internal discussion framing up operational strategies.
- Prior to the trading day, the trader reviews system operating requirements, load forecast, SLICE commitments, lake elevation targets, fish requirements, transmission limits, and unit outages as provided in the monthly operating report and subsequent updates.
- Trader review instructions provided by the Supervisor.
- On the morning of trading, the trader discusses current conditions with the Real Time trader on shift and how current conditions may impact the upcoming daily trading market.
- A review of the credit status report ensures that any changes are noted prior to trading.
- Trader reviews the daily position and determines the best optimization plan within the parameters of the instructions provided by the day-ahead supervisor.
- Trader begins market analysis and price discovery via phone calls, instant messaging, brokers, and electronic trading platforms.
- Upon determining market conditions and supply/demand, trader revisits his/her strategy and position.
- Deal negotiations with approved counterparties on recorded phone lines, recorded broker lines and via the ICE electronic trading platform.
- Upon transaction completion, trader notes the transaction on the daily written log.
- Immediately following the resolution of the daily position, the trader enters all trades in ACES, creating an individual deal ticket for each trade.
- Trader enters all transactions into a scheduling spreadsheet, which is then used by the Preschedulers for determining source and sink information and recording transmission and E-tag information.
- Upon receipt of a confirm from the broker, counterparty or electronic trading platform; trader checks the confirm for accuracy, initials the document and gives it to the back office for further processing.
- The hand written phone log, trading instructions, and the daily credit reports are all filed for future reference in a location easily accessible to trading floor and ATF staff.

## REAL-TIME TRADING PROCESS

- Trader on day shift participates in internal discussion framing up operational strategies.
- Traders exchange latest information during shift change.
- Trader analysis of system operating requirements, load forecast, SLICE commitments, lake elevation targets, fish requirements, transmission limits, unit outages etc – determining an hourly position to balance resources with system load generation within the parameters of the provided daily instructions
- Trader discusses operating strategies with the Generation Dispatcher



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## Exhibit H Settlements

The Settlement process is a monthly activity that requires City Light and each of its wholesale counterparties to reach agreement on the quantity of energy that flowed and corresponding dollars to be billed each month. This function entails a scheduling system called "Accounts Contracts and Energy Scheduling, (ACES). ACES is our "system of record". The initial step in settlements is to download ACES data & create a mass Email to all Counterparties on the 1st of every month. Each Email contains quantity (MWh) and dollars bought & sold. The expectation is that the Counterparty will contact SCL settlements staff either via Email or by phone and confirm their system reads the same information or that there is agreement with the figures.

When agreement is not reached, both SCL and/or the Counterparty will provide daily and hourly transaction detail. This detail must be audited by both parties to determine where differences occur. This involves research of sources, including ACES (reading the TAG and notes associated with deal entry), the marketer's "Marketing Log" program, their "Transaction Log" (real time) or "Daily Log" (day-ahead), any handwritten notes the marketer's keep, and the marketer's themselves. Before changes are made to ACES, they must be approved by the Real Time Marketing or Forward Marketing Manager. Settlements staff may close discrepancies of up to $200 on a monthly invoice. Discrepancies above $200 that cannot be resolved via the normal settlements process go to the Manager of Risk Control & Settlements to resolve.

Completed settlements are listed and tracked in a report known as the 'Checksheet'. This report is shared by both settlements & billing staff. Settlements staff prepare the check sheet and on it "check off" which Counterparties are settled. At approximately 2:00pm settlements staff will turn over the Checksheet report to the Manager of Risk Control & Settlements. The manager will "validate" the Checksheet does match the system of record and forward a daily validated Checksheet to wholesale billing staff. Billing staff monitor the Checksheet for completed settlements and bill as soon as the Manager of Risk Control & Settlements has sent them a daily validated Checksheet report..

Per the WSPPA, invoices must be received by the 10th of the month and payment the 20th (or 10 days after the billing date). Once the actual invoice has been created and sent, the invoice process date and the number isl noted in the Checksheet.

The Lead Settlements Analyst is authorized to make limited corrections to existing transactions in authorized products with authorized counterparties or brokers, solely to correct errors or omissions. These modifications are only intended to:

- Be for the purposes of validation and settlement of existing transactions;
- Be limited to an amount set periodically by the Chief Financial Officer, but not to exceed $50,000.00 without additional authorization;
- Be within risk limits established by the City Light ROC;
- Be consistent with all current City Light policies on credit, operating procedures and legal requirements.

Approval for modifications for amounts greater than $50,000.00 shall be obtained from the Chief Financial Officer (CFO) or the CFO's designee.

This approval structure shall not limit Settlements personnel from consulting with Power Marketing personnel for discovery of data or to obtain explanatory information for purposes of reconciliation with counterparties.

The process for settlements is seen below:



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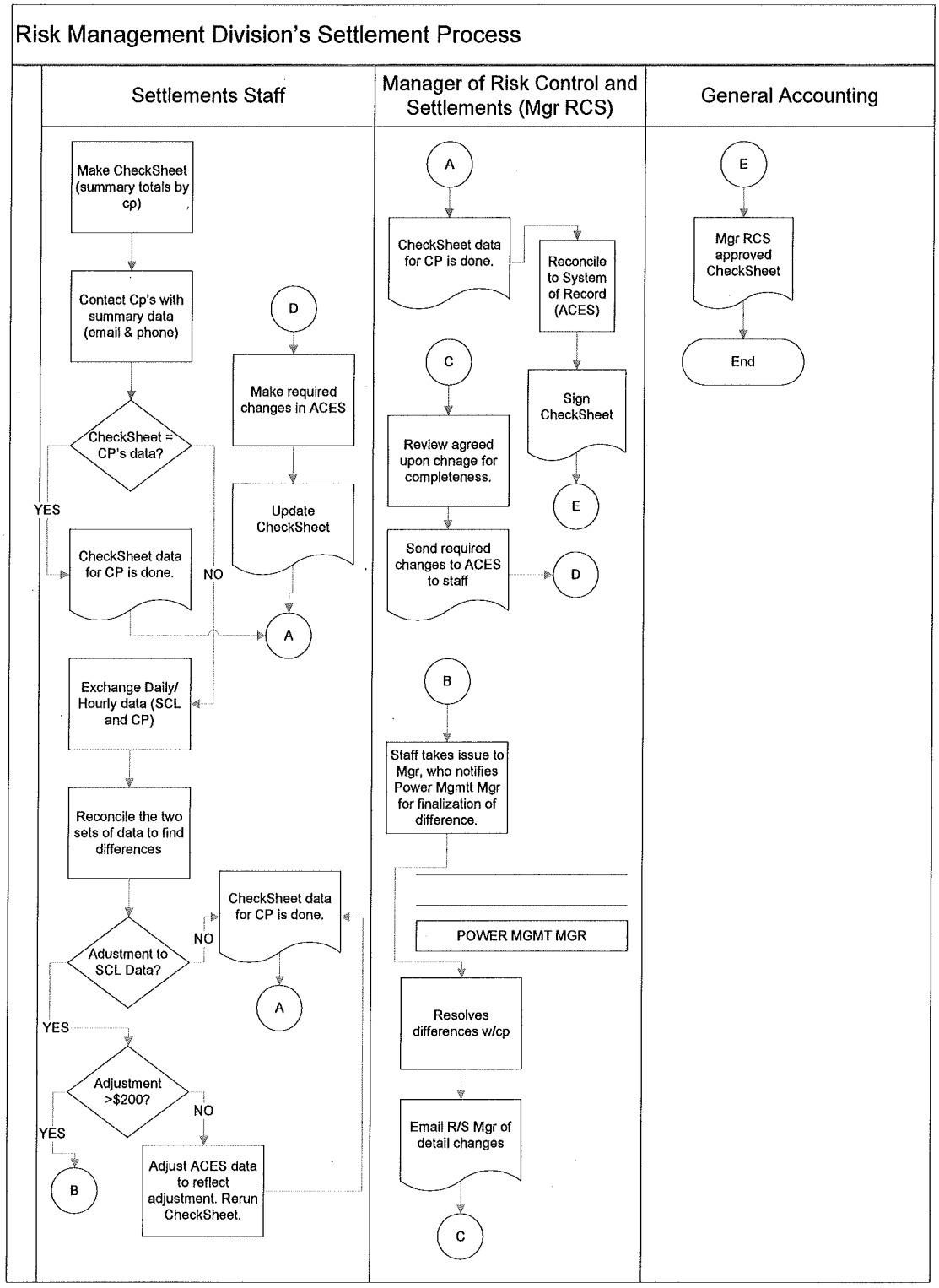
Risk Management Division's Settlement Process
Settlements Staff
Manager of Risk Control and Settlements (Mgr RCS)
General Accounting
Make CheckSheet (summary totals by cp)
Contact Cp's with summary data (email & phone)
CheckSheet = CP's data?
YES
NO
CheckSheet data for CP is done.
Exchange Daily/ Hourly data (SCL and CP)
Reconcile the two sets of data to find differences
Adustment to SCL Data?
NO
YES
CheckSheet data for CP is done.
A
Adjustment >$200?
YES
NO
B
Adjust ACES data to reflect adjustment. Rerun CheckSheet.
D
Make required changes in ACES
Update CheckSheet
A
A
CheckSheet data for CP is done.
Reconcile to System of Record (ACES)
Sign CheckSheet
E
C
Review agreed upon chnage for completeness.
Send required changes to ACES to staff
D
B
Staff takes issue to Mgr, who notifies Power Mgmtt Mgr for finalization of difference.
POWER MGMT MGR
Resolves differences w/cp
Email R/S Mgr of detail changes
C
E
Mgr RCS approved CheckSheet
End

# Exhibit I Credit Limits and Control

## CREDIT RISK TOLERANCE

Credit risk is the risk of loss from counterparty nonperformance and in the wholesale energy market it is a low likelihood, high dollar event. City Light's dependence on wholesale revenue subjects it to this risk. On an annual basis the Chief Financial Officer establishes the level of credit risk tolerance for wholesale energy market activity after taking into consideration the upcoming year's wholesale revenue target, current and forecast market prices and the credit scores of our counterparties. This risk tolerance is used to set the credit limit framework to be used by the Director of Risk Management during the year to manage individual counterparty limits. As hydro conditions, market prices, and counterparty interest in our products change during the year the level of risk tolerance will also be adjusted as needed to enable POM to transact with interested counterparties.

## QUALIFICATION REQUIREMENTS

Prospective counterparties must be evaluated and scored in order for the Director of Risk Management to assign a credit limit within the CFO-approve framework. If the analysis does not support granting unsecured credit, the following credit enhancements will be considered:

- Prepayment for the product or service;
- An acceptable irrevocable standby letter of credit from a creditworthy provider for the benefit of City Light;
- An acceptable payment guarantee from a parent company or other entity that has credit ratings of at least 'BBB' and/or 'Baa2' from S&P and Moody's, respectively, and no ratings below investment grade; or,
- Other credit enhancement deemed acceptable by the CFO.

An acceptable standby letter of credit is defined as an irrevocable standby letter of credit for the benefit of City Light from a United States office of a commercial bank or trust company organized under the laws of the United States of America or a political subdivision thereof or a foreign bank with a branch office located in the United States with at least an "A" credit rating from two or more major credit rating agencies.

If a payment guarantee is issued, the Guarantor must meet City Light credit qualification requirements and qualify for the amount of the credit guaranteed.

When a counterparty provides an acceptable payment guarantee, the credit limit set for the counterparty will be the **lower** of the guaranteed amount and the amount the guarantor qualifies for based on the ROD's credit scoring and evaluation.



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When a counterparty provides an acceptable letter of credit, the credit limit available to the counterparty will be the **sum amount** of the letter of credit and the amount it would have qualified for based on the established evaluation methodology. In cases where an existing counterparty provides additional credit assurance in the form of an acceptable letter of credit, the amount of the letter of credit will be additive to the existing credit limit.

If prepayment is provided by the counterparty, they must specify if the cash is to be held or applied to settlement for subsequent replenishment.

City Light may purchase energy from counterparties that do not have credit limits for the short term period defined as: same-day through balance of the month, provided that the counterparty has not previously been disqualified via a credit qualification review. The ROC must approve longer term purchases from these types of counterparties.

## CREDIT LIMIT ASSIGNMENT METHODOLOGY

The credit extended to a counterparty will be based on Seattle City Light's credit risk assessment methodology. The current methodology includes three (3) components, implied credit ratings using the Moody's KMV Creditedge and Riskcalc tools, review of published quantitative data, and review of qualitative information; This results in an implied credit rating used to categorize a counterparty within the existing credit limit framework and the insight to establish a specific credit limit and transaction tenor limit.

As a rule of thumb, federal government counterparties are frequently given a top tier implied credit rating due to the backing of such counterparties by the United States Government.

**Credit Limit Framework**

*Effective January 1, 2010*

| MOODY'S IMPLIED RATINGS (a) | STANDARD & POOR'S IMPLIED RATING (a) | TANGIBLE NET WORTH (b) | CREDIT LIMIT RANGE | TENOR | GRADE CATEGORIES |
|---|---|---|---|---|---|
| Aaa1, Aaa2, Aaa3, Aa1, Aa2, Aa3, A1, | AAA+, AAA, AAA-, AA+, AA, AA-, A+, | 2.50% | Up to $10M | Up to 18 Months | Category 1 - Highest |
| A2, A3, Baa1 | A, A-, BBB+ | 2.50% | Up to $6M | Up to 18 Months | Category 2 |
| Baa2, Baa3 | BBB, BBB- | 2.50% | Up to $4M | Up to 3 Quarters | Category 3 |
| Higher Risk | Higher Risk | 2.50% | Up to $2M | Up to 1 Quarter | Category 4 - Lowest |

Legend
(a) MKMV or other SCL measures.
(b) Lower of $10 million & 2.5% of Tangible Net Worth.

The quantitative review considers the elements of a counterparty's tangible net worth, credit ratings from Standard & Poors and Moody's Investors Service, and financial ratios calculated from the counterparty's recent audited financial statements. Eight financial ratios are utilized to evaluate the short-term (twelve month) liquidity,

profitability and cash flow of the counterparty from the date of the audited financial statements. These financial ratios encompass the Current, Quick, Working Capital to Current Assets, Total Debt to Total Assets, Profit Margin, Return on Equity, Operating Cash Flow, and Operating Cash Flow to Current Liabilities.

The third component of review is qualitative; and such analysis is worth up to 30% of recommended credit limit. The qualitative factors, including those listed below, are considered in the Risk Oversight Division's decision to set the credit limit for recommendation to the CFO:

- Current counterparty news, trends, and events; 8
- Adequate credit facilities;
- Stable management;
- Rate support from regulatory agencies;
- Stable market and industry sector;
- Stable ratings;
- Timely financial reporting;
- Quality of revenues and earnings;
- Risk management capability;
- Emerging trends;
- The Risk Management Oversight Group's insight and knowledge of the counterparty gained through its working relationship with the counterparty, Power Marketing, and professional industry credit organizations.

## REMAINING AVAILABLE CREDIT

The key metric used in determining remaining available credit ("RAC") that a counterparty has at any point in time is Settlement Exposure. This is computed as a rolling forward 60 day expected accounts receivable balance. This is a very realistic close approximation of actual amounts that will be payable to SCL in specific time periods. The Settlement Exposure value is deducted from the counterparty's approved credit limit to derive the RAC. In addition, the counterparty's Mark-to-Market Exposure will be monitored and used as an additional factor in deciding whether to enter into additional transactions at any point in time.



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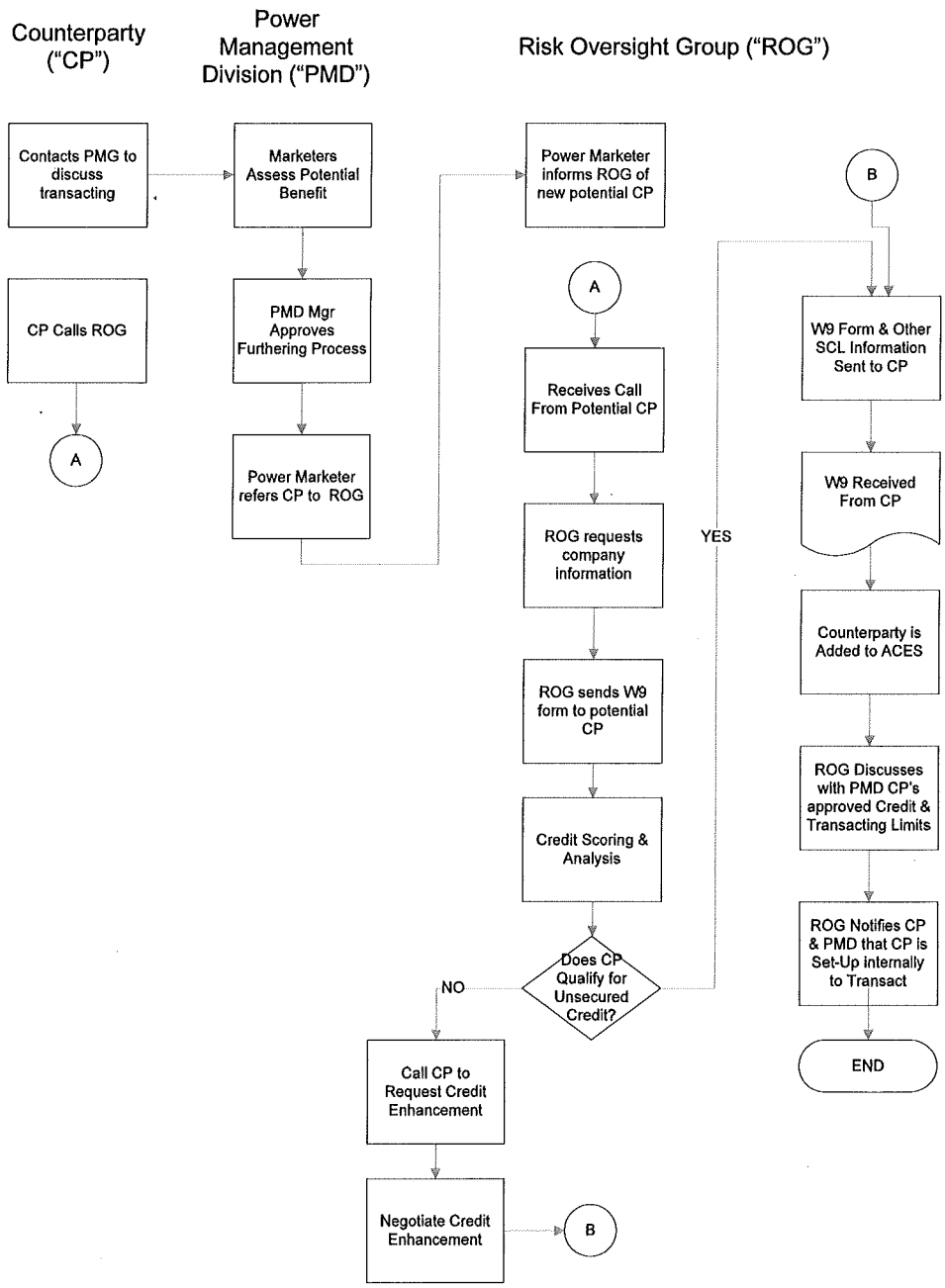
## NEW COUNTERPARY APPROVAL PROCESS

The establishment of new counterparties starts with the Power Management Division determining a benefit to be derived from adding the potential counterparty. The process of adding a new counterparty is illustrated below:

## New Counterparty Approval Process



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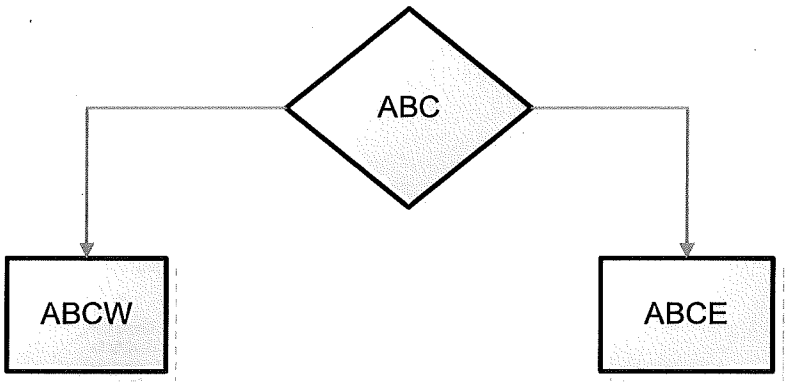
## COUNTERPARTY NAME/ ORGANIZATIONAL CHANGES PROCESS

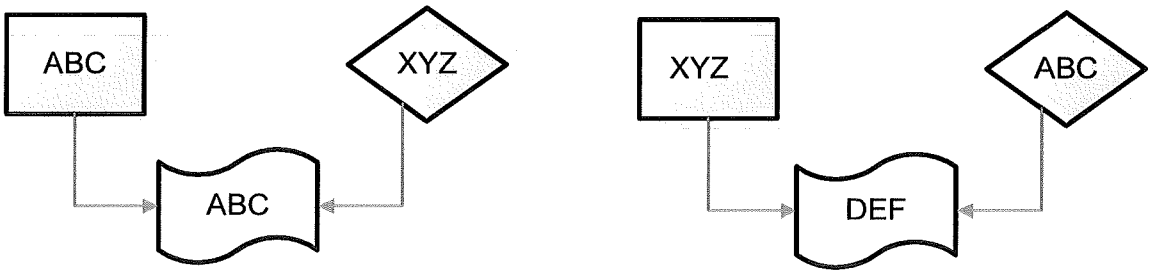
There are three types of changes that may occur with Counterparties before, during or after a contract delivery period as follows:

**Counterparty changes name:**

**Counterparty adds or changes subsidiary:**




**Counterparty consolidates w/same name or rename:**



When a Counterparty name is changed, the customer will notify SCL's Risk Oversight Division staff and provide them with formal documentation about the change. The Risk Oversight Division is the official holder of all such records. Any contact regarding name or organizational changes via other departments such as Marketing or Wholesale Contracts should be forwarded to Risk Oversight. If the customer changes their scheduling acronym along with a name or organizational change, documentation will be provided and Risk will notify all interested parties of the new acronym and when it is to be in effect.

Records in ACES/Sybase for a company that has made such a change will be kept in their original form. If staff wishes to query historical data in Sybase for a company that may have undergone such a change, they must contact Risk Oversight for information regarding the change and advice in building a query to capture all data for a single customer. It is recommended not to change historical records to the new information for audit trail purposes.

NERC registered customers will formally notify the NERC TSIN Registry of any changes. These changes are programmed to automatically flow from the NERC Website to ACES/Sybase. Therefore there is no need to manually update ACES with new information.

## CREDIT MANAGEMENT PROCESS

### CREDIT LIMIT CHANGE MANAGEMENT

A Counterparty's level of creditworthiness is not static and must be monitored and reassessed periodically. Initiation for a credit limit change may originate with the Director of Risk Oversight or the Senior Credit Analyst with required approval of the Director. When it becomes necessary to change an existing counterparty's credit limit the Director of Risk Oversight or CFO will communicate by email or other writing, the exact change to the Senior Credit Analyst and Power Management Executive. The Senior Credit Analyst will notify the Power Marketers verbally and follow up with an email communication. ROD staff will be directed by the Senior Credit Analyst to make system changes as needed.

When the origination for a counterparty's credit limit change is through a recommendation from the Senior Credit Analyst, such recommendation will be forwarded to the Director of Risk Oversight for review and approval. If the recommendation is for a decrease in credit limit, and approved, the Senior Credit Analyst will email to the Analyst of the required credit limit change in ACES, ICE, and forward activity. The Sr. Credit Analyst will email the Wholesale Power Marketers of the notification and copy to the electronic credit file.

If the change in credit limit recommendation is for an increase, and subsequent to the Director of Risk Oversight's review and approval, the Director will forward it to the CFO for final approval. Upon notification of CFO approval by the Director, the Senior Credit Analyst will email to the Analyst for the change in ACES, ICE and



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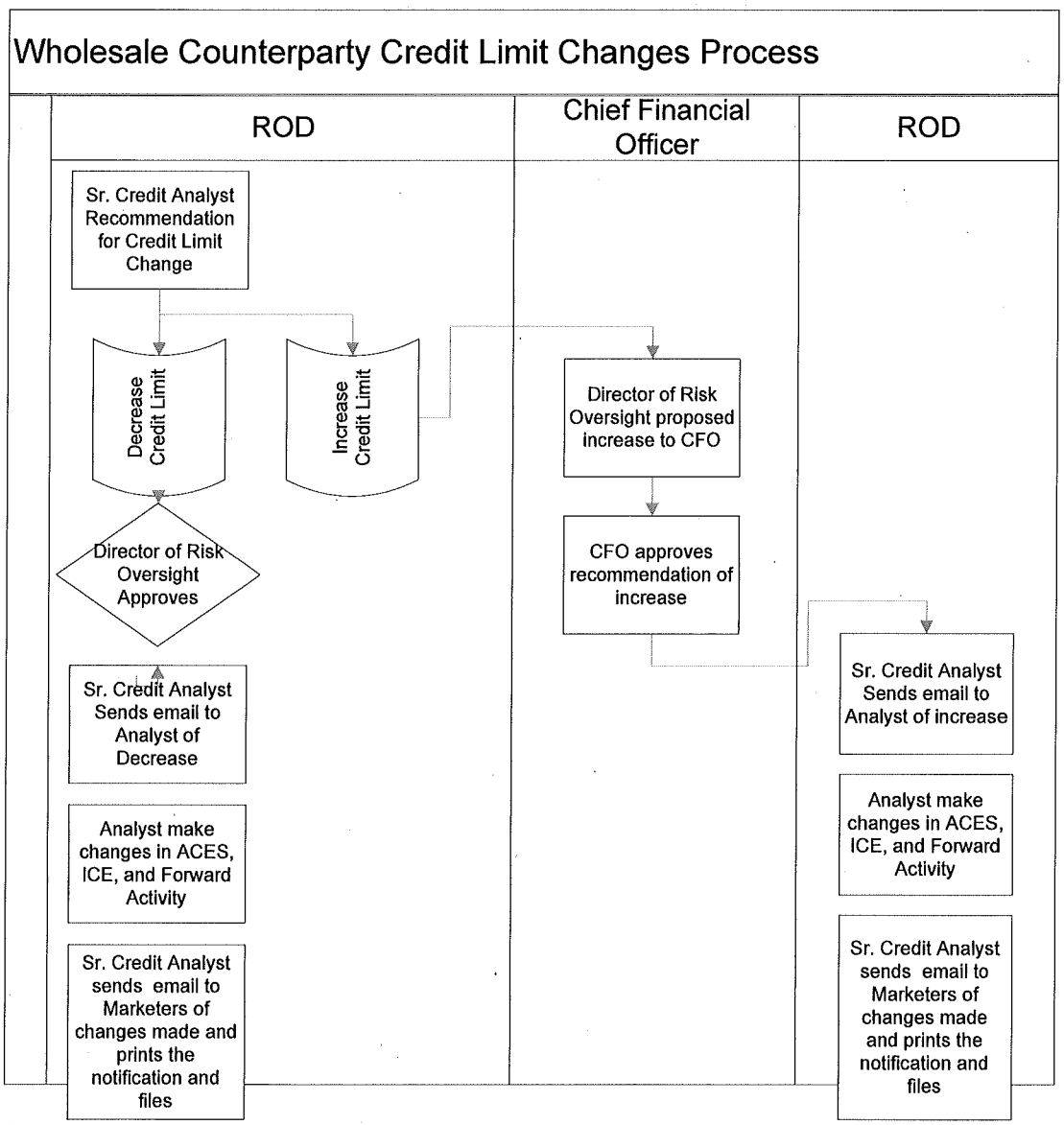
forward activity. The Sr. Credit Analyst will email the Wholesale Power Marketers of the notification and copy to the electronic credit file.



## CREDIT LIMIT EXTENSIONS

From time to time, the Wholesale Power Marketers may want to transact with a counterparty that is at or near its credit limit. In these cases, the power marketer will email a request to the Senior Credit Analyst specifying the dollar amount requested for the increase in credit capacity, including the nature of the transaction(s).

When such a request is received, the Senior Credit Analyst will assess the existing credit position, and proposed deal's required credit. If it is determined that additional credit capacity can be extended, the Senior Credit Analyst will prepare a supported recommendation for review and approval by the Director of Risk Oversight.

In many cases, the credit extension request may be to increase the existing counterparty's credit limit up to its approved original credit limit. In which case, the Director of Risk Oversight may approve or disapprove the credit increase; and, the Senior Credit Analyst will email specifics to the Analyst for ACES, ICE and forward activity updating with a copy to the electronic file.

If the recommendation for the extension of a counterparty's credit is for an amount greater than the existing approved credit limit, the Director of Risk Management will review the supported recommended, including amount and duration of extension, and if approved at this level, will forward to the CFO for final approval.

Upon notification of CFO approval by the Director, the Senior Credit Analyst will email to the Analyst for the change in ACES, ICE and forward activity. The Sr. Credit Analyst will email the Wholesale Power Marketers of the notification and copy to the electronic credit file. Additionally, the Sr. Credit Analyst will immediately communicate the approved extension of credit directly to the requesting Power Marketer by email or phone to expedite the business transaction.



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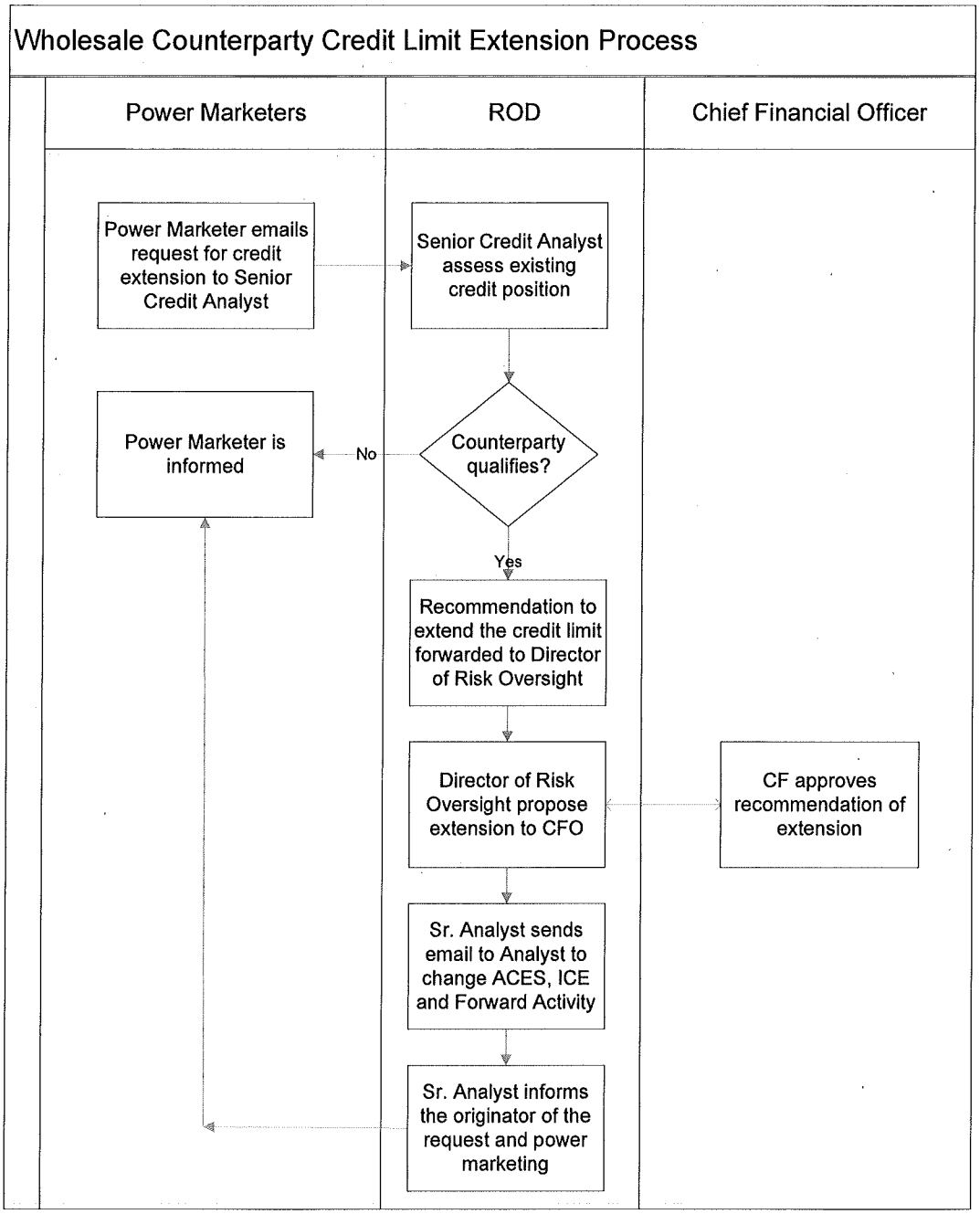
Wholesale Counterparty Credit Limit Extension Process
Power Marketers
ROD
Chief Financial Officer
Power Marketer emails request for credit extension to Senior Credit Analyst
Senior Credit Analyst assess existing credit position
Power Marketer is informed
No
Counterparty qualifies?
Yes
Recommendation to extend the credit limit forwarded to Director of Risk Oversight
Director of Risk Oversight propose extension to CFO
CF approves recommendation of extension
Sr. Analyst sends email to Analyst to change ACES, ICE and Forward Activity
Sr. Analyst informs the originator of the request and power marketing

## MONITORING

The regular monitoring for credit quality of the counterparties is performed by the Credit Branch of the Risk Oversight Division. Such monitoring includes annual and periodic financial reviews of counterparties as documented through the 'Counterparty Credit Evaluation' summary, In order to assess the likelihood of a credit event, the Senior Credit Analyst's monitoring of counterparty credit quality includes daily monitoring of market events for all counterparties. Sources of monitoring information include external counterparty, analysts (including credit rating organizations), Securities Exchange Commission filings, counterparty websites and financial news web-sites. All proposed credit recommendations, including those that pertain to significant changes in the credit quality of a counterparty are brought to the attention of the Director of Risk Oversight for credit action.

Daily monitoring of remaining available credit ("RAC") and credit exposures is done by the Credit Risk Analyst, who also produces a weekly credit exposure report for the ROC. This summary report includes the current period Settlement Exposure and MtM exposure for each counterparty, the counterparty's credit rating, credit limit, and concentration of exposure by counterparty. The report flags counterparties with MtM exposure of $1 million and above, and counterparties accounting for 10% or more of total credit exposure.

All active counterparties will be re-evaluated using the established process at least once in each twelve-month period.

## CREDIT FILE MAINTENANCE

Counterparty credit files are maintained by the Senior Credit Analyst. The credit file for each counterparty is to include prepared credit scoring and analysis, counterparty contact information, credit enhancements, and supporting information which may include audited financial statements, S&P and Moody's ratings, Dun & Bradstreet research reports, payment history, market moving news items, and correspondence with the counterparty, The Senior Credit Analyst maintains the 'Qualified Counterparty Credit Limit Summary' that summarizes each counterparty's credit information, such as current credit limit, last update, enhancements secured and date of expiration for monitoring.

Seattle City Light uses the record retention guidelines on the general schedule to comply with all of the State of Washington record keeping regulations according to the provisions of RCW 40.17. All hard copies of documents and supporting documents pertaining counterparty credit risk are kept on site for two (2) calendar years in a secured location. After the two years, the records are sent to City Lights record retention center for storage for four (4) years and are disposed of after the end of the 6th calendar year (in aggregate years). Electronic copies are retained in a secured drive for at least 6 years.



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## MARGIN MANAGEMENT

City Light does not currently utilize Margin Agreements. As a result, any credit limit violation that is derived from MtM exposure will be considered passive.

## CREDIT VIOLATION

A credit violation will be deemed to have occurred if a marketer, through negligence or intent, enters into a transaction with a counterparty that, at the time of the transaction, exceeds in value the remaining available credit for that counterparty. The Director of Risk Oversight will investigate and report findings to the ROC. The ROC will determine the appropriate action to take.

## DEFAULT

Counterparty will be deemed to have defaulted if it has not

a) Paid in full within 24 hours of payment due date, and
b) Notified City Light of its intent to pay.

In the event of default, City Light will notify the counterparty in writing of the default and will suspend trading with the counterparty immediately.

## BANKRUPTCY

City Light will cease all trading with a counterparty that declares bankruptcy or sooner if, bankruptcy is deemed possible. Further, the Chief Financial Officer or Director of Risk Oversight may suspend trading with any counterparty if there is sufficient uncertainty of the counterparty's creditworthiness. If City Light has exposure, either performance or credit, to the counterparty at the time of the declaration, The Chief Financial Officer will determine whether the City's Law Department will pursue the utility's interests and the maximum expense it will incur to prosecute the claim. In particular, the Chief Financial Officer will determine when, or if, the utility will surrender its claims in a bankruptcy to a third party.

## CREDIT CONDITION

A credit condition will be deemed to have occurred if a counterparty exceeds its credit limit because

- Credit Limit reductions reduce the counterparty credit limit below the current exposure

**OR**

- changes in market prices increases the MtM value of outstanding contracts with the counterparty above the credit limit

If a credit condition occurs, the utility will immediately suspend all sales to the counterparty. If the excess exposure is less than $1 million, no further action needs to be taken. If the excess exposure exceeds $1 million the utility will attempt to take one or more of the following actions, at the discretion of the ROC:

- Unwind a sufficient value of deals with the counterparty to bring the exposure below the $1 million threshold;
- Assign a sufficient value of deals to a third party to bring the exposure below the $1 million threshold;
- Enter into a sufficient value of offsetting purchase deals with the counterparty to bring the exposure below the $1 million threshold; or,
- Purchase a sufficient value of credit hedges to bring the exposure below the $1 million threshold.



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# Exhibit J General Control Processes

The following business processes are intended to minimize the likelihood of errors in the data stream supporting the transaction process.

## SEGREGATION OF DUTIES

City Light utilizes a Front, Middle, and Back Office energy risk management organizational structure.

### FRONT OFFICE

The Front Office is comprised of the Power Management Division and a section of the Financial Division's Financial Modeling Group. This cross functional office is responsible for Hedging Strategy and Planning development, market analytics, hydrological forecasting, transaction entry, and Risk Metric model development, maintenance, and running.

### MIDDLE OFFICE

The Risk Oversight Division is the Middle Office. It is responsible for assessing and discussing transaction risks with the Front Office prior to deal entry; risk and policy compliance reporting; confirming transactions and record keeping; providing the official forward curve for transaction valuation and model input; end of day recap process; developing and improving business processes and controls throughout the transaction lifecycle; settlements; credit analysis and credit limit setting; negotiating credit terms and credit enhancements; leading efforts to continually improve City Light's energy risk management efforts.

To ensure adequate segregation of duties, no person acting in any capacity in the ROD shall be delegated the authority to transact on behalf of City Light.

### BACK OFFICE

The Back Office is comprised of a section of the General Accounting Division and the Power Contracts and Resource Acquisitions Group. This cross functional office is responsible for transaction, billings and processing; and contract administration of contracts relating to long-term resources, i.e., Renewable Energy Credits and Carbon products (consist of but not limited to; confirmation (contract) development, negotiations, confirmation record keeping and record retention). In addition, the Power Contracts and Resource Acquisitions Group is responsible for tracking and managing their contracts throughout the transaction life cycle.

## PRE-DEAL ANALYSIS PROCESS

Prior to the entry of a forward transaction, Power Marketers will work with the Risk Oversight Division and their Section's manager to complete a Pre Deal Analysis Sheet. The purpose of this process is to ensure that deal assumptions are documented, ensuing risks and exposures are considered, the benefit of doing the deal is assessed and approved by management, and that sufficient information is gathered and communicated to the Accounting Division to ensure proper accounting treatment. The following is the process:

UNSTRUCTURED TRANSACTIONS (Standard Forward Purchase and Sales)

1. Trader discusses with his Manager the potential deal to build support/create awareness of the deal.

2. Trader surveys the market to generate a list of interested counterparties.

3. Trader creates a deal approval sheet that clearly describes the transaction. A potential list of counterparties determined from the effort of step 2 above, is also listed.

4. Trader meets with ROD to ensure Credit Exists for proposed counterparties, trade type is authorized, trade volume and price are within limits, purpose of trade is identified as being for retail load or wholesale marketing, intended benefits of doing the deal, transaction impact on existing hedging strategy.

5. ROD signs off on the deal approval sheet that the deal, as listed, is within established risk and policy framework. This is *only a vouch documenting oversight* that the listed terms are within the established limits. ROD sign-off should **not be considered deal approval** *or* an indication of a recommendation or encouragement for doing the deal. ROD sign-off should be viewed as part of a business process that is required by City Light prior to Resource Optimization Management deal approval.

6. Trader takes deal approval sheet to Resource Optimization Manager for signature indicating deal approval. This is the actual approval of the specific deal.

7. Trader calls counterparties on a recorded line to negotiate the best deal.

8. Trader enters the deal into ACES. Creating a Transaction Number.

9. Trader writes Transaction number onto deal approval sheet.

10. Front office staff gives the pre-deal analysis sheet to ROD along with the confirmation.

11. ROD maintains custody of hardcopy as well as electronic copy.



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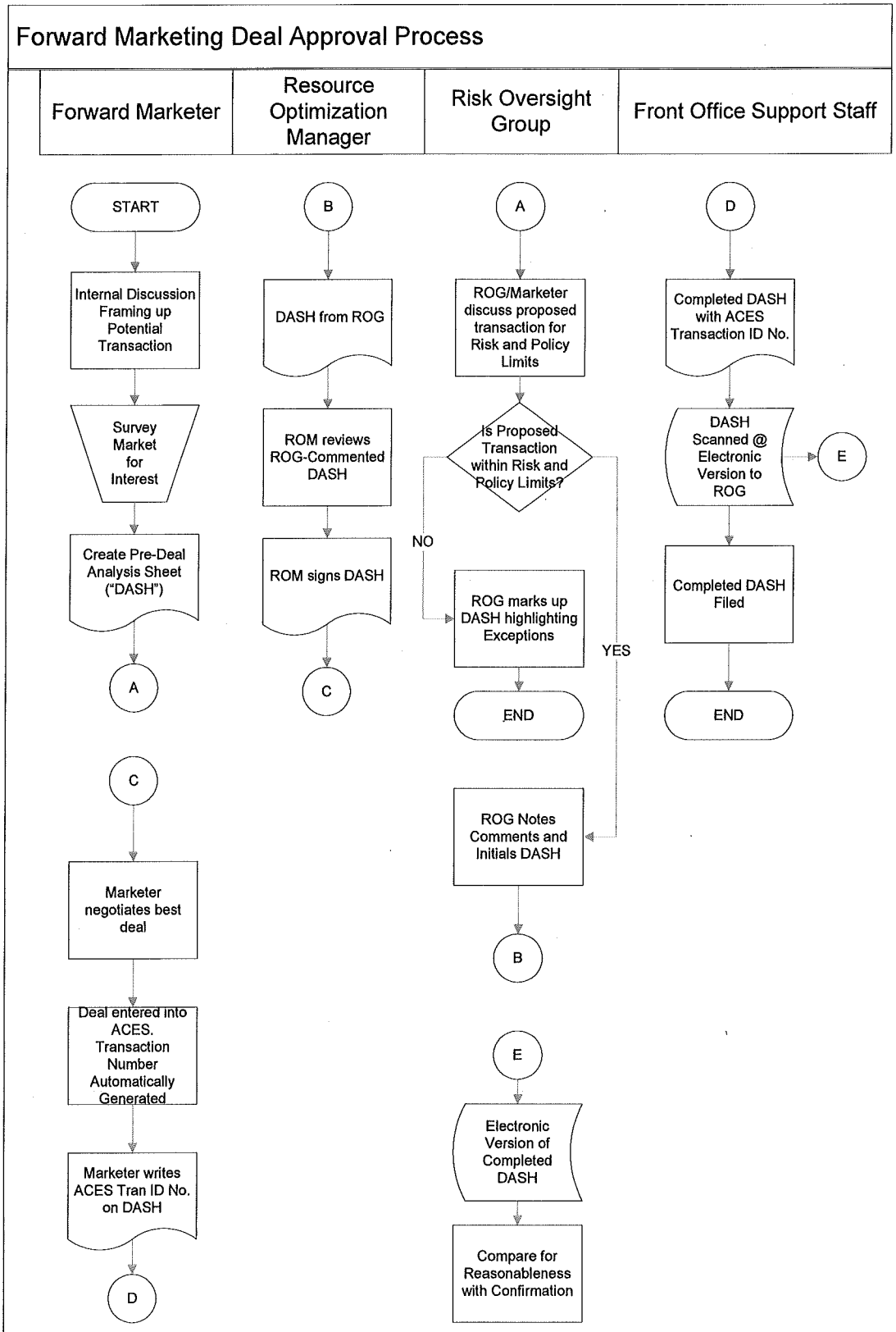
NOTE: Should a Forward Unstructured Transaction be entered into without going through this process, the transaction is still valid. However, it shall be considered an exception to the established procedure and discussed for resolution at the Risk Oversight Council.

1. STRUCTURED DEALS
2. Trader has initial talks with counterpart laying the groundwork.
3. Trader discusses with Manager to build support for the deal.
4. Trader firms up the deal with counterparty but does not execute. He ends the conversation with something like "This sounds good, I need to run it through my risk shop and I will call you back."
5. Trader creates a deal approval sheet.
6. Trader meets with ROD to ensure Credit Exists, trade type is authorized, trade volume and price are within limits, purpose of trade is identified as being for retail load or wholesale marketing, intended benefits of doing the deal, transaction impact on existing hedging strategy.
7. ROD signs off on the deal approval sheet that the deal as listed is within established risk and policy framework. This is only a vouch documenting oversight that listed terms are within the established limits and not deal approval *or* an indication of a recommendation or encouragement for doing the deal.
8. Trader takes deal approval sheet to Power Marketing Executive for signature deal approval. This is the actual approval of the specific deal.
9. Trader calls back the counterparty on a recorded line and executes the deal.
10. Trader enters the deal into ACES. Creating a Transaction Number.
11. Trader writes Transaction number onto deal approval sheet.
12. Front office staff gives the pre-deal analysis sheet to ROD along with the confirmation.
13. ROD maintains custody of hardcopy as well as electronic copy.

NOTE: Should a Forward Structured Transaction be entered into without going through this process, the transaction is still valid. However, it shall be considered an exception to the established procedure and discussed for resolution at the Risk Oversight Council.





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# Pre-Deal Risk Assessment Sheet

**MARKETER:** _____ ACES Transaction ID #_____ (1 per sheet)

Target Date for Deal Entry: __/____/____Target Month(s) for Deal: (Circle Applicable) Year
Month/Day/Year Jan Feb Mar Apr May June
Jul Aug Sep Oct Nov Dec

Transaction Type (check one)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Electrical Energy | | Transmission | | Voltage Regulation | | Parking |
| | Energy Exchanges | | Transmission Basis | | Reactive Regulation | | Lending |
| | Capacity | | Transmission Losses | | Imbalance Regulation | | Scheduling Services |
| | | | Swaption | | | | Interruptible Physical Put |

Description of Transaction:

Transaction Assumptions:

Targeted Counterparties:

Purpose of the Transaction (Check one)

| | | | | | |
|---|---|---|---|---|---|
| | Sell Surplus Energy | | Move Position Intended Retail | | Purchase for Retail |
| | Transmission Sale | | Wholesale Marketing | | Diversify Physical Position |
| | Move Position for CP | | Sell Surplus Capacity | | Resource Insurance |

Expected Benefit to Seattle City Light:

Is this Transaction part of a Hedging Plan? ____YES ____NO

Pending Transaction Approved by:

_____

**Supervisor/Manager of Marketer** **Date**

CREDIT
What is the anticipated exposure (each month) of this Transaction?
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

RISK OVERSIGHT DIVISION COMMENT:
Check Credit Available: ☐
Check Tenor Limit: ☐
Check Supervisor Approval: ☐

_____
**Pre-Deal Approved by** **Date**
(Expires 5 business days of ROD's Review)

After the actual transaction is entered into, the Power Marketer will record the ACES Transaction ID # on this form. The completed form will be given back to ROG for scanning and record keeping. Electronic copies of the forms are stored in: O:\POOL\PRIVATE\RISKMGMT\ORG UNIT 533\Credit Functions\Confirmations\Pre-Deal Forms

## DEAL CAPTURE

All market transactions are entered in the ACES scheduling and deal capture system (system of record) by the marketer executing the deal, and given a unique, sequential number automatically by the system. Day-ahead and forward deals must be entered into the system of record by 5:00 P.M. on the day the deal is executed. If for any reason this deadline is missed, the marketer will notify his/her director and the Director of Risk Oversight. The marketer will enter the deal at the earliest possible opportunity.

Any changes to the deal once entered are recorded by the system, producing an audit trail that includes the values before and after the change, the name of the person making the change, and the date and time of the change.

Real-time and day-ahead transactions cannot be modified after a predefined time period has elapsed except by the After-the-Fact accountants. At the end of each day the marketers and the director of each market segment perform a check out and reconciliation on transactions for the day to ensure that the system of record reflects the transactions executed during the day.

## END OF DAY CLOSE OUT

For each business day, the Risk Oversight Division will prepare a Deal Recap sheet for each Power Marketer that worked the Forward and Day Ahead desks. The Deal Recap sheet will contain a list of all transactions entered into by the marketer as contained in the official system of record. Each Power Marketer will review their Deal Recap Sheet for accuracy and completeness and sign the report when it accurately represents each transaction entered into for the given date. This process serves to provide assurance to the accuracy and completeness of the system of record for the Power Management Executive and the Director of Risk Oversight.

## CONFIRMATIONS

For transactions of tenor 7 days or longer: After the marketer initiates a sales transaction and enters it into the system (ACES), the system produces a contract confirmation for review and sign-off by the marketer. The marketer is responsible for delivering the confirmation to the Risk Oversight Division analyst within one business day of executing the transaction. The analyst reviews the confirmation for accuracy, approvals and validates that the confirmation reflects the Deal Ticket, ACES, and Pre-Deal Assessment Sheet; the analyst documents the receipt of the confirmation on a log and then passes it to the Power Management Executive for signature. The ROD analyst is responsible for delivering the confirmation for signature within two



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business days of receipt of it from the marketer. The PME is responsible for returned in the signed confirmation to the ROD analyst within 1 business day of receiving it. After signature it sent to the counterparty for review and signature. The ROD analyst is responsible for ensuring that it is sent to the counterparty within the timeframe dictated by the WSPP master agreement. Upon receipt of the signed confirmation from the counterparty, the ROD analyst makes a final review and creates an electronic version for the confirmation, deal ticket, pre-deal analyst and save it on a secured drive for records and retrieval. The original confirmation is filed in a locked cabinet along with a copy of Deal Ticket, Fax transmittal confirmation and any backup documentation for the transactions. The pre-deal assessment sheet is filed in the binder in a locked office for record keeping. For purchase transactions the process is similar except City Light does not initiate the confirmation; the internal process begins with receipt of the confirmation by PME Administration, followed by Power Marketer review and initial and on through the process illustrated below. If the confirmations are not received within the 5 business days of the trade, the Marketer is responsible for contacting the Seller for the confirmation or producing the confirmation themselves and continues the original "sale" transaction process for confirmation.

Confirmations are kept on site for 3 years and are moved to a secured storage location after that. After 6 years, the confirmations will be disposed.

## RFP PROCESS FOR STRUCTURED DEALS

1. Marketer discusses RFP with supervisor and runs backup analysis, which should includes:

    a. Exact Statement of Product

    b. Exact timeline for bidding submittals and acknowledgements

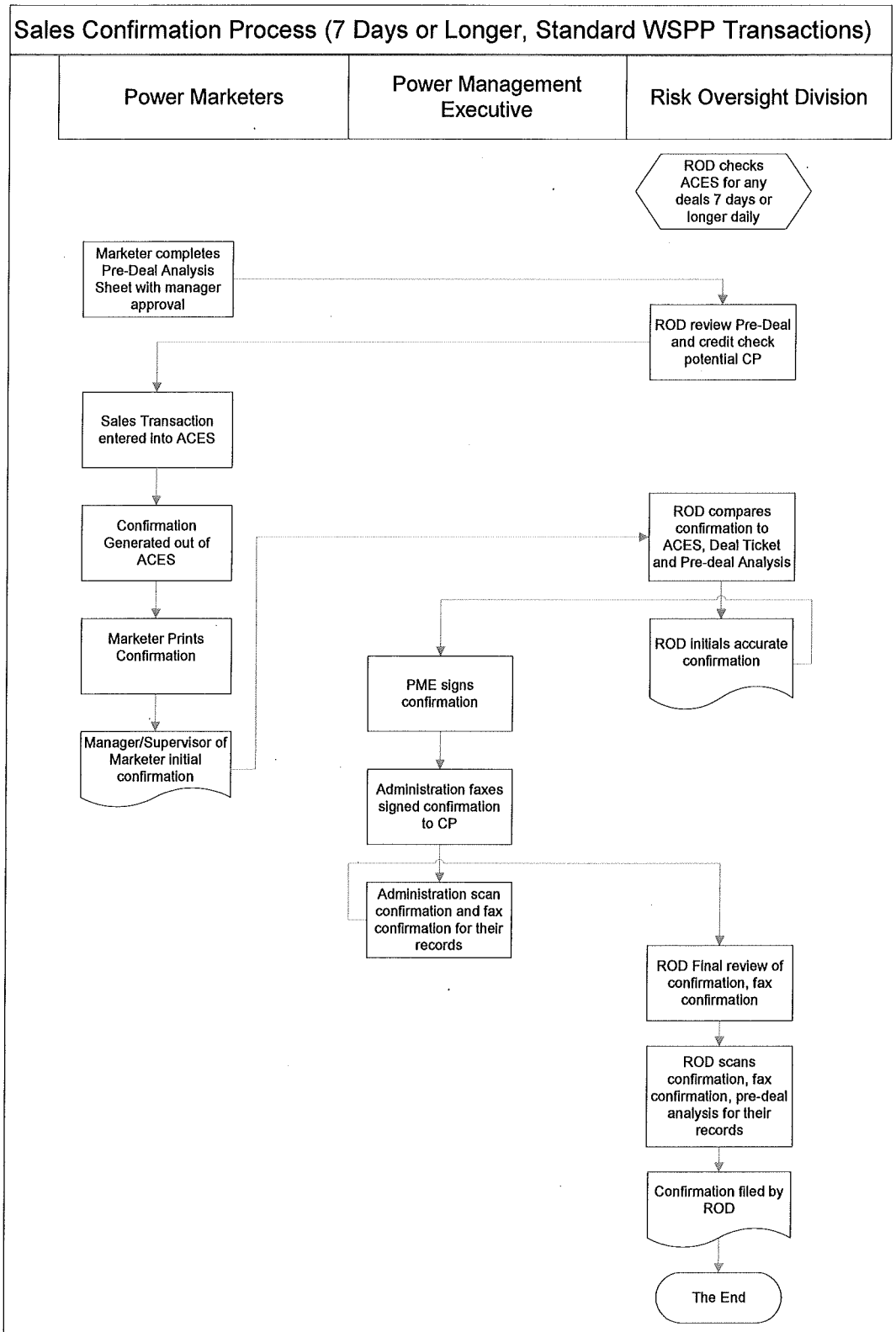
    c. Exact Payment Terms and Contract amount

    d. Language requirement of bidder – WSPP membership and registered with NERC

2. RFP is sent to marketing supervisors, ROD and Power Supply officer for review at least 2 weeks in advance of RFP being published

3. Once bidding are received and reviewed, Marketer will product a pre-deal assessment sheet and contact ROD for credit approval.

4. After approvals, Marketers will write up the short-term confirmation and go through the same process as would normally occur.



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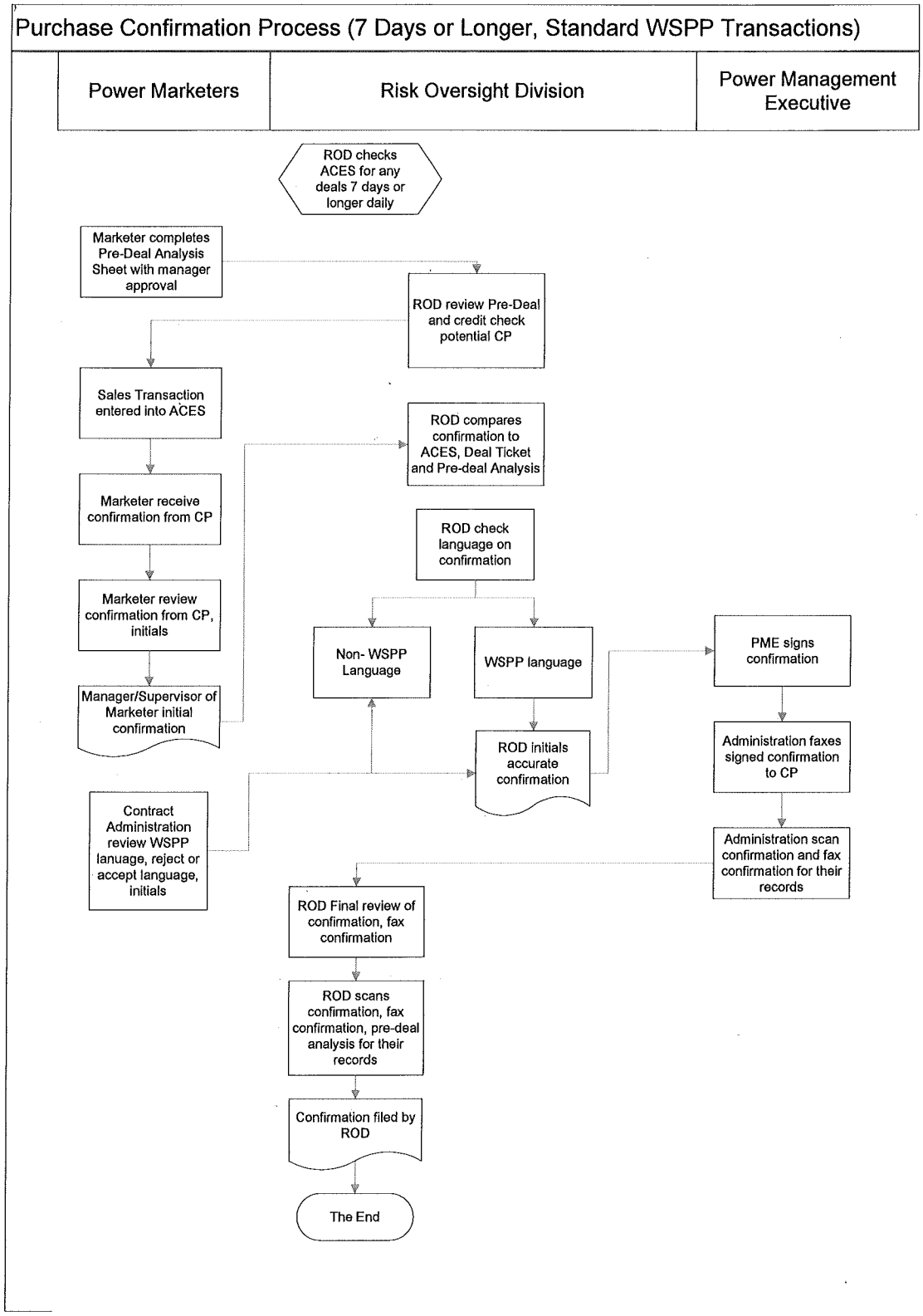
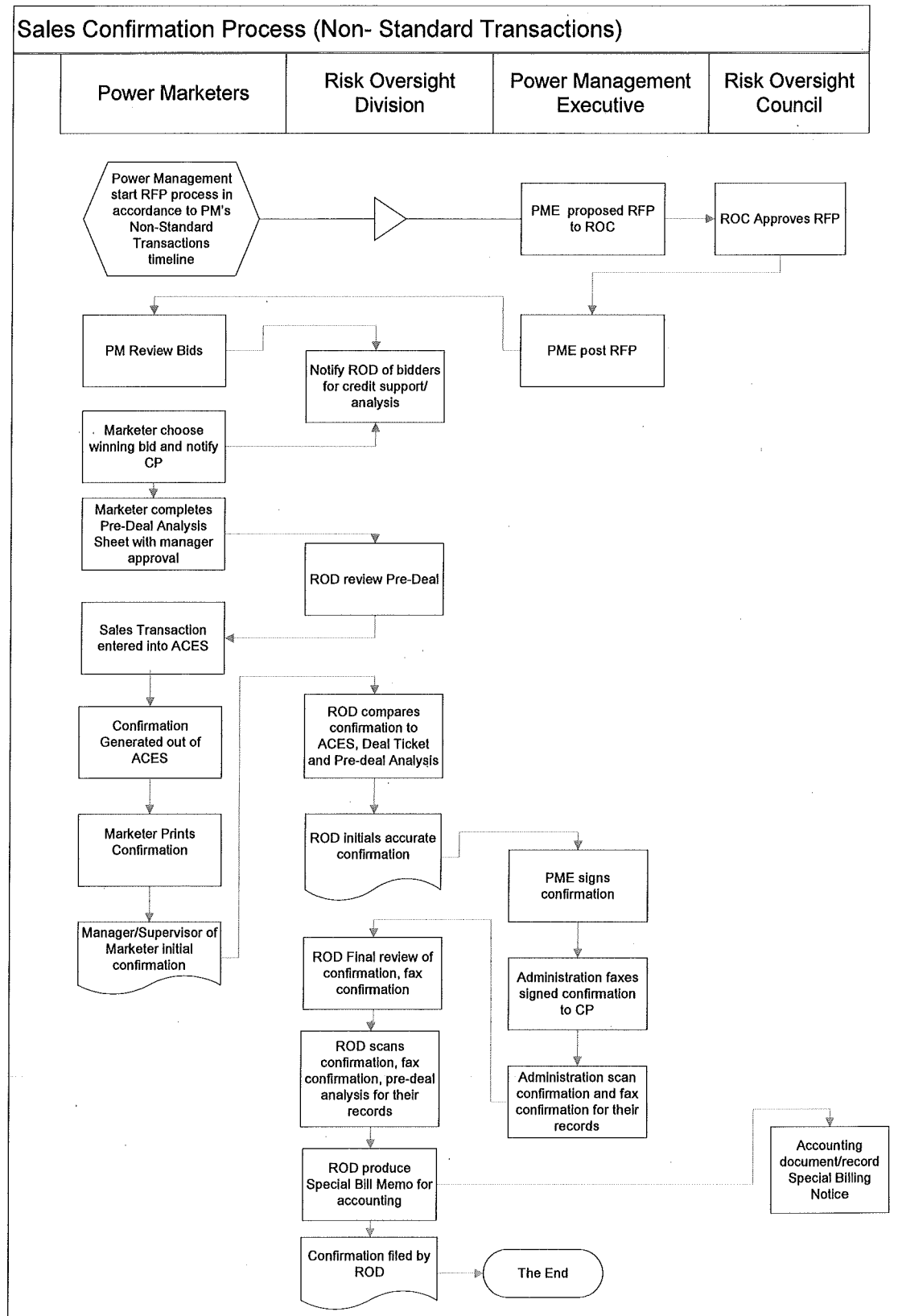

Purchase Confirmation Process (7 Days or Longer, Standard WSPP Transactions)
Power Marketers
Risk Oversight Division
Power Management Executive
ROD checks ACES for any deals 7 days or longer daily
Marketer completes Pre-Deal Analysis Sheet with manager approval
ROD review Pre-Deal and credit check potential CP
Sales Transaction entered into ACES
ROD compares confirmation to ACES, Deal Ticket and Pre-deal Analysis
Marketer receive confirmation from CP
ROD check language on confirmation
Marketer review confirmation from CP, initials
Non- WSPP Language
WSPP language
PME signs confirmation
Manager/Supervisor of Marketer initial confirmation
ROD initials accurate confirmation
Administration faxes signed confirmation to CP
Contract Administration review WSPP lanuage, reject or accept language, initials
Administration scan confirmation and fax confirmation for their records
ROD Final review of confirmation, fax confirmation
ROD scans confirmation, fax confirmation, pre-deal analysis for their records
Confirmation filed by ROD
The End



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## RECORDED PHONE LINES

**LINES TO BE RECORDED:**

a. All phones belonging to positions that either market or schedule power, including their supervisors are recorded. This includes Settlements staff. The Manager of Settlements and Risk Control has a recorded line available to resolve settlement discrepancies as needed.

b. City Light is currently using software Stancil Corporation Playback System "Ten-4" and hardware including a "beeper" which signals the person called they are being recorded.

   The Stancil Playback System records the calls and stores them for 2 years on the hard disk of the Stancil equipment. Currently, any file not available by using the client software may be obtained by calling the SCL Service Desk and making a request for the call. At present, SCL has call files dating back to early 2008. Going forward, call files will be retained for a minimum of five years. There are two computers where calls are stored. If one goes down, the other will continue to record. If both go down at the same time, there are procedures in place to have an IT technician respond. There is a third computer located at the System Control Center. This computer records dispatchers.

c. Calls may be retrieved in the following manner:

   1. Log in to the Stancil Playback Client using your User Name & Password assigned by Stancil.
   2. Set "Search Criteria" (seen on the bottom left hand corner of the initial screen), meaning to request calls based on certain criteria, including date/time or assigned phone line.
   3. Request the correct channel (seen next to the Search Criteria section), meaning to request either the trade desk type or person whose recordings you'd like to hear.
   4. Press the blue button in the bottom right hand corner called "Search".
   5. Double click on any call to hear it. You must use earphones to hear calls.
   6. If you want to pause, stop or forward to another call, or set the speed of the voice use the tool bar under the call log screen, to the right, in blue.

d. All staff and their managers with recorded lines and who have the Stancil Playback Client system may retrieve calls. Management,

Settlements & Risk Oversight will be the only staff having access to calls other than their own.

e. Per Section 3.2.1.1.3 our compliance department's approved "Standards of Conduct Procedures"; the Risk Oversight Division (ROD) shall cause the telephone recording system to be tested regularly to ensure that the system is functioning properly. The ROD will provide reporting back to the ROC. In the near future our vendor "Stancil" will provide us with reporting indicating that recording has taken place through the entire day as well as indicating when the recording system is down.

The following shows the currently recorded workstations & employees;

| Seattle City Light, Power Marketing and Back Office Voice Recorder Configured Workstations | | | | |
|---|---|---|---|---|
| | | | | |
| | Recorded Workstations | Current | Old Channel | Phone |
| | at SMT | Employee(s) | Designation | Number |
| 1 | Real Time 1 | | | |
| 2 | Real Time 2 | | | |
| 3 | Scheduler 2 | | | |
| 4 | Real Time 4 | | | |
| 5 | Scheduler 1 | | | |
| 6 | Day Ahead 1 | | | |
| 7 | Day Ahead 2 (Day Ahead Desk) | | | |
| 8 | Day Ahead 3 (Day Ahead Desk) | | | |
| 9 | Day Ahead 4 | | | |
| 10 | Forward 1 | | | |
| 11 | Forward 2 | | | |
| 12 | Forward 3 | | | |
| 13 | Scheduler 3 | | | |
| 14 | Real Time 3 | | | |
| 15 | Settlements 2 | | | |
| 16 | Settlements 1 | | | |
| | | | | |
| | | | | |
| | Recorded Workstations | Current | Old Channel | Phone |
| | at SCC* | Employee(s) | Designation | Number |
| 1 | EmergRealtime 1 | | | |
| 2 | EmergRealtime 2 | | | |
| 3 | EmergPreschedule 1 | | | |
| 4 | EmergBroker | | | |
| 5 | EmergScheduler 1 | | | |
| | | | | |
| | * Except for emergencies, these workstations are occupied by Power Marketing one time each quarter | | | |
| | during scheduled emergency preparedness exercises. The phones are recorded on a server administered by | | | |
| | The Communications Unit, Steve Pennington, Administrator (6-0170). | | | |

## PRICE CURVE CONTROL

The Risk Oversight Division provides electronic access to City Light's official price curves. These curves are independently prepared for internal analysis, valuation, and modeling tasks. Sufficient members of the Front, Middle, and Back Offices have daily access to these curves. The database has access and editing controls in place to ensure the integrity of the data.



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As part of a review for reasonableness, the Risk Management Division runs a Price Change Exception Report daily to catch changes that may indicate data error. This report shows today's curve compared with yesterday's and the % change.

Currently, the official price curves are taken from directly from SCL's subscription to the vendor's Website. The curves are updated each morning. Once the curves are taken from the vendor Website, they are filtered via a macro which pulls out the data SCL archives. Currently, SCL archives power curves for Mid-C, COB, NP15 & PV. SCL also archives Gas curves for AECO, Sumas, Rockies, So Cal & Henry Hub. Once the prices are filtered via the macro, they are placed into an access database, as the "system of record" for Platts Curves. The database is located at:

O:\APPS\SCL\RISKMGMTDB\PlattsCurve.mdb & GasPlatts.mdb

## REPORTING TRANSACTIONAL DATA TO INDEX DEVELOPERS

The Risk Oversight Division will provide data to specific index developers on behalf of City Light. The following information will be reported:

Pre-schedule trade data as follows:

a. Trade date

b. Energy flow start & end date

c. HLH/LLH

d. MWh

e. Price

f. HUB

Information comes from the Power Marketing transaction logs that are completed by the Real Time traders as they do deals. A macro has been built that pulls in this data.

## TRAINING AND ACKNOWLEDGEMENT

The Front, Middle, and Back Offices will conduct a joint training session annually covering the Risk Policy and this Risk Procedures Manual. In this training session representatives from each office will be selected to make presentations covering their area of expertise as it applies to the other Offices. Additional presentation topics may include City Light's IRP, I937, and regulatory updates covering BPA, WECC, WSPP, and FERC. At the conclusion of this annual training, personnel will be required to sign an acknowledgement that they understand the Risk Policy and Procedures and will carry out their work assignments in accordance with them.

## RECORDS AND RETENTION POLICY

Seattle City Light uses the record retention guidelines on the general schedule to comply with all of the State of Washington record keeping regulations according to the provisions of RCW 40.17. All hard copies of documents and supporting documents pertaining and resulting to the Wholesale Energy Risk Management Policy and Procedures are kept on site for two (2) calendar years in a secured location. After the two years, the records are sent to City Light's record retention center for storage for four (4) years and are disposed of after the end of the 6th calendar year (in aggregate years). Electronic copies are retained in a secured drive for at least 6 years.



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Form revised: December 6, 2011

# FISCAL NOTE FOR NON-CAPITAL PROJECTS

| Department: | Contact Person/Phone: | CBO Analyst/Phone: |
|---|---|---|
| City Light | Philip Leiber/684-4649 | Calvin Chow/684-4652 |

**Legislation Title:**

A RESOLUTION endorsing the City Light Department's Wholesale Energy Risk Management Policy; establishing it as the policy governing wholesale energy risk management at the City Light Department; and superseding Resolution 31230.

**Summary of the Legislation:**

The legislation adopts an amended risk management policy document.

**Background:**

In order to provide electricity to its customers economically, Seattle City Light routinely buys and sells wholesale energy products. This transaction in wholesale energy markets necessarily exposes Seattle City Light funds to risk, including market and credit risks.

This resolution endorses further updates to the Wholesale Energy Risk Management Policy ("the Policy"). Updates include the following:

Policy changes already adopted but not yet in the body of the Policy
Section 3.3.1 revised to address Forward Month's Resource Requirement Limits. The revision specifies when City Light is required to sell or purchase power based on anticipated deficits or surpluses in future months at particular levels of confidence. This revision was approved by Council in March 2010, but was inadvertently omitted from the 2010 update of the Policy.

Sections 3.2.2 and 3.6 revised to allow City Light to transact up to 24 months forward versus 18 months forward as previously authorized. This revision was approved by Council in May 2011.

Changes to the Risk Tolerance Band, Responsibilities, and Other Changes
Section 3.2 revised to clarify that City Light undertakes transactions to optimize financial and operational performance within the risk tolerance band, with due consideration of both financial and operational needs. With this, City Light would reduce the size of the Risk Tolerance Band from $8 million for the current year to $6 million and from $12 million for the subsequent year to $10 million.

Section 2.11 and elsewhere revised to employ the term "exception" in place of or along with "violations" in order to distinguish between the need to undertake transactions to bring City



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Light back into compliance with risk limits versus those actions that are directly contrary to the intent of the Policy.

Various Administrative and Responsibility Changes and Clarifications

- Section 2.3 revised to specify that updates and reporting to the Superintendent will be conducted during the review of monthly financial statements and as necessary.
- Section 2.4.3 revised to specify responsibilities of the Risk Working Group, a cross functional team of finance and power operations staff responsible for addressing various risk related issues at the direction of the Risk Oversight Council.
- Section 2.9 revised to add obligation for employees to report anomalies or compliance concerns to the Risk Director, Chief Financial Officer, or Power Supply Officer.
- Section 3.1 revised to specify that staff authorized to transact are those specified in the Delegation of Authority Agreement as approved by the Superintendent.
- Section 3.1 revised to specify that City Light may transaction only within limits as approved and defined in this Policy (replacing "as approved by the ROC").

Various Minor/Clerical Edits

- Section 1.2 revised to clarify that while financial derivatives are prohibited, the purchase of physical puts and calls is permissible (as already described elsewhere in the document).
- Section 2.11 and elsewhere revised to use "exception" in place of or along with "violations" to distinguish between the need to undertake transactions to bring City Light back into compliance with risk limits versus actions that are directly contrary to the intent of the policy.
- Section 3.6 revised to update the Credit Risk Management section to include headings, clarify ongoing reporting requirements, and allow extension of unsecured credit to entities with net worth below $2.5 million for renewable energy credit transactions approved by the Council.
- Other minor clarifications and edits throughout the document.

The Wholesale Energy Risk Management Procedures Manual will be updated in 2012 to conform to the changes in the Policy document.

Please check one of the following:

**__X__ This legislation does not have any financial implications.**

**____ This legislation has financial implications.**

**Other Implications:**

**a) Does the legislation have indirect financial implications, or long-term implications?**

Effective management of the risk that City Light faces through its participation in the



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wholesale energy markets is important to City Light customers. Surplus power sales are an important component of City Light's annual revenue requirement and offset the costs that would otherwise be paid by retail customers. Accordingly, customers have a direct interest in City Light's energy risk management policies. The Wholesale Energy Risk Management Policy addresses these risks. Continued refinement and improvement of these policies help ensure that City Light is maximizing the value of its wholesale energy assets for the benefit of customers. These policies can help keep rates low and mitigate retail rate volatility.

**b) What is the financial cost of not implementing the legislation?**

Not implementing the legislation would result in wholesale energy risk management policies that do not address identified concerns related to the management of wholesale energy. This would increase risks associated with wholesale energy management, potentially adversely affecting the City Light Department in the amount of millions of dollars.

**c) Does this legislation affect any departments besides the originating department?**

No, this legislation does not affect other departments.

**d) What are the possible alternatives to the legislation that could achieve the same or similar objectives?**

Adoption of the Wholesale Energy Risk Management Policy allows for clarity of responsibilities and accountability regarding acceptable mitigation of risk associated with wholesale energy management.

**e) Is a public hearing required for this legislation?**

No, a public hearing is not required for this legislation. There are no public hearings scheduled.

**f) Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?**

Yes, this legislation requires notification in aforementioned publication.

**g) Does this legislation affect a piece of property?**

No, this legislation does not affect a piece of property.

**h) Other Issues:**

N/A



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**List attachments to the fiscal note below:**

There are no attachments to the fiscal note.



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**City of Seattle**
Office of the Mayor

December 20, 2011

Honorable Richard Conlin
President
Seattle City Council
City Hall, 2nd Floor

Dear Council President Conlin:

I am pleased to transmit the attached proposed Resolution that supersedes resolution number 31230 and changes City Light's Wholesale Energy Risk Management Policy, which governs wholesale energy risk management at City Light. City Light continues to refine the risk policies to appropriately mitigate wholesale energy risk for the benefit of customers.

The changes to the Wholesale Risk Energy Risk Management Policy achieve this by clarifying roles and responsibilities and making certain changes to limits and procedures. Strengthening the Policy improves City Light's ability to meet the electricity needs of its customers, manage the risks inherent in its wholesale energy markets portfolio, and minimize the variance in the value of surplus power and transmission assets.

The key changes strengthen and safeguard City Light's involvement with wholesale energy markets through:

- Permitting the purchase—but not sale—of physical calls and puts when the intent at the time of execution of the purchase is for physical delivery of energy;
- Requiring employees who become aware of potential non-compliance with the Wholesale Energy Risk Management Policy to immediately report the potential non-compliance to City Light's Risk Oversight Director, Chief Financial Officer, or Power Supply Officer;
- Specifying that City Light will immediately suspend forward sales and take corrective actions when specific criteria are not met related to the forecasted net combined system energy projected surplus; and
- Changing the Risk Tolerance Band amount for the current calendar year and the prompt year.

These refinements to the Policy strengthen the oversight of power marketing activities at City Light. Thank you for your consideration of this legislation. Should you have questions, please contact Mr. Phil Leiber, Chief Financial Officer, at 206-684-4649.

Sincerely,

Michael McGinn
Mayor of Seattle

cc: Honorable Members of the Seattle City Council

Michael McGinn, Mayor
Office of the Mayor
600 Fourth Avenue, 7th Floor
PO Box 94749
Seattle, WA 98124-4749

Tel (206) 684-4000
Fax (206) 684-5360
TDD (206) 615-0476
mike.mcginn@seattle.gov

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**Attachment A**

# SEATTLE CITY LIGHT

## Wholesale Energy

## Risk Management Policy

THIS VERSION IS NOT ADOPTED

August 30, 2011

© Seattle City Light
700 Fifth Avenue, Suite 3300
PO Box 34023
Seattle, WA 98124-4023
Phone (206) 684-3200 • Fax (206) 684-3158



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THIS VERSION IS NOT ADOPTED

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THIS VERSION IS NOT ADOPTED



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# 1. Introduction

City Light faces significant uncertainty regarding both the quantity of energy available to the utility and the range of prices prevailing in the wholesale power market. Under all but the most extreme low water conditions, City Light's supply of power exceeds its retail demand. This excess, or surplus, power is sold in the wholesale power market, and the revenue is used to offset costs that would otherwise be borne by City Light's retail ratepayers. City Light can sell its surplus power in the "spot market" as this surplus power becomes available, or City Light can sell some of its expected surplus power in the "forward market" for future delivery. Both practices involve risks. Waiting to sell surplus power in the spot market exposes City Light to the possibility of selling at low prices if the wholesale market is flush with power. Selling expected surplus power in the forward market mitigates this risk, but exposes City Light to the possibility of having to purchase power at high prices in order to meet these forward commitments (as well as retail demand) in the event actual supplies turn out to be significantly less than projected at the time the forward sale was executed. The policies outlined below are designed to establish the framework for City Light to manage the risks that are inherent in the wholesale energy markets it participates in. These policies specify: a risk metric; a set of rules to guide decisions concerning the sale and purchase of energy and related products in the spot and forward markets; and a clear statement of roles and responsibilities of City Light's Divisions and personnel.

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## 1.1. AUTHORITY

The City Light Department of the City of Seattle (City Light) operates under the authority of the Mayor and City Council of the City of Seattle (City). City Light is charged by the City with operating its power supply resources, transmission agreements, and electric system to meet the power needs of its customers. The City recognizes that because of the nature of its customer demand and power supply portfolio, City Light will experience imbalances between the two and must therefore transact in the wholesale energy markets for energy services and products to achieve balance.

By endorsing this Wholesale Energy Risk Management Policy (Risk Policy) document by City Resolution, the City approves this Risk Policy and affirms the authority and responsibility of the Superintendent of City Light and his or her designees to comply with it, consistent with the authority granted by Seattle Municipal Code Section 21.49.130.

## 1.2. SCOPE

This Risk Policy applies to all physical wholesale energy purchases and sales, transmission services, and ancillary services pursuant to Seattle Municipal Code Section 21.49.130. Descriptions of physical transactions commonly utilized by the Power Operations & Marketing Division are maintained in the Wholesale Energy Risk Management Procedures Manual ("Procedures Manual").

This Policy expressly prohibits the use of financial energy derivative transactions which are defined as transactions that cannot be settled with the physical delivery of energy and/or capacity. Accordingly, , it is a violation of this policy to enter into a financial energy derivative contract. All Western System Power Pool (WSPP) and bi-lateral power purchase agreement (PPA) transactions are physical transactions.

This Policy permits the purchase, but not sale, of physical calls and puts where the intent at the time of execution is for physical delivery of the associated energy. Such execution would be limited as further defined in Section 3.3.1.4.

### 1.3. PURPOSE

The purpose of this Risk Policy is to formally establish a Wholesale Energy Risk Management program and document the organizational structure (Appendix B) utilized by City Light to meet the electricity needs of its customers, manage the risks inherent in its wholesale energy markets portfolio, and minimize the variance in the value of surplus power and transmission assets. As such, this document describes City Light's energy risk management roles and responsibilities, and delegations of authority that will govern how City Light conducts business in the wholesale energy markets.

The specific operating procedures and parameters for implementing this Risk Policy are detailed in the Procedures Manual to be reviewed and approved by the Risk Oversight Council (ROC), a body within City Light established by this Risk Policy that reports to the Superintendent. The existing procedures are attached for informational purposes only as Appendix A.

Please refer to Appendix C, Glossary of Terms, for definitions of terms contained in this Policy and as used by City Light.

All City Light employees in relevant functional areas are expected to comply with and acknowledge their understanding of both this Risk Policy and the associated Procedures Manual as it applies to their current position at City Light. For additional information please refer to Section 2.11. Policy Violations and Exceptions.

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# 2. Organization & Governance

### 2.1. INDEPENDENCE AND SEGREGATION OF DUTIES

An effective risk management and compliance program requires clear segregation of duties, reporting lines, and incentives between functions and personnel who originate and manage risk, and those who analyze, monitor, and report risk.



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City Light has developed a risk management and risk oversight organizational structure to support this requirement (see Appendix B). The core elements of the structure for risk management purposes are:

- Superintendent
- Chief Financial Officer (CFO)
- The Risk Oversight Council (ROC)
- The Power Operations & Marketing Division (POM)
- The Power Contracts & Resource Acquisition Division (PCRA)
- The Risk Oversight Division (ROD)

The following sections define the wholesale energy risk management roles and responsibilities of the individuals and groups listed above.

## 2.2. ROLE OF THE SUPERINTENDENT

Concerning wholesale energy risk management efforts, the Superintendent is responsible for:

- Ensuring compliance with this Risk Policy;
- Ensuring adequate internal controls exist to safeguard City Light's financial integrity and its retail customers with respect to wholesale energy purchase and sales activities;
- Ensuring that all wholesale energy purchase and sales activities are monitored by City Light staff not directly involved in executing the transactions;
- Resolving Risk Oversight Council vacancies in the best interests of the Utility; and
- Making final decisions on risk management issues when the Risk Oversight Council cannot reach a consensus.

## 2.3. ROLE OF THE CHIEF FINANCIAL OFFICER (CFO)

In regards to wholesale energy risk management efforts, the CFO is responsible for:

- Serving as the Chair of the Risk Oversight Council, leading the ROC meetings;
- Briefing the Superintendent on City Light's risk exposures and ROC actions on a regular basis during the monthly financial review and as necessary;

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- Presenting requests for changes in volumetric and risk metric limits contained in this Policy to the Superintendent;

- Setting the counterparty credit limit threshold; this is defined as the maximum secured and unsecured credit limit that may be extended to any counterparty pursuant to this Risk Policy;

- Recommending to the ROC the methodology used to compute the credit that will be extended to any counterparty; and

- Suspending transacting with a counterparty at any time due to concerns about the counterparty's credit-worthiness or ability to fulfill the terms of a transaction.

## 2.4. ROLE OF THE RISK OVERSIGHT COUNCIL (ROC)

The ROC has the authority and responsibility for approving and implementing the procedures and parameters contained in the Procedures Manual consistent with this Risk Policy. It is also responsible for setting City Light's target risk profiles, and oversight of the Risk Working Group (RWG), leading City Light's energy risk management efforts on a path of continuous improvement, and directing the development of City Light's risk management strategy.

### 2.4.1. RISK OVERSIGHT COUNCIL STRUCTURE

Voting Membership:

The ROC shall be comprised of three voting members and two non-voting members. The Chief Financial Officer (Chair), the Power Supply & Environmental Affairs Officer, and the Director of Risk Management shall each have a single vote on matters that come before the ROC and all three, or their designees, must participate in the ROC meeting in order to vote and approve a proposed action.

The two non-voting members are the Director of Power Operations & Marketing and the Director of Power Contracts & Resource Acquisition, or their equivalent as determined by the Superintendent.

Meeting Timing and Frequency:

The ROC shall meet no less than twice per calendar month. Attendance at ROC meetings shall be mandatory for appointed members. Member attendance shall be recorded in the ROC meeting minutes. Any member of the ROC can request an emergency meeting of the ROC to address circumstances or issues that may require immediate attention.

In the event a voting member is unable to attend a ROC meeting in person or by telephone, the member may designate an alternate to attend and vote in his absence,

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including one of the non-voting members. If any two of the voting members, or their designees, are not present at a ROC meeting, a vote on a proposed action cannot take place. The ROC will make decisions and take actions by a simple majority vote. If the ROC reaches an impasse that cannot be addressed through a vote, the Chair will refer the issue to the Superintendent by the end of the next business day for resolution.

Member Vacancies:

In cases where a member of the ROC leaves the employ of City Light, the Superintendent will resolve the ROC vacancy by making an interim appointment at his discretion.

The Director of Risk Management will act as Secretary to the ROC and will document all meetings and actions taken by the ROC in meeting notes that will be distributed to ROC members for their review and acceptance. Meeting notes approved by the ROC will be distributed by the Director of Risk Management to the Superintendent, ROC members, Mayor, and Council central staff.

### 2.4.2. RISK OVERSIGHT COUNCIL RESPONSIBILITIES

The ROC is responsible for:

- Reviewing and approving the Procedures Manual and changes to it;
- Reviewing and approving risk management strategies and hedging plans to be implemented by the Power Operations & Marketing Division;
- Reviewing and providing comment to the CFO concerning the methodologies used to establish counterparty credit limits;
- Monitoring and assessing compliance with this Policy and associated procedures;
- Discussing and pre-approving limit exceptions when appropriate;
- Discussing Policy violations or exceptions and taking corrective action to minimize related losses or increased risks as appropriate;
- Reviewing this Policy on an annual basis and recommending changes to the Superintendent by July 1;
- Discussing elements of energy risk management best practices and developing a City Light opinion of their specific practicality;
- Conducting other activities relevant to the implementation and oversight of this Policy and related procedures; and
- Providing a timely summary of ROC accomplishments for the past year and setting of goals for the upcoming year to the Superintendent by March 15th. This summary will also be provided to Mayor and Council staff.

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- Oversight of the Risk Working Group (RWG), providing direction and assigning projects as conditions require.
- Review and approve expected, recurring, and material changes to all modeling inputs used by the ROC to ensure that market, operational and credit risks are accurately quantified.

### 2.4.3. RISK WORKING GROUP (RWG)

The RWG is a technical work group which primary role is to examine methods and procedures used to calculate City Lights forward portfolio position, wholesale market pricing and risk position. The RWG will be comprised of employees from both the finance and power marketing divisions with familiarity of the models used to perform this work. The RWG will be chaired by the Risk Director and membership in the RWG will be confirmed by the ROC.

## 2.5. ROLE OF THE POWER OPERATIONS & MARKETING DIVISION (POM)

The POM is led by the Director of Power Operations & Marketing and manages the generation portfolio on behalf of City Light. It transacts in the physical wholesale energy market as needed to balance the supply of electricity to demand and to mitigate the risks inherent in managing the system, subject to the limitations established by this Risk Policy and the ROC and in accordance with the Procedures Manual.

### 2.5.1. POWER OPERATIONS & MARKETING DIVISION RESPONSIBILITIES

The responsibilities of the POM include:

- Meeting City Light's customer load obligation;
- Managing City Light's generating resources, short-term contracts and transmission agreements to meet its hourly, daily, balance of month, and forward month obligations (up to 24 months forward);
- Extracting value from City Light's power supply portfolio and transmission contracts with due consideration of risk;
- Formulating and recommending risk mitigation strategies and hedging plans to the ROC that are consistent with City Light's objectives and this Risk Policy;
- Implementing strategies and hedging plans approved by the ROC; and
- Other activities relevant to the daily management of a power system.

### 2.5.2. POWER OPERATIONS & MARKETING DIVISION REPORTING RELATIONSHIP

The Director of Power Operations & Marketing reports directly to the Power Supply & Environmental Affairs Officer of City Light.

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## 2.6. ROLE OF THE POWER CONTRACTS & RESOURCE ACQUISITION DIVISION (PCRA)

The PCRA is led by the Director of Power Contracts & Resource Acquisition and manages the long-term contract portfolio and procures new, renewable resources on behalf of City Light. It transacts in the Renewable Energy Credit (REC) and Greenhouse Gas (GHG) markets as needed to balance the supply of environmental attributes to maintain compliance with City policies, state law, and potential federal law, subject to the limitations established by this Risk Policy and the ROC and in accordance with established procedures.

### 2.6.1. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION RESPONSIBILITIES

The responsibilities of the PCRA include:

- Meeting City Light's customer load obligation by managing long-term contracts and acquiring new resources consistent with City Light's Integrated Resource Plan, City policies, state law, and federal law;
- Extracting value from City Light's environmental attributes portfolio with due consideration of risk;
- Formulating and recommending resource acquisition and environmental attribute risk mitigation strategies to the ROC that are consistent with City Light's objectives and this Risk Policy;
- Implementing strategies approved by the ROC; and
- Other activities relevant to the management of City Light's long-term contracts and environmental attributes portfolio.

### 2.6.2. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION REPORTING RELATIONSHIP

The Power Contracts & Resource Acquisition Director reports directly to the Power Supply & Environmental Affairs Officer of City Light.

### 2.6.3. POWER CONTRACTS & RESOURCE ACQUISITION DIVISION RESPONSIBILITY FOR MAINTAINING THE TABLE OF EXPECTED, RECURRING, MATERIAL CHANGES TO MODELING INPUTS

The Power Contracts and Resource Acquisition Director shall be responsible for updating the wholesale energy risk management procedures manual, Exhibit K – The Table of Expected, Recurring, Material Changes to Modeling Inputs as required, from time to time.

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## 2.7. ROLE OF THE RISK OVERSIGHT DIVISION (ROD)

The ROD is led by the Director of Risk Management and, among its responsibilities, serves as the "middle office" in City Light's energy risk management organization. For the purposes of this Risk Policy, these responsibilities include preparing reports covering City Light's energy portfolio position, credit exposures, and Risk Policy and Procedure Manual compliance. The ROD also leads the development of business process and internal control improvements throughout the energy transaction lifecycle; provides settlement services; documents the required accounting treatment of forward transactions; and provides the related valuation of these transactions to enable the Accounting Division to prepare invoices, bill customers, and report forward transactions in City Light's financial statements in accordance with prevailing accounting rules. The ROD will provide risk assessment input to the POM, but will maintain a strict separation of duties. Under no circumstances will members of the ROD be given the authority to enter into wholesale energy transactions on behalf of the utility.

The Director of Risk Management will meet with City Council's staff as requested to review recent City Light risk management activities and will offer to appear before the Energy, Technology, & Civil Rights Committee or its functional equivalent on a quarterly basis to inform Council members of recent ROC activities and risk management project updates.

The Director of Risk Management will act as temporary chair of the ROC if the CFO is absent.

### 2.7.1. RISK OVERSIGHT DIVISION RESPONSIBILITIES

The responsibilities of the ROD include the following:

- Assess and monitor compliance with the Risk Policy and Procedure Manual;
- Report violations or exceptions of Risk Policy or Procedure Manual limits and recommend remediation as necessary;
- Monitor market and counterparty events in order to anticipate changes in City Light's risk profile;
- Develop and propose practical improvements to business processes and internal controls within the transaction lifecycle;
- Recommend specific risk limits consistent with the utility's risk management objectives and risk tolerance;
- Engage the ROC in discussions regarding events or market developments that could expose the utility to potential opportunities and losses;
- Conduct credit scoring and analysis of City Light's existing and proposed counterparties;
- Recommend credit limits for counterparties to the Chief Financial Officer;

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- Negotiate and manage counterparty credit enhancements;
- Document proper accounting treatment of power and transmission transactions and any associated attributes, and provide reports, disclosures, and related information to the Accounting and Finance Divisions for their end use;
- Issue periodic reports on Risk Policy compliance, hedging plan status, market positions, and risk profile (for additional detail please refer to Section 3.8 Risk Reporting);
- Report the utility's transaction prices daily to specific index price developers;
- Evaluate the effectiveness of the risk metrics employed;
- Validate and test models used in risk management to ensure that market and credit risks are accurately quantified; and
- Research, develop, test, and implement risk measurement methodologies and models

### 2.7.2. RISK OVERSIGHT DIVISION REPORTING RELATIONSHIP

The head of the ROD, the Director of Risk Management, reports directly to the Chief Financial Officer and also has a direct line of communication to the Superintendent.

## 2.8. RISK POLICY APPROVALS AND AMENDMENTS

This Risk Policy will become effective upon the expressed approval of the City. Each year prior to July 1, the ROC will review the elements of this policy and present any recommended changes to the Superintendent or provide notification that no changes are necessary. If changes have been recommended, the utility will present the proposed changes to the Council by September 1. In reviewing the policy and recommending modifications, the ROC will consider any material changes in the markets in which City Light transacts, in City Light's business activities and in the financial circumstances of the utility. Recommendations shall include a complete description of the reason for such proposed changes and their anticipated impact.

## 2.9. COMPLIANCE WITH LAWS AND REGULATIONS

Employees shall comply with all applicable laws and regulations including, but not limited to, Anti-Market Manipulation rules established by Congress and implemented by state and/or federal agencies. Employees should be familiar with the relevant laws and regulations and seek clarification from the City's legal department as required. The City's legal department shall maintain up-to-date legal and regulatory guidelines that govern the purchase and sale of all authorized products, and train employees as needed. However, it shall remain City Light's responsibility to ensure that its employees are adequately trained.

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### 2.10. MISREPRESENTATION & CONFLICT OF INTEREST

City Light personnel shall not withhold or conceal information regarding transactions or risk management activities from any person responsible for the accurate recording and reporting of such activities, nor shall they misrepresent any such information.

Employees shall always put the interests of City Light ahead of any interest they may have in entities with which they transact. Further, employees authorized to place or execute wholesale energy transactions on behalf of City Light may not engage in such activities for their personal accounts. Employees will disclose to their supervisor any interest in an entity that could reasonably be construed as preventing them from acting solely in the interests of City Light. Failure to do so is a violation of this Risk Policy.

### 2.11. POLICY VIOLATIONS AND EXCEPTIONS

All persons engaged in the implementation, management, or administration of these policies and associated procedures, as detailed in the Procedures Manual, will sign the Compliance Statement (see Appendix D), stating that they have read, understood, and agree to comply with them.

Any person found in direct violation of these Risk Policies and the Procedure Manual may be subject to disciplinary action, including possible termination, at the discretion of the ROC. Inadvertent exceedances of risk limits (deemed an "exception"), upon notice to the ROC, shall be corrected in a timely manner.

Employees who become aware of potential non-compliance with these policies are obligated to immediately report such events to City Light's Risk Oversight Director, Chief Financial Officer or Power Supply Officer.

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# 3. Risk Management Approach

### 3.1. RISK MANAGEMENT PHILOSOPHY

City Light's current power supply portfolio consists primarily of hydro-based generation (approximately 90%). Historically, City Light's combined generation output has exceeded its retail customer demand by approximately 30% on an expected annual basis. Hydro uncertainty, coupled with wholesale energy market price volatility, leads to significant variability in City Light's net wholesale revenue from the sale of that surplus energy.

To manage this revenue risk and thereby protect the interests of the ratepayers, City Light hedges its exposure by buying and/or selling physical energy and associated products in the wholesale energy market up to 24 months prior to, and all the way up to, and including the hour of delivery. While City Light's principal objective is to ensure that



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it meets its retail customer demand obligation, it tries to do so in a way that generates additional value from its generation portfolio, with due consideration of risk.

By participating in the wholesale energy markets, City Light is exposed to, and needs to manage, a variety of risks including:

- Market price risk – the risk of loss due to wholesale price changes;
- Credit/performance risk – the risk of loss due to default or failure by counterparties to perform on contracts;
- Volumetric risk – the risk of loss due to unpredictable variations in the output of the generation fleet or in retail demand;
- Modeling risk – the risk of loss due to a model's failure to match reality sufficiently well;
- Operations risk – the risk of loss due to physical assets failing to perform; and
- Operational (Commercial) risk – the risk of loss due to flawed or inadequate business processes.

While all of these are under the jurisdiction of the ROC, only the approaches to market and credit risks are discussed here as they are specifically focused on energy market events. The other risks are viewed as operational risks and their management is covered in the Enterprise Risk Management Policy[1].

### 3.1.1. MARKET RISK POLICIES

The following market risk policies shall govern City Light's participation in wholesale energy markets. Specific limits, methodologies, reports, operational procedures, and approval processes are detailed in the Procedures Manual.

- City Light will meet its native retail customer demand obligation with a high level of certainty.
- Subject to the constraints of the system, City Light shall not engage in any transactions that are purely speculative in nature or that cannot be tied directly to managing its underlying purchase power agreements, generating plant, transmission asset positions, or price risk.
- City Light will ensure that it has full knowledge of its position in all transacted products and the resulting exposure, and understands the implications of its hedging activities.

[1] Pending Council approval as of 2011.

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- Only personnel authorized by the Superintendent pursuant to a written Delegation of Authority Agreement can transact on behalf of City Light in the wholesale energy market.

- City Light may only transact in physical wholesale energy-market products approved by the ROC.

- City Light may only transact within limits approved and defined in this Risk Policy and the Procedure Manual.

- Metrics for assessing City Light's market risk exposure will be specified, measured, monitored, and reported on a regular basis.

- All wholesale energy transactions will be carried out on recorded phone lines or electronic trading platforms.

- On a daily basis, all wholesale transactions will be captured in the official system of record.

- Models and inputs for valuation and risk measurement shall be subjected to a validation and change control process. The models employed and associated processes shall be described in detail in the Procedures Manual.

- Periodic risk and policy compliance reports will be delivered to the ROC, Superintendent, Mayor and the Council's central staff.

## 3.2. FORWARD HEDGING STRATEGIES AND PLANS

Successful management of the price and volumetric risks faced by City Light requires analysis, monitoring, and communication. Analysis of published hydrological and weather forecasts and market price data serve as key inputs to several internally developed models and ensure that the appropriate data is converted into useful information.

One of the statistical models used for this purpose is the Finance Division's Cash from Operations model, which produces a statistical distribution of revenues from the sale of surplus power. The average of the 5% worst outcomes in this distribution is called the "5% Tail Risk" metric. This is a conservative risk metric and the use of it is intended to protect the utility and its ratepayers against the worst outcomes. The objective of City Light's hedging practices is to attempt to maximize the underlying value of City Lights wholesale portfolio while meeting the requirements of the 5% tail risk metric.

In order to avoid frequent adjustments in the utility's forward position, and taking account of the fact that any attempt to model future uncertainty is complex and at best an exercise to guide decision making, City Light may hold forward positions that modestly depart from the optimal forward position that is projected by the Cash from Operations

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Model. This practice is actively monitored by the Risk Oversight Division's report on the Power Operations & Marketing Division's compliance with the risk tolerance band. For more information on the risk tolerance band, please refer to Section 3.3.2 Risk Metric Tolerance Limits.

As the water year progresses, increased certainty in our level of resources is attained. As greater certainty is achieved, the risk tolerance level for the 5% Tail Risk metric is reassessed and approved by the ROC through the planning process described below. Changes to the 5% Tail Risk metric value are closely monitored to ensure City Light remains within its accepted level of risk tolerance.

The 5% Tail Risk metric calculation process is a cross functional effort. The Power Operations & Marketing Division provides the hydro forecast input and load/resource balance for the Cash From Operations Model, the Finance Division owns and runs the model, and the Risk Oversight Division leads the communication of the metric's results with City Light's stakeholders. In addition, the Risk Working Group led by the Director of Risk Management and comprised of Power Operations and Marketing, Finance, and Risk Oversight Division personnel work on the continued refinement of the model, while keeping a close eye on changes in the risk metric value.

Consistent with market risk policies defined herein and the risk limits defined below, the Power Operations & Marketing Division, in concert with the ROC, will develop annual hedging strategies with underlying hedging plans as a means to manage the volumetric and price risks faced by the utility. This will be achieved by hedging the resource portfolio within the constraints of the 5% Tail Risk metric and Risk Tolerance Band.

The following two sections describe the requirements for formal written communication of City Light's hedging strategies and detailed hedging plans.

### 3.2.1. STRATEGIES

Prior to July 1, of each year, the Director of Power Operations & Marketing shall submit an initial written hedging strategy for the upcoming next two full calendar years to the ROC for review and approval. The Strategy will include:

- A timeline for presenting specific hedging plans for managing the expected surplus resource position throughout the next two years;
- A write-up of the likely usage of structured transactions (approved transaction types other than forward purchases and sales) including probable time periods and volumes;
- A recommendation for each years' initial 5% Tail Risk metric limit; and
- Price targets and triggers, and transaction types anticipated to be used in the hedging plans..

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### 3.2.2. PLANS

As a hedging strategy is finalized by the end of July of the preceding year it will remain in effect until such time as it is modified and approved by the ROC. Due to the amount of uncertainty concerning the hydrological conditions over such a time period, the document will require approximately five to six hedging plans to be developed and approved during each year.. Hedging plans are designed to contain specified effective dates and cover a particular transacting period of time in the future. For expected surplus energy revenue hedging and volumetric risk hedging plans, each plan will:

- Refer to the specific hedging strategy document it is applicable to;
- Be labeled or numbered consistent to the applicable hedging strategy;
- Have a specified start and end date;
- Cover a clearly specified forward time period;
- Document a volumetric limit for purchases and sales;
- Document transaction types to be used to carry out the Plan; and
- List price triggers that will enable hedging activity within the Plan's limits to be completed earlier than that which is contained in the Power Operations & Marketing Division's purchase and sales orders to their Power Marketing staff.

The Director of Power Operations & Marketing may, at any time, request that the ROC consider changes to the current Hedging Strategy or Plan. Any approved changes to the Hedging Strategy or Plan shall be recorded in the ROC meeting minutes and an updated written Hedging Strategy or Plan document will be prepared as soon as practical incorporating such changes. On occasion, it will become apparent to Power Operations & Marketing management that additional transactions to reshape expected monthly forward positions are necessary given changes in generation forecasts, market conditions, and load forecasts. The Director may enter into and execute such transactions to rebalance the forward position as long as the net energy position resulting from these transactions is close to zero. These transactions will be discussed in ROC meetings ahead of time if conditions allow, or reported after the fact and documented in the ROC meeting minutes. The effect on the tail risk metric, specifically a potential transaction(s) impact on risk tolerance band compliance will be evaluated prior to transaction execution. The benefit of evaluating the rebalancing-type transactions with risk tolerance band compliance is to provide management with quantitative assurance that the benefit (reduction in volumetric risk) is not adding an undesirable level of market risk to the portfolio.

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## 3.3. RISK LIMITS

The Power Operations & Marketing Division will manage City Light's exposure consistently with the Risk Limits as defined below. In the event of a potential conflict between a specific hedging plan and these risk limits, the risk limits will control and the hedging plan will be modified to bring it into compliance with these risk limits. Under normal operating conditions, if such limits are exceeded, the Power Operations & Marketing Division will take immediate corrective action. Corrective action will start with written notification to the ROC of any limits that are exceeded, the reasons and conditions that caused such exceedance, and the actions being undertaken to return the utility to within approved risk limits. The Chair of the ROC will then notify the Superintendent in writing of the risk limit exception and the cause of the exception. The Power Operations & Marketing Division's corrective action may include purchasing power to eliminate forecasted deficits in any month or calendar quarter, or re-balancing City Light's forward portfolio position through a combination of purchases, exchanges, or other products available from the market. There may be occasions when it will be necessary to change the risk limits listed below. The process for changing these risk limits are documented in Section 3.3.3 Risk Limit Changes.

### 3.3.1. VOLUMETRIC LIMITS

#### 3.3.1.1. Prompt and Within the Month

The Power Operations & Marketing Division will maintain City Light's power portfolio position for any prompt month or any Balance of the Month period so that such position shall not exceed a 50 average megawatt deficit during such period. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any call options (daily or monthly) that City Light has purchased for such month. If this limit is exceeded, the Division will take immediate action to reduce the deficit to under 50 average megawatts.

#### 3.3.1.2. Forward Month's Resource Requirement

The Power Operations & Marketing Division will immediately suspend any further forward sales for any future calendar quarter, within the next full 24 months, if the forecasted net combined system energy projected surplus for that quarter is less than zero when calculated on a 75% probability of occurrence. Further, the POM Director will take immediate corrective action to purchase for a specific future calendar quarter if the net combined system energy position for that specific future calendar quarter, which includes the next full 24 months, is less than zero when calculated on a 50% probability of occurrence. This corrective action shall reduce said deficit to zero at the 50% level of confidence for that specific future calendar quarter. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any physical call options (daily or monthly) that City Light has purchased for such month.

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#### 3.3.1.3. Forward Sales Limit

The Power Operations & Marketing Division will not sell forward a quantity of more than 1,750,000 net megawatt hours over a rolling four full calendar quarter year period. Such limit will be calculated as the net position of City Light's combined physical position adjusted for any physical call options (daily or monthly) that City Light has purchased for such period.

#### 3.3.1.4. Physical Options Limits

As the utility introduces physical "put" and "call" options into its portfolio it will do so in a conservative manner. This will allow for the refinement of business practices and internal controls that these transactions will impact. The Power Operations & Marketing Division will limit its option volumetric position so that it will not transact more than the lesser of 300 average megawatts in physical put and call options (including daily and monthly options) or spend more than $2 million for option premiums for any calendar year.

### 3.3.2. RISK METRIC TOLERANCE LIMITS

For the current calendar year, the Power Operations & Marketing Division will conduct its hedging activity to maintain the Utility's position within a $6 million Risk Tolerance Band (RTB) around the calculated 5% Tail Risk metric. For the prompt year (the year immediately following the current calendar year), the Utility's position will remain within a $10 million RTB around the 5% Tail Risk metric.

The prompt year's RTB will change to current year's RTB with the first calculation of the 5% Tail risk metric in the month of November. This coincides with the start of City Light's Finance Division running the prompt year's Cash from Operations model on a bi-weekly rather than a monthly basis.

Under normal operating conditions, in the event the approved 5% Tail Risk metric limit is exceeded or would become exceeded if the remainder of the active hedging plan was executed, planned hedging activity will stop until a revised Plan is approved by the ROC.

### 3.3.3. RISK LIMIT CHANGES

The risk metric and volumetric limits described above may be exceeded from time to time for reasons beyond City Light's control including, but not limited to unexpected or extreme market events (weather, system constraints, prices), resource underperformance, and other system conditions (prolonged plant outage, transmission line availability). To ensure that the limits contained in this Policy can be changed in a timely manner, the following protocol will apply:

1. Should the ROC desire to have an existing limit changed, a request to revise a limit along with a corresponding justification for the requested change shall be

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communicated to the Superintendent in writing and logged in the meeting minutes of the ROC.

2. The Superintendent will approve or disapprove the requested change in writing within 2 business days of receiving such request.

3. If approved, the chair of the ROC will promptly transmit the request, with all necessary supporting information, to the chair of the City Council's Energy, Technology, & Civil Rights Committee (ETCRC) or its functional equivalent.

4. The chair of the ETCRC, after consulting with the other members of the Committee, will notify the chair of the ROC and the Superintendent in writing within two business days of the ETCRC's decision. An email through the City's email system will suffice as written notification. If the chair of the ETCRC does not respond within this time period, the requested change to the limit will be deemed to have been approved by the ETCRC.

5. During the period from the exceedance of the risk limits to 2 business days following the notification of the chair of the ROC by the ETCRC of its decision, the POM will not be considered an exception of the risk limits.

Should the Superintendent disapprove the requested limit change per #1 above, the Chair of the ROC will notify the Power Operations & Marketing Division to transact as needed in order to bring City Light's portfolio of forward positions back into approved risk limits.

Should the Superintendent be unavailable to respond in the time frame required by this Policy (#2 above), the chair of the ROC will transmit the request directly to the chair of the ETCRC.

On an annual basis, timed to coincide with the exit conference of the annual external assessment of policy compliance (refer to Section 3.9 External Assessment), the limits contained in this policy as modified during the course of the year per this Section will be reviewed and reaffirmed by the City Council's Energy, Technology, & Civil Rights Committee.

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### 3.4. DELIVERY POINTS

City Light may transact in the Western Electricity Coordinating Council markets at the following points of delivery:

- Mid Columbia (Mid-C)
- Points of Interconnection with the Bonneville Power Administration (BPA), Avista Utilities, Idaho Power, B.C-U.S. Border, Pacificorp, Alberta Power Pool, and Puget Sound Energy

- California - Oregon Border (COB)
- Nevada - Oregon Border (NOB)
- Palo Verde (PV)

## 3.5. TRANSACTION TYPES

The following table summarizes the authorized products for each of the three transacting segments of the Power Operations & Marketing Division.

| Product | Real Time (Intra day) | Day-ahead through Balance of the month of the M of the | Forward |
|---|---|---|---|
| 1. Electrical Energy | Yes | Yes | Yes |
| 2. Reserve Transactions | Yes | Yes | Yes |
| 3. Transmission | Yes | Yes | AR |
| 4. Locational Transactions | Yes | Yes | Yes |
| 5. Transmission Losses Provider | No | No | Yes |
| 6. Capacity | Yes | AR | AR |
| 7. Exchange Capacity Service | AR | AR | AR |
| 8. Energy Exchanges | Yes | AR | AR |
| 9. Parking | No | AR | AR |
| 10. Lending | No | AR | AR |
| 11. Scheduling Services | AR | AR | AR |
| 12. Regulation & Frequency Response Service | AR | AR | AR |
| 13. Reactive Supply & Voltage Control Services | AR | AR | AR |
| 14. Energy Imbalance Service | AR | AR | AR |
| 15. Dynamic Scheduling Service | AR | AR | AR |
| 16. Intra-Hour Balancing Service | AR | AR | AR |
| 17. Purchase of PhysicalCall | N/A | AR | AR |
| 18. Purchase of Physical Put | N/A | AR | AR |
| | | | |
| **AR = Approval required by the Manager of corresponding desk.** | | | |

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**1. Electrical Energy**: The sale or purchase of wholesale electric energy with the following general attributes: a fixed commodity quantity; a defined commodity price; and,



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a point of delivery within the allowed geographic boundaries as specified under Section 3.4 Delivery Points.

**2. Reserve transactions** are the sale or purchase of capacity for a fee with the right to delivery of energy up to the amount of the capacity reserved during the period covered by the contract. The commodity price is either fixed or indexed to Mid-C, COB, or Palo Verde. The point of delivery is fixed. The sale of Third Party Operating Reserves Service (TPORS) per BPA Transmission's Operating Reserves Business Practice is one example of a reserve transaction.

There are two specific sub-categories of capacity reserve products which are differentiated by the notice required for delivery of the energy:

- Spinning Reserves: Capacity transactions where the buyer may call for delivery of the commodity with less than 5 minutes' notice through an automated generation control or other electronic signal;

- Operating Reserves: Capacity transactions where the buyer may call for delivery of the commodity with no less than 15 minutes' notice;

**3. Transmission**: The sale or purchase of rights to transmission capacity. These transactions have a fixed capacity, a fixed price per unit of capacity, and fixed path. The sale of surplus PTP BPA Transmission through the TransAssign function is one example.

**4. Locational Transactions**: The simultaneous purchase and sale of energy with one or more counterparty but at different points of delivery. The intent of the transaction is to either move a position from point A to point B or to lock in the spread between the two points where City Light has access to and is indifferent as to which location the position is located. At the time of transaction entry, the intent of the transaction will be clearly documented on the Risk Oversight Division's Pre-deal Risk Assessment Form.

**5. Transmission Loss Provider**: Providing transmission losses for a counterparty in return for a fee plus payment for the energy required to meet the obligation.

**6. Capacity**: Energy that is committed to be available relative to a forward schedule. The energy may not be purchased by the counterparty so a fee is charge for making the commitment of resources (capacity fee). Should the energy by needed, a price per megawatt hour will be charged. The contract will state a capacity fee and an energy price. The transaction will be with a single counterparty. The delivery of energy may be less than the amount of capacity purchased. The buyer has the choice of determining the amount (up to a stated maximum volume) and timing (within stated parameters) of when the energy deliveries will be made. Maximum deliveries and receipts are set by contract. Capacity sales terms must include that capacity payments will be structured to be due no later than 3 business days after the signing of the transaction confirmation. This capacity charge will be non-refundable. If the capacity is called upon by the

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purchaser and the energy is not available, energy will be purchased and delivered or deemed to have been purchased and delivered at a stated index price. Acceptable variations to the general terms of this transaction are:

- Buyer may be restricted as to amounts of delivery and which hours may be chosen for deliveries and/or seller may be allowed some choices.
- May be combined with a locational transaction or exchange or transmission deal.
- Any forward capacity sales shall be compared against the most recent capacity position report as prepared by the POM Division to ensure City Light has sufficient resources.

**7. Exchange Capacity Service**: Seller will exchange energy with the Buyer by delivering energy during defined hours in exchange for energy returned during other hours; within each stated time period these transactions will be energy neutral with the amount of energy delivery to the purchaser equal to the energy returned to Seller. The Buyer will pay a fixed Exchange Capacity fee for the amount of capacity made available no later than 3 business days after signing the transaction confirmation.

**8. Energy Exchanges**: Transactions of energy with a single counterparty at two different points in time and possibly location. The implicit price is defined by the ratio of quantity delivered to quantity received and the forward price differential at the time of transaction entry.

**9. Parking**: A transaction in which the purchaser delivers energy to the seller on a pre-scheduled basis according to WECC Preschedule Calendar. The seller of the service is then required to deliver a like amount of energy on a real-time basis on the pre-scheduled flow day(s) to parties or locations specified by the purchaser.

**10. Lending**: A transaction in which the purchaser directs the seller to deliver energy to specific parties or locations on a preschedule basis according to WECC Preschedule Calendar. The purchaser then delivers a like amount of energy in real-time to the seller on the pre-scheduled flow day(s).

**11. Scheduling, System Control, and Dispatch Service**: A transaction where the seller provides the service required to schedule the movement of power through, out of, within, or into a Balancing Authority Area, usually including electronic tagging service. There may be a need for additional communication gear or other hardware. If purchased through an Open Access Transmission Tariff (OATT), this service can be provided only by the operator of the Balancing Authority in which the transmission facilities used for transmission service are located.

**12. Regulation and Frequency Response Service**: A transaction where the seller commits on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) as necessary to follow the moment-

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by-moment changes in load. All transmission providers must offer this service, but others may offer it as well.

**13. Reactive Supply and Voltage Control Service**: A transaction where the seller supplies reactive power support based on the amounts necessary to maintain transmission voltages within limits that are generally accepted in the region. All transmission providers must offer this service, but others may offer it as well.

**14. Energy Imbalance Service**: A transaction where the seller provides the difference in energy between the scheduled and the actual delivery of energy to a load located within a Balancing Authority over a single hour. All transmission providers must offer this service, but others may offer it as well. An example is providing third-party supply of Energy Imbalance service per BPA Transmission's Energy Imbalance Service Business Practice, Version 3.

**15. Dynamic Scheduling Service**: The selling or buying of Ancillary services through the dynamic transfer of energy through a common communications protocol to allow participants to exchange dynamic schedules with any number of participants simultaneously for both short-term and long-term transactions.

**16. Intra-Hour Balancing Service**: Seller provides within-hour incremental or decremental service where a fixed amount of energy can be received or delivered in the Seller's Balancing Authority from another Balancing Authority. The capacity quantity, number of times within any hour, number of hours within the day, and total number of hours during the term of the contract must be specified. Buyer will pay Seller, within 3 business days of signing, the capacity fee for the amount of incremental and decremental capability provided during the hours in the term. Any energy received or delivered will be settled by an exchange or energy index price.

**Physical Options**: Forward physical transactions, contracted under the WSPP enabling agreement, that give the buyer a right, but not an obligation, to perform and give the seller the obligation to perform. The following define the types of Option transactions that City Light may enter into. Volumetric limits for options are listed at Section 3.3.1.4.

**17. Purchased Physical Call Option**: Purchase the right but not the obligation to "call" on (buy) a fixed quantity of energy at a fixed delivery point, for a fixed price. This transaction type serves as a form of energy supplye insurance. Calls can be useful to City Light for obtaining additional resources, at a known price, that may be needed in times of anticipated supply deficit and in forward markets that City Light has previously sold forward. City Light will not sell call options.

**18. Purchased Physical Put Option**: Purchase the right, but not the obligation to "put" (sell) a fixed quantity of energy at a fixed delivery point for a fixed price. This transaction type serves as an additional surplus resource sales tool that will be used to lock in a floor

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price (guaranteed bottom). This is a useful tool to protect from the market price dropping below a stated price for a specified quantity of energy. City Light will not sell put options.

## 3.6. CREDIT RISK MANAGEMENT PHILOSOPHY

To protect its financial integrity, City Light will actively manage its credit risk by making risk informed decisions regarding which counterparties to transact with and how much business it will conduct with them. Credit risk is defined as the risk of counterparty nonperformance, or failure to deliver its obligation (whether that is an energy product or payment of amounts owed). Credit risk is especially important to City Light due to the volume it transacts in the wholesale energy market, and the seasonal peak activity (the spring run-off) that requires it to increase its risk tolerance to avoid spilling water and thereby wasting the resource.

City Light manages its credit risk by:

- Incorporating the expected sales volumes, timing of such sales, and expected energy prices, and estimated counterparty probability of default when establishing a credit risk tolerance for a calendar year;
- Allocating the credit risk tolerance among approved counterparties based on the individual counterparty's estimated likelihood to perform;
- Assessing counterparty creditworthiness and establishing credit limits for counterparties based on that assessment;
- Requiring a counterparty to be assigned a credit limit prior to transacting with it;
- Monitoring and assessing market and counterparty events to adjust credit limits as appropriate;
- Calculating and reporting counterparty credit exposures; and
- Requiring Power Marketers transacting in the forward markets (full prompt month up to 24 months forward) to discuss term deals from a risk perspective with the Risk Oversight Division prior to deal entry. A completed Pre-Deal Risk Assessment Sheet (PDRA) or a memorandum transmitted through the recently installed Trading and Risk Management ("TRM") system listing the requested counterparties to transact with satisfies this requirement.

### 3.6.1. CREDIT RISK POLICIES

City Light sells significant quantities of power in the wholesale market. Industry practice dictates payment no sooner than 20 days after the end of the delivery month, requiring that City Light extend credit to its counterparties. Further, as noted earlier, City Light

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seeks to manage its volumetric and price risk by transacting in the forward market, resulting in its extending credit to counterparties for periods up to 24 months.

The following policies shall govern City Light's credit exposure management efforts. Specific limits, methodologies, reports, operational procedures, and approval processes will be detailed in the Procedures Manual.

The Chief Financial Officer sets the following on an annual basis:

- Credit risk tolerance. This is determined by considering wholesale revenue goals, available counterparties, and these counterparties' estimated probabilities of default.

- The maximum secured and unsecured credit limit a counterparty may be given (Credit Threshold).

- A credit limit table that will be used by the Director of Risk Management during the year to manage counterparty credit.

- The methodologies used for establishing specific counterparty credit limits.

- Initial counterparty credit limits. This ensures that at the beginning of each year credit limits are aligned with risk tolerance and that the Risk Oversight Division has prepared a comprehensive analysis of counterparties and market conditions.

The above decisions and any changes to them during the year will be documented in the ROC meeting minutes. The Director of Risk Management will utilize these decisions and any additional parameters documented in the Procedures Manual to develop and adjust counterparty specific credit limits to present to the CFO for approval at the ROC and to manage credit limits during the year.

Credit limits will be based on a number of factors including the counterparty's probability of default, and credit score that focuses on liquidity, profitability, and cash flow.

SPECIAL CONDITIONS

Except under the following circumstances, City Light will not extend unsecured credit to counterparties having a net worth of less than $2.5 million:

- 'must sell' (spill conditions); or

- Negative priced energy transactions that result in City Light receiving payment for taking the counterparty's energy (a seasonal event driven by a combination of high wind and high water flow).

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- Renewable Energy Credit (REC) purchases for periods greater than 24 months where a transaction-specific Ordinance is approved by the Mayor and City Council.

During spill events the Director of Power Operations & Marketing and the Power Supply & Environmental Affairs Officer may take action to extend credit to parties that currently do not have credit or do not have sufficient credit for a proposed transaction. In the case where neither of these two members of the senior leadership team can be reached, the real time marketer may sell to a specific counterparty that has no available credit once per shift to minimize lost opportunities. The real time marketer may not make more than three such sales (different counterparties) per shift. Before the end of the shift, the real time marketer will notify the Director of Power Operations and Marketing and the Power Supply & Environmental Affairs Officer of each transaction including dollar amount. Each of these transactions will be discussed and documented at the next regularly scheduled Risk Oversight Council meeting. These are expected to be low frequency events. By anticipating and documenting that such events may happen, opportunities are not lost. The post transaction discussion will cover the underlying drivers of the event's occurrence and the effectiveness and results of the decisions that were made.

CREDIT ENHANCEMENTS

In establishing credit for counterparties, City Light may consider credit enhancements that meet the following criteria:

- Prepayment for the product or service. Prepayment is due within 5 business days of signing the confirm or contract; or

- An irrevocable standby letter of credit for the benefit of City Light from a United States office of a commercial bank or trust company organized under the laws of the United States of America or a political subdivision thereof or a foreign bank with a branch office located in the United States with at least an "A" credit rating from two or more major credit rating agencies; or

- An acceptable payment guarantee from a parent or otherwise qualified entity having investment grade credit ratings of at least 'BBB' or 'Baa2' from S&P and Moody's, respectively. The Guarantor must meet City Light credit qualification requirements and qualify for the amount of credit support to be provided; or

- Other credit enhancement deemed acceptable by the CFO.

REPORTING

City Light will measure and report its counterparty credit exposure in the following ways:

Settlement Exposure: A rolling 60-day notional value. This is equal to the higher of existing Accounts Payable (AP) plus current delivered but unbilled plus scheduled to be

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delivered through the end of the current month (CM) or the CM plus next month notional value.

Mark to Market Exposure (MTM): The change in market value of undelivered obligations.

Current Exposure: The sum of Settlement Exposure plus Mark to Market Exposure.

A credit exposure that exceeds a credit limit due to the MTM component will be considered a passive exception by the Power Marketers; however, this excess credit exposure will be managed by the Risk Oversight Division.

The ROD will provide such reports to the ROC no less than once per month or more frequently if conditions warrant.

### 3.7. PROCEDURES MANUAL

The specific operating procedures and parameters for implementing the policies in this document are detailed in the Procedures Manual. Changes to the Procedures Manual will be reviewed and approved by the ROC for consistency with this Risk Policy.

### 3.8. RISK REPORTING

The Risk Oversight Division will produce the following periodic reports:

- A monthly report documenting City Light's compliance with this Policy.
- A weekly report identifying Risk Policy violations or exceptions, if any, and summarizing the status of City Light's existing Hedging Plan, existing positions, forecast of resources, and credit exposures.

These reports will be distributed to the ROC, the Superintendent, the Mayor and the Council's central staff.

### 3.9. EXTERNAL ASSESSMENT

The Mayor's staff and the Council's central staff will consult with the Director of Risk Management regarding the selection of an external party to conduct a review of City Light's adherence to this Risk Policy. This compliance review will be performed and reported annually to the Mayor and Council. In alternate years the scope of this compliance review will be expanded to include an assessment of the adequacy of City Light's wholesale energy risk management controls.

This Version is Not Active

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# Appendix A

See Exhibit 1 to Attachment A of SCL Risk Management Policy RES

# Appendix B City Light's Energy Risk Management Organization Charts

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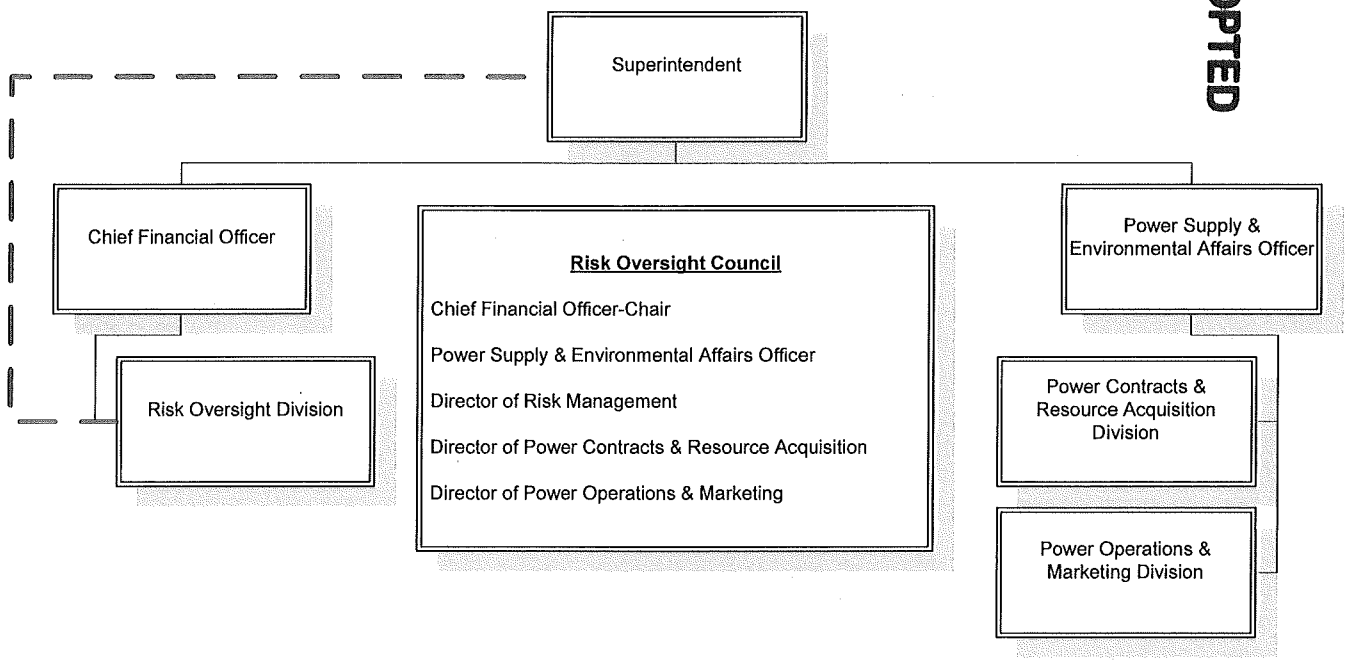
## Energy Risk Management Organization



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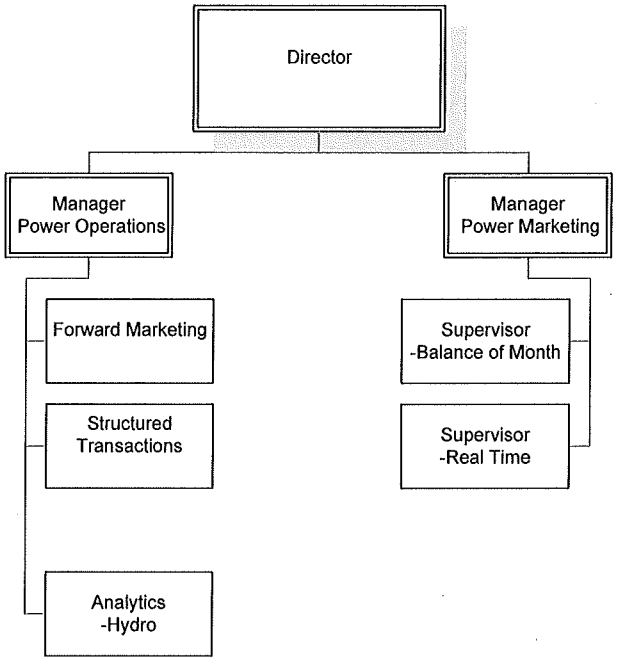
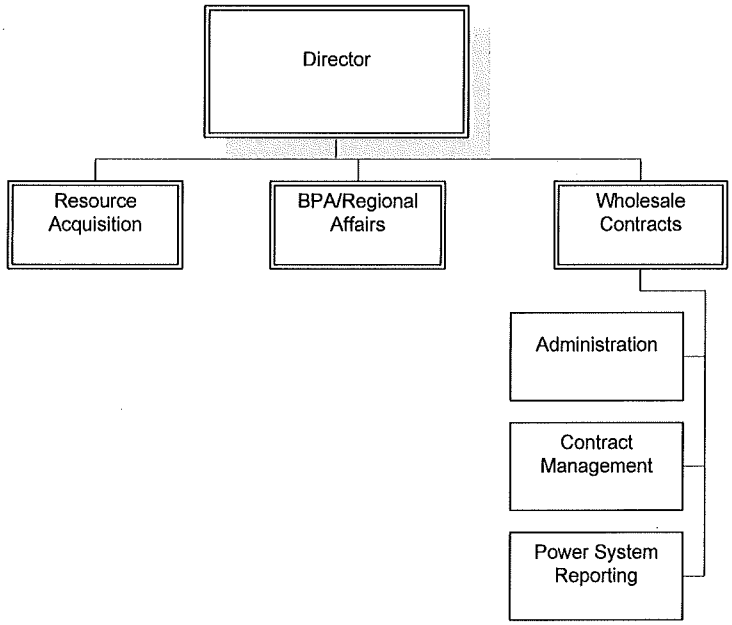
# Power Operations & Marketing Division




# Power Contracts & Acquisition Division

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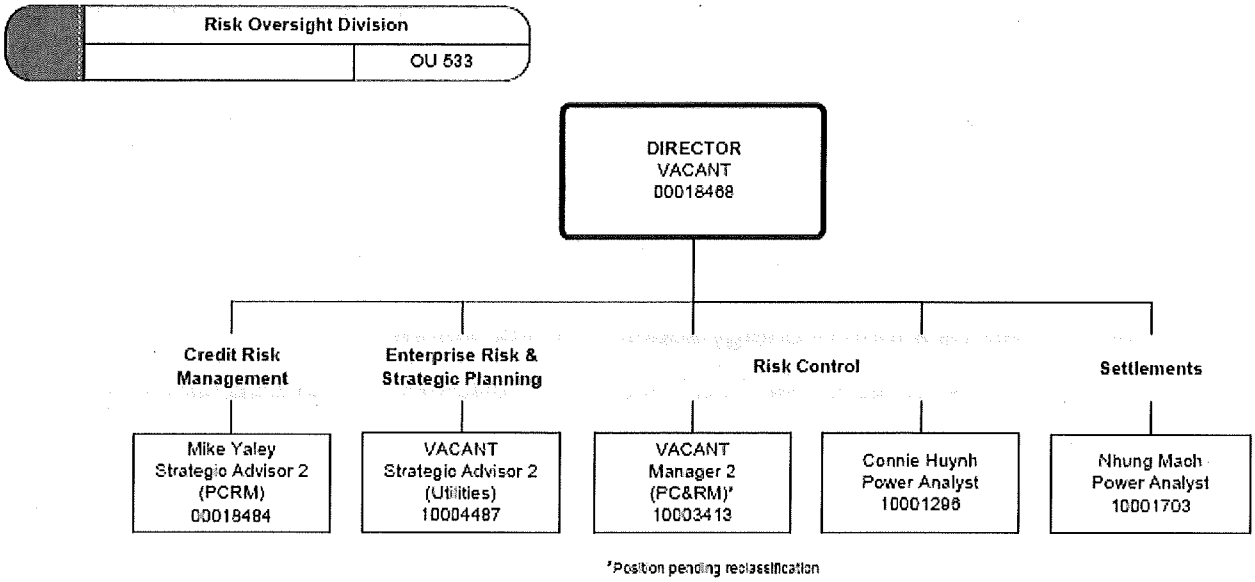
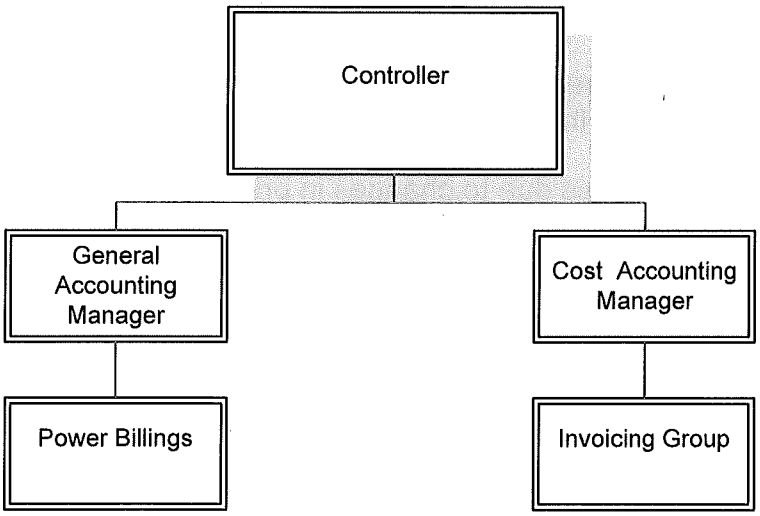
Structure of Risk Oversight Division organization is under review / reorganization




## Back Office: Accounting Division



# Appendix C Glossary of Terms

Risk Tolerance Band: An acceptable variance, in either direction (positive or negative), from the 5% Tail Risk's calculated optimal position.

Calendar Quarter: Three-month blocks of time, often referred to as "Q's." Q1 is comprised of January through March; Q2 contains April through June; Q3 contains July through September; Q4 contains October through December.

Call Option: The right but not the obligation to "call" on (buy) a fixed quantity of energy at a fixed delivery point, for a stated price, including the market index price. This transaction type serves as a form of energy supply resource insurance.

Cash From Operations: The net revenue expected from wholesale energy transactions, retail sales, other expenses, and incomes.

Cash From Operations Model: The Financial Division's model that estimates net revenue available to fund capital requirements taking into account the variability of cash flows resulting from uncertainty of water conditions, market prices, and system load.

Credit Risk: The risk of loss due to counterparty failure to perform contractual obligations including payment.

Hedge: Transaction entered into for a time period that covers the Prompt Month or further-forward time period for the purpose of reducing resource and/or price uncertainty or generating a return on City Light's investment in energy assets.

Hedging Plan: Specific plan of action derived from the Hedging Strategy.

Hedging Strategy: High level direction that serves as the framework for developing courses of action (Hedging Plans) that will lead towards achieving a goal.

Market Price Risk: The risk of loss due to changes in price,

Modeling Risk: The risk of loss due to a model's failure to sufficiently match reality.

Operational Risk: The risk of loss due to flawed or inadequate business processes.

Operational Transaction: Procurement or sale transaction entered into for the purpose of managing resources.

Operations Risk: The risk of loss due to physical assets failing to perform.

Procurement: Energy product purchase transaction in the Balance of Month or shorter time horizon for the purpose of serving City Light's native load.

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Prompt Month: Closest calendar month that has not yet begun.

Put Option: The right, but not the obligation to "put" (sell) a fixed quantity of energy at a fixed delivery point for a stated price including the market index price. This transaction type serves as an additional surplus resource sales tool that will be used to lock in a floor price (guaranteed bottom). This is a useful tool to protect from the market price dropping below a stated price for a specified quantity of energy.

Volumetric Risk: The risk of loss due to variations in generation output and customer demand.

5% Tail Risk: The risk metric produced from the Cash From Operations Model. It is the average financial outcome of the worst 5% of all outcomes.

# Appendix D Compliance Statement

**Compliance Statement**

The undersigned employee hereby acknowledges receipt and review of City Light's Wholesale Energy Risk Management Policy dated _____ and corresponding Wholesale Energy Risk Procedures Manual version _____.

The undersigned further acknowledges that this risk policy and corresponding risk procedures manual defines the standards of City Light's energy risk management efforts that the employee is expected to comply with, and that failure to comply with the Policy and procedures may result in, among other things, disciplinary action up to and including termination.

As Utility compliance with the Wholesale Energy Risk Management Policy requires the involvement and support of many City Light staff, employees who become aware of non-compliance with these policies are obligated to report such anomalies to the Risk Oversight Director, CFO, or Power Supply Officer.

Acknowledged by:

_____
Employee Name (Print)

_____
Employee Signature

_____

Date

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## STATE OF WASHINGTON – KING COUNTY

--ss.

284671 No. 31365,31370,31380

CITY OF SEATTLE,CLERKS OFFICE

## Affidavit of Publication

The undersigned, on oath states that he is an authorized representative of The Daily Journal of Commerce, a daily newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a daily newspaper in Seattle, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. The Daily Journal of Commerce was on the 12th day of June, 1941, approved as a legal newspaper by the Superior Court of King County.

The notice in the exact form annexed, was published in regular issues of The Daily Journal of Commerce, which was regularly distributed to its subscribers during the below stated period. The annexed notice, a

CT:TITLE ONLY RESOLUTION

was published on

05/30/12

The amount of the fee charged for the foregoing publication is the sum of $ 41.85, which amount has been paid in full.

MELISSA M. DOWD
STATE OF WASHINGTON
NOTARY PUBLIC
MY COMMISSION EXPIRES
11-21-15

Subscribed and sworn to before me on

05/30/12

Notary public for the State of Washington,
residing in Seattle

Affidavit of Publication

# State of Washington, King County

## City of Seattle

**Title Only Resolutions**

The full text of the following legislation, passed by the City Council on May 14, 2012, and published below by title only, will be mailed upon request, or can be accessed at http://clerk.seattle.gov. For information on upcoming meetings of the Seattle City Council, please visit http://www.seattle.gov/council/calendar.

Contact: Office of the City Clerk at (206) 684-8344.

RESOLUTION NO. 31365

A RESOLUTION endorsing the City Light Department's Wholesale Energy Risk Management Policy; establishing it as the policy governing wholesale energy risk management at the City Light Department; and superseding Resolution 31230.

RESOLUTION NO. 31370

A RESOLUTION identifying principles and a revised schedule to guide the review and update of the City's Comprehensive Plan.

RESOLUTION NO. 31380

A RESOLUTION supporting a United States Constitutional Amendment to Regulate Corporate Political Spending and Campaign Financing.

Date of publication in the Seattle Daily Journal of Commerce, May 30, 2012.

5/30(2846711)