

MEMORANDUM

2

TO: UTILITY ADVISORY COMMISSION

FROM: ADMINISTRATIVE SERVICES DEPARTMENT

DATE: JUNE 6, 2012

SUBJECT: City of Palo Alto's Energy Risk Management Policy (ERMP)

Request

Staff requests that the UAC recommend that Council approve the proposed Energy Risk Management Policy (ERMP).

Executive Summary

The City of Palo Alto's Risk Management Policy serves as the overriding document for the monitoring, measurement, and control of risks associated with electric and gas commodity transactions. This Policy is to be reviewed by the City Council on an annual basis. On January 18, 2011, staff requested that the City Council review and approve this Policy (CMR 101:11). At that meeting, the Council continued the item and directed staff to return with an ERMP that referenced updated long-term electric and gas purchasing strategies. In line with the Policy requirement to submit the Policy to the City Council for approval each year, staff requests that the Commission review and recommend the Policy for approval, prior to Council consideration tentatively scheduled for July 9, 2012.

Background

The Council last approved the ERMP on September 14, 2009 (CMR 359:09). On January 18, 2011 (CMR 101:11), Council continued policy approval until after the Gas Utility Long-Term Plan (GULP) incorporated a market based purchasing strategy. The City's ERMP requires that staff update it annually, but with staffing and GULP changes this process has been delayed.

Discussion

Electricity and gas prices have displayed significant volatility over time and purchasing electricity and gas can carry inherent financial risks. The ERMP is the overarching document for the management of the City's risks associated with purchasing electric and gas commodities. In addition to the ERMP, there are two more detailed sets of documents that support it and are used to mitigate risk: the Energy Risk Management Guidelines and Energy Risk Management Procedures. The Guidelines are prepared by Administrative Services staff in concert with

Utilities staff. Energy Risk Management Procedures are prepared by the Front, Middle, and Back Offices. As a whole, the Energy Risk Management Policy, Guidelines, and Procedures codify for staff a variety of principles and activities designed to minimize risks by, for example, ensuring transparent and appropriate purchasing procedures, segregating duties, establishing acceptable risk parameters and limits, and instituting multiple review processes. The ERMP and Guidelines are reviewed and approved by the Utilities Risk Oversight and Coordinating Committee (UROCC), which consists of the Directors of Utilities, Administrative Services, Public Works, and a representative from the City Managers' Office. The Procedures are approved by the Utilities and Administrative Services Directors.

The ERMP clearly delineates that all contract transactions, whether carried out under purchasing Master Agreements or not, must be fully in compliance with the Municipal Code. Transactions with the Northern California Power Agency, including scheduling, are covered under a separate Member Services Agreement.

Compared to the existing ERMP, the proposed 2012 ERMP reflects the following changes:

- Elimination of specific gas purchasing strategy references
- Addition of references to the Long-Term Electric Acquisition Plan (LEAP) and Gas Utility Long-Term Plan (GULP) documents
- Inclusion of how and when to report a conflict of interest in the Conflict of Interest section
- Clarification of time periods in which Risk Manager reports information
- Clarification of text

Based on Council's direction to eliminate the former gas laddering strategy, update the GULP to reflect a market based procurement objective, and insert references to GULP in the ERMP, the updated Policy eliminates specific gas portfolio management references. Instead, the updated ERMP Objective now references the strategic documents that guide or implement commodity purchases. These include: the Utilities Strategic Plan, the Long-Term Electric Acquisition Plan (LEAP), and Gas Utility Long-Term Plan (GULP).

The Conflict of Interest section was revised to provide additional direction to an employee and his/her supervisor on how and when to report a conflict of interest. The text now reads, "Should an employee become aware of a conflict of interest during the course of fulfilling his or her responsibilities, he or she shall report it, without delay, to the Director, or her or his designee, who shall resolve the conflict." References to the Form 700 or disclosure of interests form have been eliminated since it is already a City requirement.

The updated ERMP added language to the Risk Management Reporting Policy section clarifying the time in which the Risk Manager must alert the UROCC and Council of an exception to portfolio limits. The UROCC is now to be notified within one business day and the Council in the next quarterly report.

Finally, there have been a number of edits to clarify or clean-up text and to make the ERMP easier to use. The UAC can follow changes to the existing ERMP in the "redlined" version of the update or Attachment A. The UROCC has reviewed and approved the attached, updated ERMP.

Staff recommends that the UAC review the ERMP, provide comment, and recommend Council approval.

Attachments:

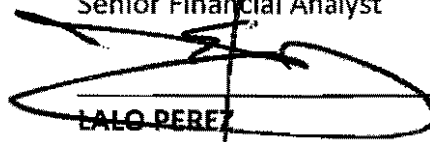
- A. Energy Risk Management Policy – redlined version
- B. Energy Risk Management Policy as approved by the UROCC on May 24, 2012

PREPARED BY:

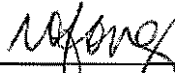


MARY FIGONE
Senior Financial Analyst

DEPARTMENT HEAD APPROVAL:



LALO PEREZ
Director, Administrative Services



VALERIE O. EONG
Director, Utilities

City of Palo Alto

Energy Risk Management Policy

May 2012

Deleted: August 10, 2009 ¶
<sp><sp>



CITY OF
**PALO
ALTO**

City of Palo Alto Energy Risk Management Policy

Table of Contents

A. OBJECTIVE	1
B. APPLICABILITY	1
C. RISK MANAGEMENT ROLES, RESPONSIBILITIES, AND ORGANIZATION	2
1. CITY COUNCIL.....	2
2. UTILITIES ADVISORY COMMISSION.....	2
3. CITY MANAGER.....	3
4. UTILITIES RISK OVERSIGHT AND COORDINATING COMMITTEE.....	3
5. MANAGEMENT OVERSIGHT.....	3
a. Front Office – Planning and Procurement.....	3
b. Middle Office – Risk Management Controls and Reporting.....	4
c. Back Office – Settlement and Recording.....	5
D. TRANSACTING POLICY	5
1. ANTI-SPECULATION.....	5
2. MAXIMUM TRANSACTION TERM.....	5
3. COMPETITIVE PROCESS.....	6
E. COUNTERPARTY CREDIT POLICY	6
F. RISK MANAGEMENT REPORTING POLICY	6
G. AUTHORIZED PRODUCTS POLICY	7
H. TRANSACTING AUTHORITY POLICY	8
I. CONFLICT OF INTEREST POLICY	8
GLOSSARY OF TERMS.....	9
4. COMPETITIVE PROCESS.....	6
VIII. COUNTERPARTY CREDIT POLICY	6
IX. COMMODITY PRICING POLICY	II
X. RISK MANAGEMENT REPORTING POLICY	6
XI. AUTHORIZED PRODUCTS POLICY	7
XII. TRANSACTING AUTHORITY POLICY	8
XIII. CONFLICT OF INTEREST POLICY	8

Deleted: I. INTRODUCTION	
Formatted	... [1]
Field Code Changed	... [2]
Deleted: 1	
Field Code Changed	... [3]
Field Code Changed	... [4]
Deleted: II.	
Field Code Changed	... [5]
Deleted: 1	
Formatted	... [6]
Formatted	... [7]
Field Code Changed	... [8]
Deleted: III. ENERGY...PHI	... [9]
Field Code Changed	... [10]
Deleted: 2	
Formatted	... [11]
Formatted	... [12]
Field Code Changed	... [13]
Deleted: IV. ENERGY RISK	... [14]
Field Code Changed	... [15]
Deleted: 2	
Formatted	... [16]
Formatted	... [17]
Field Code Changed	... [18]
Deleted: 1. RETAIL RATE STABILITY	
Field Code Changed	... [19]
Deleted: 2	
Formatted	... [20]
Field Code Changed	... [21]
Deleted: 2. PRESERVE A SUPP	... [22]
Deleted: 3	
Field Code Changed	... [23]
Formatted	... [24]
Field Code Changed	... [25]
Deleted: 3. EFFICIENT AND C	... [26]
Field Code Changed	... [27]
Deleted: 3	
Formatted	... [28]
Formatted	... [29]
Field Code Changed	... [30]
Deleted: V. OVERSIGHT BODIES	
Field Code Changed	... [31]
Deleted: 3	
Formatted	... [32]
Formatted	... [33]
Formatted	... [34]
Field Code Changed	... [35]
Deleted: 1. City Council	
Field Code Changed	... [36]
Deleted: 3	
Formatted	... [37]
Formatted	... [38]
Field Code Changed	... [39]
	... [40]
Field Code Changed	... [41]
Formatted	... [42]
Formatted	... [43]
Field Code Changed	... [44]
Field Code Changed	... [45]
Formatted	... [46]
	... [47]

XIV. GLOSSARY OF TERMS.....9

~~Deleted: Section Break (Next Page)~~

INTRODUCTION

It is the policy of the City of Palo Alto Utilities to provide reliable and affordable energy and energy services to its industrial, commercial and residential customers in an environmentally sustainable manner. Furthermore, this policy is consistent with the City's business objectives of making financially sound and timely investments in the capital infrastructure of the Utilities to ensure the reliable delivery of energy and energy services to its customers.

The City of Palo Alto's Energy Risk Management Policy ("Policy") details the key control structures and policies for prudent risk management processes based on sound energy risk management principles while ensuring adherence to financial requirements set forth by City Council and Director of Administrative Services as well as all pertinent legal requirements. The control structures and policies are focused on the following issues:

- Clearly defined segregation of duties and delegation of authority
- Organizational structure for risk management controls
- Policies related to setting acceptable risk parameters and risk limits.
- Policies for risk reporting.
- Permitted transaction and product types.

The Energy Risk Management Policy serves as the key policy level document on energy risk management. This Policy is supported by more detailed operational-level documents: the Energy Risk Management Guidelines and the Energy Risk Management Procedures for the Front, Middle and Back Offices.

APPLICABILITY

This Energy Risk Management Policy applies to all City of Palo Alto employees engaged directly or indirectly in transacting in the energy markets. The first objective of this Policy is to build risk awareness within the City. Consistent with the City Council's desire for the City to be an active manager of risk, the organization must maintain awareness of the risks faced. It is critical that all members of the organization have awareness that participation in th

A. OBJECTIVE

The City of Palo Alto (City), Department of Utilities (CPAU) purchases and sells gas and electricity to meet the needs of its customers. The City's Energy Risk Management (ERM) Policy (ERM Policy) describes the management organization, authority, and processes to monitor, measure, and control market risks, which include price risk, credit risk, and operational risk, to which the City is exposed in the normal course of managing the gas and electric utilities.

The ERM Policy describes the key policies and control structures for prudent energy risk management processes. This occurs while ensuring adherence to financial requirements set forth by the Council and the Director of Administrative Services as well as all pertinent legal requirements. The control structures and policies are focused on the following areas:

- Segregation of duties and delegation of authority
- Organizational structure for risk management controls to include the front, middle, and back offices
- Transacting
- Counterparty credit
- Reporting
- Permitted transaction and product types
- Conflict of interest

The ERM Policy serves as the key policy level document on energy risk management. This Policy is supported by policy/implementation-level and operations-level documents, including, the Energy Risk Management Guidelines (ERM Guidelines), Energy Risk Management Procedures (ERM Procedures) for the Front, Middle, and Back Offices, and the Long-Term Electric Acquisition Plan (LEAP), Gas Utility Long-Term Plan (GULP), and the Utilities Strategic Plan. Together these three documents serve to meet the requirements set forth in the Palo Alto Municipal Code Chapter 2.30 Contracts and Purchasing Procedures ("PAMC") as they relate to Wholesale Commodity Contracts, Authority, and Transactions.

B. APPLICABILITY

The ERM Policy applies to all City employees engaged in the decision-making process for transacting in the energy markets. It is critical that all members of the City are aware that participation in the City's energy procurement business entails a host of risks and

that all members participating in the process must have knowledge of the ERM Policy and use it during such participation.

The ERM Policy applies to the electric and natural gas supply business units. The electric and natural gas supply business units are the part of the electric and natural gas enterprise funds that deal with the acquisition of energy supply resources.

The ERM Policy describes the management, organization, authority, processes, tools and systems to monitor, measure, and control risks to which CPAU is exposed related to the acquisition and management of wholesale electric and gas commodity products and services to meet load.

The City is a member of the Northern California Power Agency (NCPA), which executes transactions on the City's behalf. The NCPA Commission approves its own energy risk management policies and procedures for the acquisition of energy supply resources. The City's energy risk management staff, however, will be actively involved in NCPA's Risk Oversight Committee and meetings to monitor possible risk exposures resulting from the City's membership in the NCPA Joint Powers Agency even where the City is neither a project nor a program participant and to ensure best practices are observed.

The ERM Policy does not address general CPAU business risks such as fire, accident, casualty, worker health and safety, and general liability. Neither does the policy cover the water fund, the electric and natural gas distribution business units, nor the telecommunications business unit.

C. RISK MANAGEMENT ROLES, RESPONSIBILITIES, AND ORGANIZATION

1. City Council

The Council reviews and adopts the ERM Policy as developed and recommended by the Utilities Risk Oversight and Coordinating Committee and delegates its implementation to the City Manager. The Council will, at a minimum, review the Policy annually. Additionally, the Council shall receive quarterly updates from the City Manager regarding energy risk management activities.

2. Utilities Advisory Commission

The Utilities Advisory Commission (UAC) is responsible for advising the Council on long-range planning and policy matters relating to the electric and gas utilities. While it has no formal responsibility in energy risk management, the UAC shall receive copies of the quarterly reports sent to the Council regarding energy risk management activities.

3. City Manager

The City Manager has overall responsibility for executing and ensuring compliance with policy adopted by the Council. The City Manager reports quarterly to the City Council regarding energy risk management activities.

4. Utilities Risk Oversight and Coordinating Committee

The Utilities Risk Oversight and Coordinating Committee (UROCC) consists of the following four voting members: the Director of Utilities (designated as the Chairperson), the Director of Administrative Services, the Director of Public Works, and a representative from the City Manager's Office. The staff City Attorney assigned to Utilities and the City Auditor serve as non-voting advisors to the UROCC. In accordance with 2007 Government Auditing Standards, the City Auditor's participation as an advisor to the UROCC is not considered an audit service and does not impair the City Auditor's objective ability to audit CPAU. The Energy Risk Manager serves as the Secretary to the UROCC. A quorum, consisting of at least three voting members of the UROCC, may take action on any matter within the subject matter jurisdiction of the UROCC.

The UROCC is responsible for monitoring compliance with the ERM Policy. The UROCC is the primary body responsible for approving and implementing the ERM Guidelines consistent with the Council-approved ERM Policy.

5. Management Oversight

Risk management oversight at an operational level is accomplished through supervisory review and approval and appropriate separation of duties. The separate functions of the Front Office, Middle Office, and Back Office are described in the ERM Guidelines. Risk management functions are separated, as follows:

a. Front Office – Planning and Procurement

In reporting to the Director of Utilities, the Front Office representative is primarily responsible for resource planning and procuring energy supplies and services. The Front Office, by delegation of the City Manager, has a critical role in risk management through its transacting operations. The Front Office has the authority to commit the financial capital of the City to energy transactions with counterparties. As such, the Front Office is a central clearing point for risk assumption and risk mitigation.

The Front Office's roles in energy risk management include:

- Developing and implementing the Utilities Director-approved Front Office procedures consistent with the Council-approved ERM Policy and the UROCC-approved ERM Guidelines;

- Developing and implementing energy portfolio management plans, strategies and guidelines in support of CPAU's objectives and in accordance with the City's ERM Policy and legal and regulatory requirements;
- Developing and recommending for annual approval retail rates and financial plans, including appropriate levels of gas and electric utility reserves in support of CPAU's objectives;
- Ensuring adherence to the ERM Policy, the ERM Guidelines and the ERM Procedures, including the proper recording of transactions, monitoring, and valuation of risk;
- Reporting position, valuation and market conditions, and energy portfolio risk to the UROCC; and
- Ensuring the proper reporting of contractual commitments in the City's financial reporting system.

The Front Office's Procedures are developed by staff, approved by the Utilities Director, and provided to the UROCC for information.

b. Middle Office – Risk Management Controls and Reporting

In reporting to the Director of Administrative Services, the Middle Office representative provides the primary independent oversight role. The Middle Office consists of the Risk Manager, and she or he shall institute, supervise, and review all energy risk management activities, including portfolio exposure, credit exposure, transaction compliance, and ongoing approval of counterparties and transacting limits.

The Middle Office's energy risk management responsibilities include:

- Monitoring CPAU's risk exposures and ensuring compliance with the ERM Policy, the ERM Guidelines, and the ERM Procedures;
- Reporting to the UROCC on risk management issues, and making recommendations which may relate to the temporary or permanent cessation of transactions with one or more counterparties, citing exceptions to rules and procedures, other operational exceptions, or any other topic the Risk Manager believes represents an unacceptable risk exposure; and
- Recommending, as necessary, updates to the ERM Policy, the ERM Guidelines, and the ERM Procedures.

The Middle Office's Procedures are developed by staff, approved by the Director of Administrative Services, and provided to the UROCC for information.

c. Back Office – Settlement and Recording

The Back Office is primarily responsible for settlement of bills, recording transactions, bookkeeping and accounting, and contract administration. Functions within the Back Office are performed by both Administrative Services Department (ASD) and CPAU staff and are detailed in the ERM Guidelines.

The Back Office roles in risk management oversight include:

- Ensuring that bills reflect trade orders;
- Independently monitoring and recording transactions into a tracking database; and
- Verifying and reporting on compliance with procedures as reflected in the deal tracking documentation.

Back Office Procedures are collectively developed by ASD and CPAU staff, jointly approved by the Director of Administrative Services and the Utilities Director, and provided to the UROCC for information.

D. TRANSACTING POLICY

The Transacting Policy ensures transactions executed under the Electric Master Agreements and the Gas Master Agreements (collectively, Master Agreements) are executed in a manner consistent with the authority granted by the Council to the City Manager to transact under these contracts and the PAMC. The Transacting Policy also ensures such transactions are carried out to manage risk inherent to the electric and gas supply portfolio without exposing the City to unnecessary risk. The policy has three key elements:

1. Anti-speculation

Speculative buying and selling of energy products are prohibited. Speculation is defined as buying energy not needed for meeting forecasted load or selling energy that is not owned. Additionally, in no event shall transactions be entered into in order to speculate on market conditions. The ERM Guidelines shall prescribe volume and sales dollar amount limits for forward purchases and sales.

2. Maximum Transaction Term

The maximum term of any supply resource transaction (purchase or sale) is three years, unless approved by the City Council.

3. Competitive Process

CPAU will endeavor to obtain three or more quotations from eligible counterparties and select the best price. The ERM Guidelines include trade capture guidelines to ensure the proper execution of transactions.

E. COUNTERPARTY CREDIT POLICY

The Counterparty Credit Policy is designed to minimize the potential adverse financial impacts, and credit exposure to the City in the event of a defaulting counterparty. Specifically, the policy seeks to minimize credit exposure related to wholesale commodity transactions by:

- Establishing a credit risk management governance and oversight structure within the existing ERM program;
- Providing a framework to enable the City to qualify energy suppliers and transact with eligible counterparties;
- Providing counterparty transacting parameters (limits) to control and measure the City's exposure to any one supplier;
- Implementing a mechanism to monitor and report on supply portfolio-related counterparty credit exposures; and
- Managing counterparty credit requirements from the City.

Furthermore, the PAMC Section 2.30.340 sets forth creditworthiness standards and certain contractual provisions applicable to contracts for wholesale utility commodities. As such, transactions carried out under the Master Agreements are limited to counterparties with a Standard and Poor's issuer rating of BBB- or better, or a Moody's Investor Services issuer rating of Baa3 or better. Only the Council can approve exemptions to this requirement.

The ERM Guidelines shall set forth specific counterparty credit limits for volume, term and credit exposure, and counterparty reporting requirements.

F. RISK MANAGEMENT REPORTING POLICY

Key to ERM is the monitoring of risks and the accurate and timely information that must be provided to all parties involved in any aspects of energy risk management to allow them to perform their functions appropriately. Quarterly reports will be distributed to the UROCC, the UAC, and the Council; those reports shall provide sufficient details on the

City's forward contract purchases, market exposure, credit exposure, counterparty credit ratings, transaction compliance, and other relevant data.

The Front and Middle Offices' staffs shall prepare performance reports containing an analysis of physical and financial positions of all electric and gas commodity contracts. The frequency and content of performance reports for each oversight body shall be prescribed in the ERM Guidelines. Should the risks associated with the portfolio or a specific transaction within the portfolio fall outside of the risk limits prescribed in the ERM Guidelines, the Risk Manager will report this fact to the UROCC within one business day via email and will evaluate the risk of holding any of the contracts in the portfolio to delivery along with reporting to the Council in the next quarterly energy risk management report.

G. AUTHORIZED PRODUCTS POLICY

The Council has delegated to the City Manager the authority to transact under Council-approved Master Agreements. The purpose of the Authorized Products Policy is to ensure that products transacted under the Master Agreements are consistent with the needs of CPAU and fall within the authority granted by the Council to the City Manager. The following products and/or transactions are approved to be executed under the Master Agreements:

- A. Purchase of physical fixed price, index-based price, call options, capped-price or collar-priced energy, natural gas, capacity, transportation, basis and transmission products to meet load requirements;
- B. Sale of physical fixed price or index-based price energy, natural gas, capacity, storage, and transmission incidental to load;
- C. Purchase of electric heat rate products to meet load;
- D. Purchase and Sale of Renewable Energy Credits with or without bundled energy;
- E. Purchase of Gas storage;
- F. Purchase and Sale of Electric Ancillary Services;
- G. Purchase and sale of local and system capacity to meet the City's resource adequacy requirement;
- H. Fixed price or index-priced purchases and sales to substitute the use of higher cost resources with lower cost market alternatives;
- I. Fixed price or index-priced forward purchases and sales of transmission and transmission rights to meet contractual obligations or to dispose of surplus capacity; and
- J. Purchase of physical call options and physical collars.

Deleted: <#> Financial transactions related to the nomination, purchasing and selling of Congestion Revenue Rights¶
¶

H. TRANACTING AUTHORITY POLICY

In accordance with PAMC section 2.30.270(a), the City Manager has the authority to purchase and sell wholesale energy commodities for terms of up to three years under open purchase contracts. PAMC section 2.30.270(b) governs the City Manager's delegation of authority. Delegation of authority for and on behalf of the City Manager shall be established in the ERM Guidelines. The City Clerk maintains the list of CPAU individuals who are authorized to engage in wholesale utility commodity transactions.

I. CONFLICT OF INTEREST POLICY

In accordance with Chapter 2.09 of the PAMC and applicable California law, the City's personnel who are involved in transacting and exercising oversight of CPAU's supply resource acquisition, contract negotiation, risk management, and back office programs may not participate in decisions in which they have a conflict of interest. Should an employee become aware of a conflict of interest during the course of fulfilling his or her responsibilities, he or she shall report it, without delay, to the Director, or her or his designee, who shall resolve the conflict.

Formatted: No bullets or numbering

Deleted: The

Deleted: City Manager authorities may be delegated by

Deleted: Manager to the Director of Utilities. Purchases and sales are subject to signature

Deleted: limits as defined

Deleted: Municipal Code. Currently, energy purchases exceeding \$250,000 per year and exceeding a three-year term require City Council approval (Municipal Code Sec 2.30.210 (I)). Authority to enter into transactions must be based on City Council approved contracts such as master agreements, purchase agreements, or other contractual forms. In all cases the Municipal Code provides the final authorization rules and regulations for energy purchases.¶

¶ Authorization levels for City staff as delegated are maintained in the Risk Management

Deleted: by the Middle Office.

Deleted: make

Formatted: No bullets or numbering

Deleted:

Deleted: Municipal Code

Deleted: and

Deleted: the City of Palo Alto Utilities

Deleted: financial

Deleted: All personnel are required to complete, on

Deleted: annual basis, the Form 700 Disclosure forms and submit these forms to the City Clerk. Each staff member engaged in energy transacting, risk management, or energy back office operations has the sole responsibility of identifying and reporting any potential conflict of interest, and ensuring that he or she does not participate in decisions when a financial

Deleted: exists. If the employee has a reportable interest, it is their responsibility to disclose the interest and have their supervisor sign-off on ... [51]

Deleted: supervisor of the potential conflict. If questions remain aft(... [52]

GLOSSARY OF TERMS

Back Office	A set of business functions in Utilities and Administrative Services Departments including trade confirmation, accounting, and other processes that support the transaction of commodities.	Formatted: Font: Bold Deleted: <#>-----Page Break----- <#>Glossary of Terms
Call <u>Options</u>	An option that allows the owner the right to purchase energy at the specified strike price.	Formatted Table Deleted: options
Cap <u>Price</u>	A structured product that contains a strip of multiple call option contracts with identical, but staggered expirations.	Deleted: price
<u>Carbon Offsets</u>	<u>A way for a company or person to reduce the level of carbon dioxide for which they are responsible by paying money to an organization that works to reduce the total amount produced in the world.</u>	
Collar	A combination of a price with a maximum and minimum value.	Formatted Table
Congestion Revenue Rights (<u>CRRs</u>)	A hedging tool or a financial instrument that entitles the holder to a CRR payment. <u>This occurs</u> when <u>congestion</u> (a characteristic of the transmission system produced when constraints on the system prevent the optimum economic dispatch of generation to meet demand) is in the direction of the CRR Source (a node or a trading hub where generation is scheduled into the electric grid) to the CRR Sink (a node or a trading hub specified as the point of withdrawal for consumption).	Deleted: CRR is a Deleted: Congestion
Credit <u>Risk</u>	The probable change in the value of a contract due to a counterparty defaulting.	Deleted: risk
Electric Ancillary Services	Those services necessary to support the transmission of electric power from seller to purchaser given the obligations of control areas and transmitting utilities within those control areas to maintain reliable operations of the interconnected transmission system.	
<u>Electric Heat Rate Product</u>	A contract based on how efficiently a generator uses heat energy in fuel (i.e., natural gas) to generate electricity.	Deleted: Electric heat rate product Deleted: Financial Position
<u>Front Office</u>	<u>The sector of energy procurement operations in utilities where trading (purchasing or selling of a commodity) occurs.</u>	Deleted: The total dollar amount of contracts that setting with counterparties exchanging cash.
<u>Hydro Risk</u>	<u>The risk that altered precipitation patterns result in less than normal hydro electric generation.</u>	Deleted: Front Office
<u>Index-based Price</u>	<u>A price that varies based on published index prices.</u>	Deleted: The sector of energy procurement operations in utilities where trading occurs.
<u>Market Risk</u>	<u>The probable change in value of (or sensitivity to) a contract, position, or portfolio due to general changes in market conditions.</u>	Deleted: Hydro risk Deleted: Index-based price Deleted: A price that varies based on published index prices. Deleted: Market risk

Master Agreement	A standardized agreement <u>for the purchase and sale of energy.</u>	Deleted: to which other agreements
Middle Office	The set of business functions in Administrative Services <u>Department</u> that carries out <u>energy</u> risk management activities.	Deleted: purchases are referred.
Physical <u>Fixed Price</u>	A contract for a fixed price which settles when one counterparty delivers the commodity to another <u>counterparty and pays a cash</u> settlement.	Formatted Table Deleted: the
Physical Position	The volumetric sum of all physical transactions.	Deleted: including measuring, controlling and hedging market, credit, hydro and other risks
Portfolio <u>Exposure</u>	The monetary sum of all positions that are subject to change.	Deleted: fixed price
Risk Management	The set of skills and processes for measuring, controlling, and hedging risk.	Deleted: who
Supply Portfolio	The composition and amount of all purchased power.	Deleted: exposure
Transmission <u>Product</u>	The sale or purchase of a non-energy asset to transport energy.	Deleted: product
Volume <u>Risk</u>	The risk of the volume of a contract or position changing from current expectations.	Deleted: risk
Weather <u>Risk</u>	The risk of weather changing from current expectations and causing changes to expected load or generation.	Deleted: risk

City of Palo Alto

Energy Risk Management Policy

May 2012



CITY OF
**PALO
ALTO**

**City of Palo Alto Energy Risk Management Policy
Table of Contents**

A. OBJECTIVE..... 1

B. APPLICABILITY 1

C. RISK MANAGEMENT ROLES, RESPONSIBILITIES, AND ORGANIZATION 2

 1. CITY COUNCIL 2

 2. UTILITIES ADVISORY COMMISSION..... 2

 3. CITY MANAGER 3

 4. UTILITIES RISK OVERSIGHT AND COORDINATING COMMITTEE..... 3

 5. MANAGEMENT OVERSIGHT..... 3

a. Front Office – Planning and Procurement 3

b. Middle Office – Risk Management Controls and Reporting..... 4

c. Back Office – Settlement and Recording 5

D. TRANSACTING POLICY..... 5

 1. ANTI-SPECULATION 5

 2. MAXIMUM TRANSACTION TERM..... 5

 3. COMPETITIVE PROCESS 6

E. COUNTERPARTY CREDIT POLICY 6

F. RISK MANAGEMENT REPORTING POLICY 6

G. AUTHORIZED PRODUCTS POLICY..... 7

H. TRANSACTING AUTHORITY POLICY..... 8

I. CONFLICT OF INTEREST POLICY 8

GLOSSARY OF TERMS..... 9

A. OBJECTIVE

The City of Palo Alto (City), Department of Utilities (CPAU) purchases and sells gas and electricity to meet the needs of its customers. The City's Energy Risk Management (ERM) Policy (ERM Policy) describes the management organization, authority, and processes to monitor, measure, and control market risks, which include price risk, credit risk, and operational risk, to which the City is exposed in the normal course of managing the gas and electric utilities.

The ERM Policy describes the key policies and control structures for prudent energy risk management processes. This occurs while ensuring adherence to financial requirements set forth by the Council and the Director of Administrative Services as well as all pertinent legal requirements. The control structures and policies are focused on the following areas:

- Segregation of duties and delegation of authority
- Organizational structure for risk management controls to include the front, middle, and back offices
- Transacting
- Counterparty credit
- Reporting
- Permitted transaction and product types
- Conflict of interest

The ERM Policy serves as the key policy level document on energy risk management. This Policy is supported by policy/implementation-level and operations-level documents, including, the Energy Risk Management Guidelines (ERM Guidelines), Energy Risk Management Procedures (ERM Procedures) for the Front, Middle, and Back Offices, and the Long-Term Electric Acquisition Plan (LEAP) and Gas Utility Long-Term Plan (GULP), and the Utilities Strategic Plan. Together these three documents serve to meet the requirements set forth in the Palo Alto Municipal Code Chapter 2.30 Contracts and Purchasing Procedures ("PAMC") as they relate to Wholesale Commodity Contracts, Authority, and Transactions.

B. APPLICABILITY

The ERM Policy applies to all City employees engaged in the decision-making process for transacting in the energy markets. It is critical that all members of the City are aware that participation in the City's energy procurement business entails a host of risks and

that all members participating in the process must have knowledge of the ERM Policy and use it during such participation.

The ERM Policy applies to the electric and natural gas supply business units. The electric and natural gas supply business units are the part of the electric and natural gas enterprise funds that deal with the acquisition of energy supply resources.

The ERM Policy describes the management, organization, authority, processes, tools and systems to monitor, measure, and control risks to which CPAU is exposed related to the acquisition and management of wholesale electric and gas commodity products and services to meet load.

The City is a member of the Northern California Power Agency (NCPA), which executes transactions on the City's behalf. The NCPA Commission approves its own energy risk management policies and procedures for the acquisition of energy supply resources. The City's energy risk management staff, however, will be actively involved in NCPA's Risk Oversight Committee and meetings to monitor possible risk exposures resulting from the City's membership in the NCPA Joint Powers Agency even where the City is neither a project nor a program participant and to ensure best practices are observed.

The ERM Policy does not address general CPAU business risks such as fire, accident, casualty, worker health and safety, and general liability. Neither does the policy cover the water fund, the electric and natural gas distribution business units, nor the telecommunications business unit.

C. RISK MANAGEMENT ROLES, RESPONSIBILITIES, AND ORGANIZATION

1. City Council

The Council reviews and adopts the ERM Policy as developed and recommended by the Utilities Risk Oversight and Coordinating Committee and delegates its implementation to the City Manager. The Council will, at a minimum, review the Policy annually. Additionally, the Council shall receive quarterly updates from the City Manager regarding energy risk management activities.

2. Utilities Advisory Commission

The Utilities Advisory Commission (UAC) is responsible for advising the Council on long-range planning and policy matters relating to the electric and gas utilities. While it has no formal responsibility in energy risk management, the UAC shall receive copies of the quarterly reports sent to the Council regarding energy risk management activities.

3. City Manager

The City Manager has overall responsibility for executing and ensuring compliance with policy adopted by the Council. The City Manager reports quarterly to the City Council regarding energy risk management activities.

4. Utilities Risk Oversight and Coordinating Committee

The Utilities Risk Oversight and Coordinating Committee (UROCC) consists of the following four voting members: the Director of Utilities (designated as the Chairperson), the Director of Administrative Services, the Director of Public Works, and a representative from the City Manager's Office. The staff City Attorney assigned to Utilities and the City Auditor serve as non-voting advisors to the UROCC. In accordance with 2007 Government Auditing Standards, the City Auditor's participation as an advisor to the UROCC is not considered an audit service and does not impair the City Auditor's objective ability to audit CPAU. The Energy Risk Manager serves as the Secretary to the UROCC. A quorum, consisting of at least three voting members of the UROCC, may take action on any matter within the subject matter jurisdiction of the UROCC.

The UROCC is responsible for monitoring compliance with the ERM Policy. The UROCC is the primary body responsible for approving and implementing the ERM Guidelines consistent with the Council-approved ERM Policy.

5. Management Oversight

Risk management oversight at an operational level is accomplished through supervisory review and approval and appropriate separation of duties. The separate functions of the Front Office, Middle Office, and Back Office are described in the ERM Guidelines. Risk management functions are separated, as follows:

a. Front Office – Planning and Procurement

In reporting to the Director of Utilities, the Front Office representative is primarily responsible for resource planning and procuring energy supplies and services. The Front Office, by delegation of the City Manager, has a critical role in risk management through its transacting operations. The Front Office has the authority to commit the financial capital of the City to energy transactions with counterparties. As such, the Front Office is a central clearing point for risk assumption and risk mitigation.

The Front Office's roles in energy risk management include:

- Developing and implementing the Utilities Director-approved Front Office procedures consistent with the Council-approved ERM Policy and the UROCC-approved ERM Guidelines;

- Developing and implementing energy portfolio management plans, strategies and guidelines in support of CPAU's objectives and in accordance with the City's ERM Policy and legal and regulatory requirements;
- Developing and recommending for annual approval retail rates and financial plans, including appropriate levels of gas and electric utility reserves in support of CPAU's objectives;
- Ensuring adherence to the ERM Policy, the ERM Guidelines and the ERM Procedures, including the proper recording of transactions, monitoring, and valuation of risk;
- Reporting position, valuation and market conditions, and energy portfolio risk to the UROCC; and
- Ensuring the proper reporting of contractual commitments in the City's financial reporting system.

The Front Office's Procedures are developed by staff, approved by the Utilities Director, and provided to the UROCC for information.

b. Middle Office – Risk Management Controls and Reporting

In reporting to the Director of Administrative Services, the Middle Office representative provides the primary independent oversight role. The Middle Office consists of the Risk Manager, and she or he shall institute, supervise, and review all energy risk management activities, including portfolio exposure, credit exposure, transaction compliance, and ongoing approval of counterparties and transacting limits.

The Middle Office's energy risk management responsibilities include:

- Monitoring CPAU's risk exposures and ensuring compliance with the ERM Policy, the ERM Guidelines, and the ERM Procedures;
- Reporting to the UROCC on risk management issues, and making recommendations which may relate to the temporary or permanent cessation of transactions with one or more counterparties, citing exceptions to rules and procedures, other operational exceptions, or any other topic the Risk Manager believes represents an unacceptable risk exposure; and
- Recommending, as necessary, updates to the ERM Policy, the ERM Guidelines, and the ERM Procedures.

The Middle Office's Procedures are developed by staff, approved by the Director of Administrative Services, and provided to the UROCC for information.

c. Back Office – Settlement and Recording

The Back Office is primarily responsible for settlement of bills, recording transactions, bookkeeping and accounting, and contract administration. Functions within the Back Office are performed by both Administrative Services Department (ASD) and CPAU staff and are detailed in the ERM Guidelines.

The Back Office roles in risk management oversight include:

- Ensuring that bills reflect trade orders;
- Independently monitoring and recording transactions into a tracking database; and
- Verifying and reporting on compliance with procedures as reflected in the deal tracking documentation.

Back Office Procedures are collectively developed by ASD and CPAU staff, jointly approved by the Director of Administrative Services and the Utilities Director, and provided to the UROCC for information.

D. TRANSACTING POLICY

The Transacting Policy ensures transactions executed under the Electric Master Agreements and the Gas Master Agreements (collectively, Master Agreements) are executed in a manner consistent with the authority granted by the Council to the City Manager to transact under these contracts and the PAMC. The Transacting Policy also ensures such transactions are carried out to manage risk inherent to the electric and gas supply portfolio without exposing the City to unnecessary risk. The policy has three key elements:

1. Anti-speculation

Speculative buying and selling of energy products are prohibited. Speculation is defined as buying energy not needed for meeting forecasted load or selling energy that is not owned. Additionally, in no event shall transactions be entered into in order to speculate on market conditions. The ERM Guidelines shall prescribe volume and sales dollar amount limits for forward purchases and sales.

2. Maximum Transaction Term

The maximum term of any supply resource transaction (purchase or sale) is three years, unless approved by the City Council.

3. Competitive Process

CPAU will endeavor to obtain three or more quotations from eligible counterparties and select the best price. The ERM Guidelines include trade capture guidelines to ensure the proper execution of transactions.

E. COUNTERPARTY CREDIT POLICY

The Counterparty Credit Policy is designed to minimize the potential adverse financial impacts, and credit exposure to the City in the event of a defaulting counterparty. Specifically, the policy seeks to minimize credit exposure related to wholesale commodity transactions by:

- Establishing a credit risk management governance and oversight structure within the existing ERM program;
- Providing a framework to enable the City to qualify energy suppliers and transact with eligible counterparties;
- Providing counterparty transacting parameters (limits) to control and measure the City's exposure to any one supplier;
- Implementing a mechanism to monitor and report on supply portfolio-related counterparty credit exposures; and
- Managing counterparty credit requirements from the City.

Furthermore, the PAMC Section 2.30.340 sets forth creditworthiness standards and certain contractual provisions applicable to contracts for wholesale utility commodities. As such, transactions carried out under the Master Agreements are limited to counterparties with a Standard and Poor's issuer rating of BBB- or better, or a Moody's Investor Services issuer rating of Baa3 or better. Only the Council can approve exemptions to this requirement.

The ERM Guidelines shall set forth specific counterparty credit limits for volume, term and credit exposure, and counterparty reporting requirements.

F. RISK MANAGEMENT REPORTING POLICY

Key to ERM is the monitoring of risks and the accurate and timely information that must be provided to all parties involved in any aspects of energy risk management to allow them to perform their functions appropriately. Quarterly reports will be distributed to the UROCC, the UAC, and the Council; those reports shall provide sufficient details on the

City's forward contract purchases, market exposure, credit exposure, counterparty credit ratings, transaction compliance, and other relevant data.

The Front and Middle Offices' staffs shall prepare performance reports containing an analysis of physical and financial positions of all electric and gas commodity contracts. The frequency and content of performance reports for each oversight body shall be prescribed in the ERM Guidelines. Should the risks associated with the portfolio or a specific transaction within the portfolio fall outside of the risk limits prescribed in the ERM Guidelines, the Risk Manager will report this fact to the UROCC within one business day via email and will evaluate the risk of holding any of the contracts in the portfolio to delivery along with reporting to the Council in the next quarterly energy risk management report.

G. AUTHORIZED PRODUCTS POLICY

The Council has delegated to the City Manager the authority to transact under Council-approved Master Agreements. The purpose of the Authorized Products Policy is to ensure that products transacted under the Master Agreements are consistent with the needs of CPAU and fall within the authority granted by the Council to the City Manager. The following products and/or transactions are approved to be executed under the Master Agreements:

- A. Purchase of physical fixed price, index-based price, call options, capped-price or collar-priced energy, natural gas, capacity, transportation, basis and transmission products to meet load requirements;
- B. Sale of physical fixed price or index-based price energy, natural gas, capacity, storage, and transmission incidental to load;
- C. Purchase of electric heat rate products to meet load;
- D. Purchase and Sale of Renewable Energy Credits with or without bundled energy;
- E. Purchase of Gas storage;
- F. Purchase and Sale of Electric Ancillary Services;
- G. Purchase and sale of local and system capacity to meet the City's resource adequacy requirement;
- H. Fixed price or index-priced purchases and sales to substitute the use of higher cost resources with lower cost market alternatives;
- I. Fixed price or index-priced forward purchases and sales of transmission and transmission rights to meet contractual obligations or to dispose of surplus capacity; and
- J. Purchase of physical call options and physical collars.

H. TRANACTING AUTHORITY POLICY

In accordance with PAMC section 2.30.270(a), the City Manager has the authority to purchase and sell wholesale energy commodities for terms of up to three years under open purchase contracts. PAMC section 2.30.270(b) governs the City Manager's delegation of authority. Delegation of authority for and on behalf of the City Manager shall be established in the ERM Guidelines. The City Clerk maintains the list of CPAU individuals who are authorized to engage in wholesale utility commodity transactions.

I. CONFLICT OF INTEREST POLICY

In accordance with Chapter 2.09 of the PAMC and applicable California law, the City's personnel who are involved in transacting and exercising oversight of CPAU's supply resource acquisition, contract negotiation, risk management, and back office programs may not participate in decisions in which they have a conflict of interest. Should an employee become aware of a conflict of interest during the course of fulfilling his or her responsibilities, he or she shall report it, without delay, to the Director, or her or his designee, who shall resolve the conflict.

GLOSSARY OF TERMS

Back Office	A set of business functions in Utilities and Administrative Services Departments including trade confirmation, accounting, and other processes that support the transaction of commodities.
Call Options	An option that allows the owner the right to purchase energy at the specified strike price.
Cap Price	A structured product that contains a strip of multiple call option contracts with identical, but staggered expirations.
Carbon Offsets	A way for a company or person to reduce the level of carbon dioxide for which they are responsible by paying money to an organization that works to reduce the total amount produced in the world.
Collar	A combination of a price with a maximum and minimum value.
Congestion Revenue Rights (CRRs)	A hedging tool or a financial instrument that entitles the holder to a CRR payment. This occurs when congestion (a characteristic of the transmission system produced when constraints on the system prevent the optimum economic dispatch of generation to meet demand) is in the direction of the CRR Source (a node or a trading hub where generation is scheduled into the electric grid) to the CRR Sink (a node or a trading hub specified as the point of withdrawal for consumption).
Credit Risk	The probable change in the value of a contract due to a counterparty defaulting.
Electric Ancillary Services	Those services necessary to support the transmission of electric power from seller to purchaser given the obligations of control areas and transmitting utilities within those control areas to maintain reliable operations of the interconnected transmission system.
Electric Heat Rate Product	A contract based on how efficiently a generator uses heat energy in fuel (i.e., natural gas) to generate electricity.
Front Office	The sector of energy procurement operations in utilities where trading (purchasing or selling of a commodity) occurs.
Hydro Risk	The risk that altered precipitation patterns result in less than normal hydro electric generation.
Index-based Price	A price that varies based on published index prices.
Market Risk	The probable change in value of (or sensitivity to) a contract, position, or portfolio due to general changes in market conditions.

Master Agreement	A standardized agreement for the purchase and sale of energy.
Middle Office	The set of business functions in Administrative Services Department that carries out energy risk management activities.
Physical Fixed Price	A contract for a fixed price which settles when one counterparty delivers the commodity to another counterparty and pays a cash settlement.
Physical Position	The volumetric sum of all physical transactions.
Portfolio Exposure	The monetary sum of all positions that are subject to change.
Risk Management	The set of skills and processes for measuring, controlling, and hedging risk.
Supply Portfolio	The composition and amount of all purchased power.
Transmission Product	The sale or purchase of a non-energy asset to transport energy.
Volume Risk	The risk of the volume of a contract or position changing from current expectations.
Weather Risk	The risk of weather changing from current expectations and causing changes to expected load or generation.