Title: Gas Utility Long-term Plan

Subject: Finance Committee Recommendation to Adopt a Resolution Approving the Proposed Gas Utility Long-term Plan (GULP) Objectives, Strategies, and Implementation Plan

From: City Manager

Lead Department: Utilities

RECOMMENDATION
Staff, the Utilities Advisory Commission, and the Finance Committee recommend that the Council adopt a resolution approving the proposed Gas Utility Long-term Plan (GULP) Objectives, Strategies, and Implementation Plan.

SUMMARY
GULP was originally approved by Council in July 2003 and was revised in 2004 and 2008. The proposed new GULP Objectives and Strategies focus on balancing environmental concerns with economic sustainability. At its meetings on September 1, 2010 and October 6, 2010, the UAC recommended that Council approve the proposed GULP Objectives, Strategies and the associated Implementation Plan (Attachment A). On December 7, 2010, the Finance Committee voted to recommend that Council approve the GULP Objectives, Strategies, and Implementation Plan. In parallel with the GULP revision, staff is developing a new Utilities Strategic Plan. Ultimately, GULP will be aligned with the Utilities Strategic Plan to ensure that the GULP Objectives are consistent with the vision, goals, and strategic objectives of the Utilities Department. Further revisions to GULP may be required after the Utilities Strategic Plan is completed.

COUNCIL COMMENTS AT JANUARY 10, 2011 MEETING
This report was presented originally to the Council for consideration on January 10, 2011 as an element of the consent calendar (CMR: 106:11). However, Council removed the item from the consent calendar and asked that it be rescheduled for discussion since GULP is a substantive program and worthy of discussion by the full Council regardless of the recommendation by the Council Finance Committee. This item was continued until the February 7, 2011 meeting to allow for thorough consideration by the full Council. Council Member Burt raised several issues, which are summarized below:

1. The natural gas commodity purchasing strategy includes “laddered” purchases in
which portions of the monthly gas needs are purchased over a three-year period
before delivery of the gas. Since the price of gas has been highly volatile in the past,
this strategy resulted in a smoothing of the total cost of the gas allowing for relative
stability in the City’s gas retail rates. PG&E’s gas purchasing strategy is very different
from the City’s and relies on purchasing gas at near the time of delivery of the gas.
Therefore, when the market prices for natural gas rise, PG&E’s gas retail rates rise
and when gas prices fall, PG&E’s prices fall. Since gas prices have fallen precipitously
since mid-2008, the City’s natural gas retail rates are much higher than PG&E’s. As
Council Member Burt stated, industry experts expect the price of natural gas to
remain low for the next several years at least as new sources continue to be
discovered. This trend calls the laddering strategy into question. In its discussions of
this issue on November 16, 2010, the Finance Committee requested that UAC revisit
the laddering strategy. Staff added an implementation item, (Implementation Item
No. 2), to return to the UAC to review the laddering strategy in compliance with this
request.

2. GULP does not include any objectives or strategies related to safety of the gas
distribution system. GULP is limited to issues related to the gas resource portfolio –
both gas supplies and demand-side (energy efficiency) resources. Other issues of
importance to the Gas Fund, including safety, reliability and customer service are
not addressed in GULP, but are part of the Utilities Strategic Plan. An update of the
Utilities Strategic Plan is underway and will be ready for Council consideration in the
next couple of months.

3. Although the report from the Finance Committee (CMR: 432: 10) did contain tables
comparing the existing GULP Objectives, Guidelines, and Implementation Plan items
to the proposed new GULP Objectives, Strategies and Implementation Plan items,
there was no attachment with all the changes together. This omission has been
remedied with the addition to this report of an attachment containing the combined
comparison, as requested (Attachment E).

COMMITTEE REVIEW AND RECOMMENDATIONS

Staff presented the proposed GULP Objectives, Strategies, and Implementation Plan to the
Finance Committee on November 16, 2010. After discussion and requests for additional
information, the Finance Committee voted to request that staff return with a revised report
providing more detail and clarity on several points. In addition, the Finance Committee
requested that the UAC review the gas purchasing strategy known as the laddering strategy to
undertake further study on the laddering strategy, with staff returning to the Finance
Committee with the results of the review, including any suggestions to change the laddering
strategy.

Staff returned to the Finance Committee on December 7, 2010 with a revised report responding
to the questions and comments provided by the UAC at its November 16, 2010 meeting. Staff
provided a brief explanation of the changes in the report compared to the November 16, 2010
version. In addition, staff noted that it added a new task (Task #2) in the GULP Implementation Plan for the UAC to review the gas laddering strategy and to potentially make changes to the strategy. The Finance Committee voted unanimously to recommend that the City Council approve the revised, proposed GULP Objectives, Strategies, and Implementation Plan. Draft notes from the Finance Committee’s December 7, 2010 are provided as Attachment C.

**RESOURCE IMPACT**
There is no direct resource impact as a result of the proposed changes to the GULP Objectives, Strategies and Implementation Plan. Implementation of various programs that meet the Objective and Strategies will be brought to Council for approval and may have a resource impact at that time.

**POLICY IMPLICATIONS**
The proposed GULP Objectives, Strategies and Implementation Plan support the Council-approved Utilities Strategic Plan, Energy Risk Management Policies, and Comprehensive Plan Goal N-9: to provide a clean, efficient, competitively-priced energy supply that makes use of cost-effective renewable resources.

**ENVIRONMENTAL REVIEW**
Adoption of the resolution approving the GULP Objectives, Strategies and Implementation Plan does not constitute a project for the purposes of the California Environmental Quality Act.

**Attachments:**
- Attachment A: Resolution (DOC)
- Attachment B: CMR: 432:10 - Utilities Advisory Commission Recommendation to Approve the Proposed Gas Utility Long-term Plan (GULP) Objectives, Strategies, and Implementation Plan (PDF)
- Attachment C: Excerpted Draft Minutes of the Finance Committee meeting of November 16, 2010 (DOC)
- Attachment D: Excerpted Draft Minutes of the Finance Committee meeting of December 7, 2010 (DOC)
- Attachment E: Existing and Proposed GULP Objectives Comparison (DOC)

Prepared By: Karla Dailey, Sr. Resource Planner
Department Head: Valerie Fong, Director
City Manager Approval: James Keene, City Manager
Resolution No. ______
Resolution of the Council of the City of Palo Alto Approving
the Gas Utility Long-term Plan (GULP) Objectives, Strategies,
And Implementation Plan

WHEREAS, the Gas Utility Long-term Plan is a strategic planning document
focused on how the City of Palo Alto’s Utilities Department (CPAU) can successfully
balance environmental and economic sustainability as it provides natural gas service to
CPAU customers; and

WHEREAS, staff presented the Gas Utility Long-term Plan to the UAC at its
September 1, 2010 meeting, and the UAC voted 7 to 0 to recommend that the City
Council approve the Gas Utility Long-term Plan (GULP) Objectives, Strategies, and
Implementation Plan; and

WHEREAS, staff presented the Gas Utility Long-term Plan to the Finance
Committee at its December 7, 2010 meeting, and the Finance Committee voted 4 to 0
(with Councilmember Larry Klein absent) to recommend that the City Council approve
the Gas Utility Long-term Plan (GULP) Objectives, Strategies, and Implementation Plan.

NOW, THEREFORE, the Council of the City of Palo Alto does hereby
RESOLVE as follows:

SECTION 1. The Council hereby adopts the resolution approving the Gas

SECTION 2. The Council finds that any revenue derived from the
authorized adoption enumerated herein shall be used only for the purpose set forth in
Article VII, Section 2, of the Charter of the City of Palo Alto.
Not Yet Approved

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SECTION 3. The Council finds that the adoption of this resolution does not constitute a project under Section 21065 of the California Environmental Quality Act (CEQA) and the CEQA Guidelines, and therefore, no environmental assessment is required.

INTRODUCED AND PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

___________________________ ___________________________
City Clerk Mayor

APPROVED AS TO FORM:

___________________________ ___________________________
Senior Deputy City Attorney City Manager

___________________________
 Director of Utilities

___________________________
 Director of Administrative Services
EXECUTIVE SUMMARY
The Gas Utility Long-term Plan (GULP) covers a wide range of gas supply activities of City of Palo Alto Utilities including supply procurement given varying market prices, supply cost reduction, energy efficiency, climate protection and regulatory involvement. The proposed GULP Objectives, Strategies and Implementation Plan have a focus on balancing environmental and economic sustainability.

REQUEST
The Utilities Advisory Commission (UAC) and staff recommend that the Finance Committee recommend that the City Council approve the proposed Gas Utility Long-term Plan (GULP) Objectives, Strategies and Implementation Plan.

BACKGROUND
In July 2003, Council approved the first GULP Objectives and Guidelines (CMR: 345:03), and in September 2004, Council approved the accompanying GULP Implementation Plan (CMR: 368:04). In April 2005, and again in April 2006, Council received informational reports about GULP (CMR: 186:05 and CMR: 255:06). Staff reported that minor modifications had been made to the Implementation Plan and informed Council that no other GULP reports were planned.

In 2007 and 2008, three factors drove the need to update GULP: 1) changes in the natural gas market prompted a review of the economics of gas storage; 2) new opportunities and favorable economics and contract terms prompted the need to re-examine financial alternatives for long-term discounted gas purchases; and 3) the arrival of renewable gas resources from livestock manure (biogas) afforded new opportunities for the City to pursue non-fossil fuel gas resources. The potential availability of biogas was significant because the City’s Climate Protection Plan (CPP), approved in December 2007 (CMR: 435:07), included greenhouse gas (GHG) emissions reduction goals related to renewable energy supply to be purchased voluntarily by gas utility customers. Council approved new GULP Guidelines and an Implementation Plan in February
Since 2008, staff has effectively worked towards meeting the Objectives within the set Guidelines. Significant accomplishments include:

- Maintained robust gas supply contracts with private sector suppliers to purchase market price-based gas supplies;
- Managed market price variability within portfolio and risk management limits through implementation of the laddered purchasing strategy;
- Positively influenced new regulations and legislation to increase reliability and to maintain parity with Pacific Gas and Electric’s (PG&E’s) residential and commercial customers;
- Conducted an exhaustive search for reasonably priced non-fossil fuel gas resources; and
- Achieved gas efficiency savings of 0.11% and 0.49% of the annual gas usage in FY 2008 and FY 2009, respectively.

The single biggest change since GULP was last updated is the global recession that began in 2007 and continues to affect federal, local and state governments, consumers, and businesses. Diminished global demand for energy resulted in lower prices for natural gas. Because Palo Alto purchases a portion of its gas needs at fixed prices over a period of years, Palo Alto’s gas cost is currently higher than prevailing market prices. (The opposite has been true during past periods of rising gas prices.) In addition, the cost of renewable energy has increased as more California electric utilities pursue Renewable Portfolio Standard (RPS) goals while future GHG emissions regulation is uncertain. Solutions with a reasonable cost are becoming difficult to find.

The proposed set of GULP Objectives and Strategies have a focus on balancing environmental and economic sustainability. At its October 6, 2010 meeting, the UAC recommended Council approval of revised GULP Objectives and Strategies and an Implementation Plan (Attachment A). In parallel with the GULP revision, staff is developing a new Utilities Strategic Plan. Ultimately, GULP will need to align with the Utilities Strategic Plan to ensure that the GULP Objectives are consistent with the vision, goals, and strategic objectives of the Utilities Department and, thus, further revisions to GULP may be required after the Utilities Strategic Plan is completed.

**DISCUSSION**

**Proposed Changes to GULP Objectives**

The GULP Objectives are intended to address several functions related to long-term gas resource acquisition and management including implementation of related Council policies. The Objectives are intended to direct the management of gas supply cost and uncertainty inherent in the business of serving Palo Alto’s gas customers. Modifications to the GULP Objectives are proposed with a focus on procuring supply resources and gas efficiency and managing existing gas supply assets to meet customer needs over the next ten years. The proposed changes to GULP Objectives are shown below.
Existing and Proposed GULP Objectives

<table>
<thead>
<tr>
<th>Objective 1</th>
<th>Existing GULP Objectives</th>
<th>Proposed GULP Objectives</th>
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<tbody>
<tr>
<td><strong>Objective 1</strong>&lt;br&gt;Management of market price uncertainty</td>
<td>Ensure low and stable gas supply rates for pool customers.</td>
<td>Balance supply cost stability with market exposure.</td>
</tr>
<tr>
<td><strong>Objective 2</strong>&lt;br&gt;Supply Cost Management</td>
<td>Provide superior financial performance to customers and the City by managing the supply portfolio cost in a competitive manner compared to market cost and a retail supply rate advantage compared to PG&amp;E.</td>
<td>Lower delivered gas cost over the long term.</td>
</tr>
<tr>
<td><strong>Objective 3</strong>&lt;br&gt;Energy Efficiency</td>
<td>Balance environmental, rate, and cost impacts when considering energy efficiency investments.</td>
<td>Ensure the deployment of all feasible, reliable, cost-effective energy efficiency measures.</td>
</tr>
<tr>
<td><strong>Objective 4</strong>&lt;br&gt;Climate Protection</td>
<td></td>
<td>Reduce the carbon intensity of the gas portfolio in accordance with the Climate Protection Plan</td>
</tr>
<tr>
<td><strong>Objective 5</strong>&lt;br&gt;Parity with PG&amp;E</td>
<td></td>
<td>At a reasonable cost, protect the City’s interests and maintain access to transportation on par with PG&amp;E’s core customers.</td>
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</tbody>
</table>

Proposed Changes to GULP Guidelines
The proposed modifications to the 2008 GULP Guidelines and Implementation Plan are described in detail in this section. In an attempt to be consistent with the Strategic Plan, the term “guidelines” will be replaced with “strategies”. For each proposed GULP Objective, a Strategy is proposed providing definition for the Objective. The changes are intended to better reflect the proposed GULP Objectives, account for initiatives that have been completed and new ones that are underway, include concepts currently addressed in the implementation plan, and bring them more in line with Council priorities.

Proposed Objective #1: Management of market price uncertainty
Unlike the electric utility, the gas utility does not hold any long-term commodity assets and is ultimately dependent upon the spot market for all gas commodity purchases. After experiencing skyrocketing gas prices during the 2001 energy crisis, staff developed a plan to manage gas price volatility for periods longer than one fiscal year (CMR:196:01). Figure 1 shows Palo Alto’s historical and projected cost of gas compared to the monthly spot market price since July 2005.
Palo Alto has implemented a “laddering strategy” for its residential and small commercial gas customers (i.e. the “pool” customers). The rates for the largest gas customers change on a monthly basis similar to gas rates for all of Pacific Gas and Electric’s (PG&E’s) customers. These large customers do, however, have the option to select a variety of rate structures to manage their energy cost.

The gas laddering strategy spreads out the purchase of gas over a longer time period in an effort to stabilize costs and, thus, rates. The laddering strategy is implemented by purchasing gas at fixed-prices or prices with a negotiated cap on the price. The parameters of the laddering strategy are established by the Director of Utilities by her approval of a procurement plan. Procurement plans are developed in accordance with the City of Palo Alto’s Energy Risk Management Procedures. The procurement plan includes an analysis of the risks to net revenue (projected revenue minus cost) and takes into account Palo Alto’s expected gas costs compared to the spot market, Palo Alto’s current and projected gas commodity rate, the system average rate compared to market prices and the Gas Supply Rate Stabilization Reserve (G-SRSR) balance.

Figure 2 below shows the cumulative cost savings that have accrued to the average residential customer from gas bills paid to the City of Palo Alto Utilities (CPAU) compared to what would have been paid to PG&E since January 1998. The figure shows that there were savings (CPAU’s bill was lower than PG&E’s) from about January 1998 through May 2001, then PG&E’s bill was lower than CPAU’s from June 2001 until November 2002. CPAU’s bill was lower from December 2002 through September 2006, but since October 2006, PG&E’s gas bill has been
lower than CPAU’s. Over the entire span of time for which we have data – from January 1998 to October 2010 – Palo Altans paid about the same as PG&E customers for gas usage.

**Figure 2**

*Cumulative Residential Gas Bill Savings*  
*January 1998 through October 2010*

Note that Figure 2 shows the entire gas bill savings. However, in July 2006, Palo Alto “unbundled” its gas rates by separating the charges into those related to distribution and those related to supply. Since GULP is about the supply business only and the laddering strategy relates to supply only, it may be useful to compare the supply rates and bills for Palo Alto and PG&E. Figure 3 below provides the cumulative gas supply bill savings since July 2006 for Palo Alto versus PG&E. As shown, Palo Alto residential customers saved money on gas supply compared to PG&E customers until September 2008, when the gas supply market prices started to plummet (See Figure 1). Since October 2008, Palo Alto residential customers have paid more for gas supply than PG&E. Overall, over the July 2006 to October 2010 period, the average Palo Alto residential customer paid about $140 more than a PG&E residential customer for gas supply.
The current procurement plan’s targets are to purchase 80% of expected usage for the next 18-month period, 50% of expected usage for the following 9-month period and 20% of expected usage for the last 9-month period in the 36-month laddering horizon.

The laddered commodity procurement strategy means that in times of rising gas prices, Palo Alto’s gas cost will be lower than the market and in times of falling gas prices Palo Alto’s gas cost will be higher than the market. On the other hand, purchasing gas on the short-term spot market results in unpredictable and volatile costs. In either case, communication with customers when rates are impacted is important and will be addressed in the context of overall customer communication improvements in the Utilities Strategic Plan.

While the current GULP Objectives have competing goals (stable and competitive rates), rate stability has been an overriding objective in recent years. Staff has used an internal objective of limiting rate changes to 10% in a given year; however, the cost of gas is only one factor contributing to the potential need for a rate change. Capital, regulatory and operational costs for the distribution system also impact total cost. Reserves are also used to achieve rate stability by building reserve levels during low-cost periods and drawing down reserves during high-cost periods.

The table below shows the existing GULP Guideline #1 compared to the proposed GULP Strategy #1 and related Implementation Plan tasks. The proposed Strategy is essentially the same as the existing Guideline. All of the strategy elements are designed to strike a balance between cost stabilization and to not stray too far from the market cost over the longer term.
This strategy also includes a limit of 10 years for fixed-price contracts due to the credit risk associated with such long-term transactions and the reality of an inactive market that far into the future. Fixed-price purchases for delivery more than three years from present require Council approval.

The Utilities Strategic Plan may establish a quantifiable, measurable objective for gas rates at which time this strategy will be reviewed and may require modification. Staff will bring the results of that analysis to the UAC and then to the Finance Committee for review by June 2011 or as soon as practical after the completion of the Utilities Strategic Plan. In the interim, staff recommends continuing with a diversified portfolio, thus dampening the effects of the volatile gas market, helping to stabilize costs and rates while reducing the need for large reserves. The proposed Implementation Plan task makes this recommendation explicit.

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<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy</th>
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<tr>
<td><strong>Guideline #1: Market Risk Management –</strong> Manage market risk by adopting a portfolio strategy for gas supply procurement by:</td>
<td><strong>Strategy #1: Balance supply cost stability with market exposure by:</strong></td>
</tr>
<tr>
<td>a. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms, and delivery points;</td>
<td>a. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms &amp; delivery points;</td>
</tr>
<tr>
<td>b. Maintaining a prudent exposure to changing market prices by leaving some fraction of the forecasted gas pool needs exposed to near-term market prices; and</td>
<td>b. Leaving some fraction of the forecasted gas pool needs exposed to near-term market prices; and</td>
</tr>
<tr>
<td>c. Avoiding long-term (&gt;10 years) fixed-price commodity contracts.</td>
<td>c. Avoiding long-term (&gt;10 years) fixed-price commodity contracts.</td>
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<tr>
<th>Existing Implementation Plan</th>
<th>Proposed Implementation Plan</th>
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<tr>
<td>No initiatives were specified.</td>
<td>1. Continue to implement a laddered commodity purchasing strategy for the pool.</td>
</tr>
<tr>
<td></td>
<td>2. Review the laddering strategy and rate stability with the Utilities Advisory Commission and recommend changes, if appropriate.</td>
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**Proposed Objective #2: Supply Cost Management**

Because Palo Alto does not own gas supplies (reserves in the ground, or gas production wells), all gas must be purchased on the open market. This objective is to lower Palo Alto’s cost whenever possible through asset management and the acquisition of cost-effective storage services or pipeline capacity. This objective does not refer to trying to “beat the market” or PG&E’s commodity cost, but to lower these other aspects of supply-related costs. Procuring gas pipeline capacity, gas storage services or resources are potential opportunities to lower gas supply costs. Gas prepay transactions, described below, provide an opportunity for Palo Alto to systematically acquire gas commodity at a discount to market prices.

**Storage**

The use of gas storage may result in a lower delivered gas cost if that storage service is cost-effective. Typically gas is injected into storage during the low-usage summer months and then...
withdrawn during the winter when usage is high. If the difference between the price of gas for summer delivery and the price of gas for winter delivery is greater than the cost of storage, then storage is cost-effective. Palo Alto has access to several independent storage service providers and Pacific Gas and Electric Company (PG&E). Palo Alto already has the ability to purchase storage services from PG&E through an existing transportation contract but would need contracts to purchase gas storage services from any of the other storage service providers. The proposed Implementation Plan is intended to prepare Palo Alto to purchase gas storage services, if those services prove to be cost-effective.

**Asset Optimization**

Occasionally, below-market assets or services become available to Palo Alto. For example, through a regulatory process, Palo Alto acquired access on a PG&E pipeline at a discounted rate. Another way to lower costs is through the optimization of assets. For instance, in some months excess pipeline capacity on a pipeline may be sold for more than its cost. However, this revenue is very small compared to the overall cost of the gas portfolio.

As a result of a pending settlement agreement, Palo Alto has an opportunity to elect pipeline capacity on two PG&E-owned intrastate pipelines at a rate comparable to that for PG&E’s residential and commercial customers. Accepted capacity will be contracted at set rates for a four-year period beginning in 2011, the same term as the settlement agreement. Forecasting the value of the pipeline capacity and then capturing that value is included in the proposed Implementation Plan.

**Gas Prepay**

A potentially significant opportunity for lowering delivered gas commodity cost is through a “gas prepay” transaction. In a gas prepay transaction, a municipality purchases discounted gas by prepayment using tax-exempt bonds. IRS regulations allow for tax-exempt prepay natural gas transactions by municipalities, and the tax-exempt status of those transactions was codified in the Federal Energy Policy Act of 2005. Many other municipal utilities have completed prepay transactions for their gas-fired electric generation plants, including the City of Long Beach, the City of Roseville, the City of Redding, Silicon Valley Power, and the Sacramento Municipal Utility District. Gas prepay transactions are one way for municipal utilities to have a cost advantage over investor-owned utilities such as PG&E.

Typically transactions are structured such that the gas supplier is liable in the event of bond payment default. While the prepayment amount is calculated using a fixed gas price, gas is purchased monthly by the municipality at an index price, less a fixed discount as the gas is delivered. The amount of the discount is dependent on several factors, including the difference between municipal bond interest rates and taxable interest rates.

Recent recession-related credit market problems stalled prepay activity as achievable discounts have shrunk considerably. Because the potential benefit of participation in a gas prepay transaction in the future could be substantial, Palo Alto should position itself to be able to act in the event an attractive opportunity arises.

Prepay transactions are quite complicated and involve a number of parties and agreements resulting in a significant up-front cost. Palo Alto may want to partner with other municipal utilities. Additionally, Palo Alto may want to consider a series of one to three prepay arrangements over a number of years to diversify price risk. The proposed Implementation Plan

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includes the necessity of engaging a consultant to help guide CPAU through the process of evaluating these complex, but potentially cost-effective, transactions.

The table below shows the existing GULP Guideline #2 compared to the proposed GULP Strategy #2. The proposed strategy is very similar to the existing guideline, but removes some of the operational specificity and contains language that is more policy-based. In addition, the existing and proposed Implementation Plan tasks supporting this strategy are shown.

<table>
<thead>
<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy</th>
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| **Guideline #2: Asset Acquisition and Management** – Explore supply, pipeline, and storage acquisition options available to the City which may be assembled to yield reliable supply at a fair and reasonable cost, taking into consideration:  
  a. Long-term supply cost for gas deliveries at PG&E Citygate;  
  b. Operational needs including the need for daily balancing during Operational and Emergency Flow Orders;  
  c. Existing and potential regulatory mandates;  
  d. Potential operational streamlining opportunities with other agencies; and  
  e. City’s low cost of capital for asset acquisition. | **Strategy #2: Lower delivered gas cost over the long term by:**  
  a. Acquiring pipeline and/or storage assets that yield supply costs below market and meet operational needs;  
  b. Taking advantage of the City’s low cost of capital to acquire gas supply and assets; and  
  c. Optimizing existing assets. |

<table>
<thead>
<tr>
<th>Existing Implementation Plan</th>
<th>Proposed Implementation Plan</th>
</tr>
</thead>
</table>
| Implementation Plan Items:  | 3. Pursue cost-effective gas storage services by:  
  1. Pursue cost-effective opportunities for natural gas storage capacity;  
  2. Do not acquire additional natural gas pipeline capacity at this time;  
  3. Take steps to analyze Palo Alto’s tax-exempt status to realize a discount to the City’s gas cost by:  
    a. Identifying risks and costs associated with prepay transactions including required modifications to City policies and operating procedures; and  
    b. Exploring alternative prepay structures  
  4. Pursue any low-cost, high-value prospects to acquire supply-related resources that may arise from time to time. |  
  a. Signing enabling agreements with available gas storage service providers;  
  b. Monitoring gas prices for seasonal differences; and  
  c. Purchasing gas storage services when cost-effective. |
|                            | 4. Pursue below-market assets available through the Gas Transportation and Storage Settlement by:  
  a. Evaluating the pipeline capacity reservation options available; and  
  b. Contracting with PG&E for any pipeline capacity with an estimated cost below the forecasted market value. |
|                            | 5. Pursue opportunities for natural gas prepay transactions by:  
  a. Hiring a consultant to help staff with:  
    i. Identifying any internal policy changes needed including the policy on the use of financial instruments;  
    ii. Identifying system and internal processes required;  
    iii. Identifying opportunities; and  
    iv. Evaluating opportunities and quantifying the benefits and costs; and  
  b. Seeking UAC recommendation and Council approval regarding whether to proceed with a gas prepay transaction. |

**Proposed Objective #3: Energy Efficiency**
Palo Alto has long been a leader in energy efficiency programs, and views efficiency as a critical long-term resource that plays a key role in long-term planning and in achieving the GHG
emissions reduction goals in the CPP. Council approved the first Ten-Year Energy Efficiency (EE) Plan in April 2007 which set energy savings goals for both electric and gas efficiency. Over a ten-year period, the cumulative electric and gas savings were targeted at 3.5% of both gas and electric usage.

Council approved the updated Ten-Year Electric EE Plan in May 2010, which doubled the cumulative electric efficiency savings to 7.2% by 2020. In determining the amount of cost-effective electric efficiency, staff used a value for renewable energy adopted by the California Public Utilities Commission (CPUC) so that the carbon emission reduction benefits of EE are properly valued.

Staff is currently updating the Ten-Year Gas EE Plan, which will include updated gas efficiency targets. Staff is using the carbon adder (carbon price premium)\(^1\) identified in the CPP for the purposes of calculating the cost-effectiveness of gas efficiency measures. The proposed update of the Ten-Year Gas EE Plan will be presented to the UAC in Fall 2010 and to Council in early 2011.

The table below shows the existing Guideline #4 compared to the proposed Strategy #3. The proposed strategy states that the Ten-Year Gas EE Plan must be prepared every three years and must include a “reasonable” carbon adder when evaluating cost-effectiveness for gas efficiency. The carbon adder identified in the CPP is used for the purpose of calculating the cost-effectiveness of gas efficiency measures. A $20/tonne carbon adder translates to around 12¢ per therm. Therefore, given a long-term natural gas price of about $0.60 per therm, a gas efficiency measure that costs less than $0.72 per therm (\$0.60/therm + \$0.12/therm) would be found to be cost-effective. Including a value for carbon in the EE Plan is justified because natural gas is anticipated to be regulated under cap-and-trade, which is expected to result in a market cost associated with carbon emissions. Using a carbon adder ensures that the long-term liability of the costs of buying allowances for carbon emissions is incorporated into the investment decision for gas efficiency measures.

The proposed update of the 10-year gas efficiency goals will be presented to the Utilities Advisory Commission in January 2011. The existing Implementation Plan item that relates to Guideline #4 is listed. The proposed Implementation Plan tasks related to this strategy address the evaluation of substitutions (gas for electric appliances and vice versa), reporting of gas efficiency program results and ongoing evaluation of gas efficiency technologies.

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\(^1\) The City’s 2007 CPP recommended using a carbon adder for investment decisions of $20 per tonne escalated by 5% each year starting in 2008. A $20 per tonne CO\(_2\) carbon adder translates to around 12¢ per therm.
Proposed Objective #4: Climate Protection

Climate change continues to be a key global environmental challenge that impacts not only utilities, but all City operations. Both a voluntary green gas program similar to PaloAltoGreen and a mandatory green portfolio similar to the Renewable Portfolio Standard (RPS) concept for the electric portfolio were considered in staff’s analysis.

Besides the expected CO₂ emissions reductions from gas efficiency (under Strategy #3 above), the City’s CPP includes a CO₂ reduction goal associated with a voluntary green gas program. This strategy reflects staff’s intention to pursue resources for that purpose. Staff investigated the potential acquisition of non-fossil gas supplies through the issuance of a Request for Proposals in July 2009, but found the resource to be too costly for a successful voluntary program.

Currently staff is pursuing several non-fossil fuel gas opportunities through Palo Alto’s Northern California Power Agency (NCPA) membership and participation in the NCPA Green Power Project (NGPP). NCPA has hired a consultant to perform due diligence on the projects. CPAU is a participant thus far in the project evaluation process with an interest in the gas for the voluntary green gas program. The proposed implementation plan includes continued
involvement in NGPP to pursue green gas at a reasonable price that could be used in a voluntary green gas program.

Non-fossil fuel gas acquisition was also considered for the portfolio. Any additional cost for non-fossil gas supplies would have the benefit of meeting local GHG reduction goals, but would adversely impact gas rates. Given the lack of regulatory pressure and the current economic climate, no rate impact for non-fossil gas supplies is deemed prudent at this time for the overall gas portfolio, and this is reflected in the proposed strategy.

The table below shows the existing Guideline #5 compared to the proposed Strategy #4. The proposed strategy recommends pursuing a voluntary program for green gas. Non-fossil fuel supplies for the portfolio are recommended only when there is no rate impact, which in essence means that a renewable gas portfolio standard for the overall gas portfolio will not be implemented at this time. The proposed Implementation Plan tasks include pursuing reasonably priced renewable gas resources through NGPP.

<table>
<thead>
<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy</th>
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<tbody>
<tr>
<td>Guideline #5: Renewable Resources - Develop alternatives to reduce the carbon intensity of the natural gas portfolio consistent with the Climate Protection Plan.</td>
<td>Strategy 4: Reduce the carbon intensity of the gas portfolio by: a. Designing and implementing a voluntary retail program using reasonably priced non-fossil fuel gas resources; and b. Purchasing non-fossil fuel gas for the portfolio as long as it can be done with no rate impact.</td>
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<tr>
<th>Existing Implementation Plan</th>
<th>Proposed Implementation Plan</th>
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<tr>
<td>Reduce the carbon intensity of the natural gas portfolio by a. Designing and implementing a voluntary retail program using low-carbon gas resources; b. Evaluating the participation of City facilities in the voluntary program; and c. Evaluating portfolio targets for low-carbon gas resources.</td>
<td>9. Pursue reasonably priced non-fossil gas for a voluntary program through NGPP by: a. Reviewing the due diligence report to be provided to NGPP participants by the end of October 2010; and b. Based on the results, recommending whether to continue participating in the projects.</td>
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Proposed Objective #5: Parity with PG&E
Palo Alto participates in regulatory proceedings and in the legislative arena when the expected cost to intervene is less costly than an adverse outcome and when the city has a reasonable chance of influencing that outcome. Whenever possible, staff seeks to partner with other entities with similar positions and interests.

The table below shows the existing Guideline #3 compared to the proposed Strategy #5. The proposed strategy is similar to the existing guideline, but adds more detail on parity with PG&E and specifies that participation in regulatory and legislative advocacy be cost-effective.
### Existing Guideline vs. Proposed Strategy

<table>
<thead>
<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy</th>
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<tr>
<td>Guideline #3: Management of Regulatory and Legislative Matters – Serve as an effective voice to protect and enhance the City’s positions in regulatory and legislative arenas by:</td>
<td>Strategy 5: Protect the City’s interests and maintain parity with PG&amp;E’s core customers by:</td>
</tr>
<tr>
<td>a. Intervening in the regulatory and legislative arenas that the City’s gas utility interests are protected and enhanced; and</td>
<td>a. Participating in the regulatory and legislative arenas when the potential impact on the City is aligned with the cost to intervene and the probability of success;</td>
</tr>
<tr>
<td>b. Exploring potential joint action with other public agencies.</td>
<td>b. Negotiating with PG&amp;E for fair access to transportation and storage; and</td>
</tr>
<tr>
<td>c. Exploring potential joint action with other public agencies.</td>
<td>c. Exploring potential joint action with other public agencies.</td>
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### Existing Implementation Plan vs. Proposed Implementation Plan

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<tr>
<th>Existing Implementation Plan</th>
<th>Proposed Implementation Plan</th>
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<tr>
<td>No initiatives specified</td>
<td>No Implementation Plan initiatives are recommended for this strategy as the strategy itself provides staff the direction needed.</td>
</tr>
</tbody>
</table>

## COMMISSION REVIEW AND RECOMMENDATIONS

The UAC began discussing the GULP update at its June 2010 meeting. At that meeting, staff reviewed the existing policies and GULP Objectives and Guidelines and began the discussions with the UAC on the range of alternatives to the current policies. Discussion continued on draft GULP Objectives and Strategies at the UAC’s July 2010 meetings. Using the UAC’s input from those discussions, staff presented proposed GULP Objectives and Strategies to the UAC at its September 2010 meeting.

At its September 2010 meeting, the UAC voted (6-1) to recommend that the Council approve the proposed GULP Objectives and Strategies as staff recommended. Chair Waldfogel opposed the motion clarifying that he felt that Strategy #1 did not provide sufficient policy direction. The notes from the UAC’s September 1, 2010 meeting are provided as Attachment C.

Staff presented the proposed GULP Implementation Plan to the UAC at its October 2010 meeting. At that meeting, the UAC unanimously recommended that the City Council approve the proposed Gas Utility Long-term Plan (GULP) Implementation Plan (7-0). The notes from the UAC’s October 6, 2010 meeting are provided as Attachment D.

The Finance Committee reviewed the draft GULP Objectives, Strategies and Implementation Plan on November 16, 2010. The committee asked for clarifications on several issues and requested that the report contain additional information providing that clarification. For example, there was a question about whether Objective #2 – Lower delivered gas cost over the long term – referred to lowering gas costs compared to PG&E. Staff explained that this did not refer to being lower cost than PG&E, but to finding ways to reduce Palo Alto’s cost by investing in cost-effective storage or pipeline capacity and pursuing a gas prepayment transaction.

The committee also discussed the gas procurement laddering strategy and questioned the value of rate stability that results from the laddering strategy versus a strategy of tracking market prices. The committee requested that staff review the laddering strategy and rate stability.
objectives with the UAC. Another issue raised around gas rates was communication to customers. Staff advised that customer communication would be addressed in the strategic plan that is currently under development.

The committee voted unanimously to continue the requested action until the report was revised to include the clarifications requested. This report contains additional explanation on the issues raised by the Finance Committee and includes a new implementation plan item to review the laddering strategy with the UAC.

**RESOURCE IMPACT**
There is no direct resource impact as a result of the proposed changes to the GULP Objectives and Guidelines. Implementation of various programs that meet the Objective and Strategies will be brought to Council for approval and may have a resource impact at that time.

**POLICY IMPLICATIONS**
The proposed GULP Objectives, Strategies and Implementation Plan support the Council-approved Utilities Strategic Plan, Energy Risk Management Policies, and Comprehensive Plan Goal N-9 (a clean, efficient, competitively-priced energy supply that makes use of cost-effective renewable resources).

**ENVIRONMENTAL REVIEW**
Adoption of the GULP Objectives, Strategies and Implementation Plan does not constitute a project for the purposes of the California Environmental Quality Act.

**ATTACHMENTS**
A. Proposed GULP Objectives, Strategies and Implementation Plan
B. Existing GULP Objectives, Guidelines and Implementation Plan
C. Excerpted Minutes of the UAC Meeting of September 1, 2010
D. Excerpted Minutes of the UAC Meeting of October 6, 2010
E. Excerpted Draft Minutes of the Finance Committee Meeting of November 6, 2010

**PREPARED BY:**
CHRISTINE TAM, Resource Planner
KARLA DAILEY, Senior Resource Planner

**REVIEWED BY:**
JANE RATCHYE
Assistant Director, Resource Management

**DEPARTMENT HEAD:**
VALERIO O. LONG
Director of Utilities

**CITY MANAGER APPROVAL:**
JAMES KEENE
City Manager

CMR: 432:10 Page 14 of 14
Proposed 2010 Gas Utility Long-term Plan (GULP)  
Objectives, Strategies and Implementation Plan

GULP Objectives:
1. Management of market price uncertainty – Balance supply cost stability with market exposure.
2. Supply Cost Management – Lower delivered gas cost over the long term.
3. Energy Efficiency – Ensure the deployment of all feasible, reliable, cost-effective energy efficiency measures.
4. Climate Protection – Reduce the carbon intensity of the gas portfolio in accordance with the Climate Protection Plan.
5. Parity with PG&E – At a reasonable cost, protect the City’s interests and maintain access to transportation on par with PG&E’s core customers.

GULP Strategies:
1. Balance supply cost stability with market exposure by:
   a. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms & delivery points;
   b. Leaving some fraction of the forecasted gas pool needs exposed to near-term market prices; and
   c. Avoiding long-term (>10 years) fixed-price commodity contracts.
2. Lower delivered gas cost over the long term by:
   a. Acquiring pipeline and/or storage assets that yield supply costs below market and meet operational needs;
   b. Taking advantage of the City’s low cost of capital to acquire gas supply and assets; and
   c. Optimizing existing assets.
3. Ensure the deployment of all feasible, reliable, cost-effective energy efficiency measures by:
   a. Developing and implementing a ten-year gas efficiency plan every three years that includes a reasonable carbon price premium for traditional gas supplies; and
   b. Considering the impacts (cost, benefits, and GHG emissions) of substituting electricity-using appliances for gas-using appliances and vice versa in the ten-year gas efficiency plan.
4. Reduce the carbon intensity of the gas portfolio in accordance with the Climate Protection Plan by:
   a. Designing and implementing a voluntary retail program using reasonably priced non-fossil fuel gas resources; and
   b. Purchasing non-fossil fuel gas for the portfolio as long as it can be done with no rate impact.
5. At a reasonable cost, protect the City’s interests and maintain access to transportation on par with PG&E’s core customers by:
   a. Participating in the regulatory and legislative arenas when the potential impact on the City is aligned with the cost to intervene and the probability of success;
   b. Negotiating with PG&E for fair access to transportation and storage; and
   c. Exploring potential joint action with other public agencies.
GULP Implementation Plan:

1. Continue to implement a laddered commodity purchasing strategy for the pool.
2. Review the laddering strategy and rate stability with the Utilities Advisory Commission and recommend changes, if appropriate.
3. Pursue cost-effective gas storage services by:
   a. Signing enabling agreements with available gas storage service providers;
   b. Monitoring gas prices for seasonal differences; and
   c. Purchasing gas storage services when cost-effective.
4. Pursue below-market assets available through the Gas Transportation and Storage Settlement by:
   a. Evaluating the pipeline capacity reservation options available; and
   b. Contracting with PG&E for any pipeline capacity with an estimated cost below the forecasted market value.
5. Pursue opportunities for natural gas prepay transactions by:
   a. Hiring a consultant to help staff with:
      i. Identifying any internal policy changes needed including the policy on the use of financial instruments;
      ii. Identifying system and internal processes required;
      iii. Identifying opportunities; and
      iv. Evaluating opportunities and quantifying the benefits and costs; and
   b. Seeking UAC recommendation and Council approval regarding whether to proceed with a gas prepay transaction.
6. Develop an implementation plan by summer 2011 to meet the gas efficiency targets including the:
   a. Evaluation of the cost-effectiveness of substituting gas-using appliance for electric-using appliances and vice versa and the greenhouse gas impacts of such substitutions; and
   b. Incorporation of any cost-effective substitution measures in the implementation plan to meet the gas efficiency targets.
7. Track and report progress against adopted gas efficiency goals by:
   a. Providing quarterly updates on the gas efficiency program achievements to the UAC; and
   b. Providing annual updates on gas efficiency program achievements to the UAC and the City Council.
8. Continue evaluating new gas efficiency technologies and undertake pilot studies where appropriate.
9. Pursue reasonably priced non-fossil gas for a voluntary program through NGPP by:
   a. Reviewing the due diligence report to be provided to NGPP participants by the end of October 2010; and
   b. Based on the results, recommending whether to continue participating in the projects.
EXISTING GAS UTILITY LONG-TERM PLAN (GULP)
GUIDELINES, OBJECTIVES, AND IMPLEMENTATION RECOMMENDATIONS

GULP Objectives (CMR:345:03)
Objective 1: Ensure low and stable gas supply rates for pool customers.
Objective 2: Provide superior financial performance to customers and to the City by managing the supply portfolio cost in a competitive manner compared to market cost and a retail supply rate advantage compared to PG&E.
Objective 3: Balance environmental, rate, and cost impacts when considering energy efficiency investments.

GULP Guidelines (CMR:134:08)
Guideline 1: Market Risk Management – Manage market risk by adopting a portfolio strategy for gas supply procurement by:
   A. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms and delivery points;
   B. Maintaining a prudent exposure to changing market prices by leaving some fraction of the forecasted gas pool needs exposed to near-term market prices;
   C. Avoiding long-term (>10 years) fixed-price commodity contracts.

Guideline 2: Asset Acquisition and Management – Explore supply, pipeline, and storage acquisition options available to the City which may be assembled to yield reliable supply at fair and reasonable cost, taking into consideration:
   A. Long-term supply cost for gas deliveries at PG&E Citygate;
   B. Operational needs including the need for daily balancing during Operational and Emergency Flow Orders;
   C. Existing and potential regulatory mandates;
   D. Potential operational streamlining opportunities with other agencies; and
   E. City’s low cost of capital for asset acquisition.

Guideline 3: Management of Regulatory and Legislative Matters – Serve as an effective voice to protect and enhance the City’s position in regulatory and legislative arenas by:
   A. Intervening in the regulatory and legislative arenas to ensure that the City’s gas utility interests are protected and enhanced; and
   B. Exploring potential joint action with other public agencies.

Guideline 4: Gas Efficiency and Solar Heating - Fund innovative programs that promote and facilitate deployment of all cost-effective, reliable and feasible energy efficiency and solar heating opportunities as high priority resources consistent with the Ten-year Efficiency Plan.

Guideline 5: Renewable Resources - Develop alternatives to reduce the carbon intensity of the natural gas portfolio consistent with the Climate Protection Plan.
GULP Implementation Recommendations (CMR:134:08)

1. Pursue cost-effective opportunities for natural gas storage capacity;
2. Do not acquire additional natural gas pipeline capacity at this time;
3. Take steps to analyze Palo Alto’s tax-exempt status to realize a discount to the City’s gas cost by:
   a. Identifying risks and costs associated with prepay transactions including required modifications to City policies and operating procedures; and
   b. Exploring alternative prepay structures.
4. Pursue any low-cost, high-value prospects to acquire supply-related resources that may arise from time to time;
5. Develop comprehensive demand-side management goals and implementation plan by fall 2004 in time for incorporation into FY05-06 and future ratemaking and budget decisions. In the interim, continue implementation of current and planned FY 04-05 demand-side management programs; and
6. Reduce the carbon intensity of the natural gas portfolio by
   a. Designing and implementing a voluntary retail program using low-carbon gas resources;
   b. Evaluating the participation of City facilities in the voluntary program; and
   c. Evaluating portfolio targets for low-carbon gas resources.
EXEMPLARY FINAL MINUTES OF UTILITIES ADVISORY COMMISSION
Meeting of September 1, 2010

ITEM 3: ACTION: Proposed Gas Utility Long-Term Plan (GULP) Objectives and Strategies
Senior Resource Planner Karla Dailey focused the discussion on the proposed GULP objectives and strategies, as given in Attachment A of the Memo on Proposed Gas Utility Long-term Plan Objectives and Strategies in the UAC package.

Chair Waldfoogel stated that proposed Objective #1 (Balance supply cost stability with market exposure) is too vague and doesn’t offer enough guidance as to where the “balance” gets resolved. Dailey offered that the strategic plan will provide a rates objective such as that rates do not change by more than 10% every 12 months, for example. The gas supply portfolio would then be managed to meet the rates objective. Assistant Director Ratchye added that during the annual long-term financial forecast and budget process, the level of the reserves and the forecast costs would be evaluated along with the rates stability objective so that the Council could determine the proper balance. There is a danger of adding too much specificity into the objective and strategy that could box staff in to a corner in managing the supply portfolio. Commissioner Eglash stated that there was no opposition from the UAC to contracts longer than one year and wondered what problem proposed Strategy #1 was addressing. Chair Waldfoogel replied that the strategy provides no policy direction.

Council Member Yeh asked if we could have a policy to change how the portfolio is managed if our costs exceed PG&E’s for a period of time – say, three years, for example. Commissioner Eglash stated that in the long term, energy prices have risen and, given our laddering strategy, we should overall (in the long term) be lower priced than PG&E. Commissioner Keller stated that the City should strive to have rate stability and weather the storm when our costs are higher than PG&E’s.

Council Member Scharff asked where our rates have been with respect to PG&E’s over the past 10 years. He advised that the topic of rates and rate stability was very relevant as it is being discussed by the Council Finance Committee with respect to the Refuse Fund. Dailey stated that CPAU started the laddering strategy during the energy crisis. In contrast, PG&E historically buys nearly 100% spot purchases, which is expected given the CPUC gas procurement incentive mechanism for the IOUs, Council Member Scharff stated that he had read that natural gas reserves were huge and that some experts expect prices to remain low for the foreseeable future. Dailey responded that staff monitors gas prices on a daily basis and understands the volatility of gas prices; however staff doesn’t have a “market view” and can’t predict where prices might go in the future. At the current price levels however, there is more room for gas prices to go higher rather than lower. There aren’t many analysts predicting sudden price spikes in the short term.

Commissioner Cook asked if CPAU’s objective was to have less variability in gas prices than PG&E. Commissioner Eglash responded that rate stability is an objective, but noted that stable rates shield customers from price signals. Stability however is better than volatility. Commissioner Eglash then asked if the UAC should accept the proposed GULP strategy and wait until the other issues are resolved and the strategic plan is complete and return to the
question in the future. Commissioner Berry agreed with this approach to act now and return to these issues later.

Yeh asked if the UAC had an opinion on Strategy 4.b. (Reduce the carbon intensity of the gas portfolio by purchasing non-fossil fuel gas for the portfolio as long as it can be done with no rate impact.). He noted that LEAP did contain a rate impact limit for RPS and wondered if a rate impact limit should be allowed under this GULP strategy. Commissioner Eglash commented that there is no competitive alternative to fossil-based gas supply. Commissioner Melton offered that the reality is that the premium for green gas is very high and that staff’s proposal was acceptable and responsive to this fact.

Commissioner Eglash asked how proposed Strategy #2 (Lower delivered gas cost over the long term by: a) acquiring pipeline and/or storage assets that yield supply costs below market and meet operational needs; b) taking advantage of the City’s low cost of capital to acquire gas supply and assets; and c) optimizing existing assets) would work. Dailey replied that, for subsection a, the City’s pipeline capacity rights that were granted in settlements with PG&E have some value that the City receives and that, for subsection c, there is a small amount of money that can be realized by optimizing that asset. However, the largest potential value could come from subsection b, which is a gas “pre-pay” arrangement whereby the City would prepay for gas for the long term and realize a discount off of the spot market index for the gas. The GULP implementation plan would contain all the steps that would be required to implement such an arrangement, which is a complex set of agreements that would minimize the City’s risk and provide a long-term benefit.

**ACTION:**
Commissioner Melton made a motion that the UAC recommend that the Council approve proposed GULP Objective and Strategy #1 – Balancing Stability and Competitiveness as proposed. Commissioner Eglash seconded the motion.

Commissioner Eglash offered a substitute motion that the UAC recommend that the Council approve the proposed GULP Objectives and Strategies as proposed. Commissioner Cook seconded the motion. The motion passed (6-1) with Chair Waldfogel opposing. Chair Waldfogel stated his opposition was due to his opinion that Strategy #1 did not provide sufficient policy direction.
EXEMPLARY FINAL MINUTES OF UTILITIES ADVISORY COMMISSION  
Meeting of October 6, 2010

ITEM 3: ACTION: Gas Utility Long-term Plan (GULP) Implementation Plan
Senior Resource Planner Karla Dailey presented the proposed GULP implementation plan, which consists of eight initiatives to be taken by staff in order to achieve the proposed GULP objectives and strategies that the UAC recommended Council approve at its September 2011 meeting.

Commissioner Keller asked if GULP addresses long-term maintenance and new pipeline development. Dailey clarified that GULP only addresses gas supply and not infrastructure.

Commissioner Cook noted his support for Implementation Plan Initiatives #2 (Pursue cost-effective gas storage services) and #3 (Pursue below-market assets available through the Gas Transportation and Storage Settlement) as they are proactive attempts to save costs.

Regarding Initiative #4 (Pursue opportunities for natural gas prepay transactions), Council Member Yeh asked for clarification on the use of financial instruments. Dailey emphasized that the use of financial instruments needs to be part of the prepay discussion up front because implementing a hedging strategy with physical gas priced at a discount to a market varying index price requires the use of financial instruments. Council Member Yeh expressed his concern about structuring the deal to protect the City.

Commissioner Eglash noted that using a consultant can be expensive, and the City may not end up pursuing prepay. Dailey explained that the potential benefits of several million dollars out of an annual supply budget of $20 million outweigh the costs of using a consultant, and a prepay arrangement is the only way to achieve gas supply cost below PG&E’s. Commissioner Eglash asked about the cost range for a consultant. Dailey responded that if Palo Alto decides to pursue prepay alone, that could result in higher transaction costs. A consultant would help Palo Alto identify how best to pursue prepay. Commissioner Eglash asked if the Energy Risk Manager is aware of the prepay initiative. Karl Van Orsdol, Energy Risk Manager, responded that he himself, along with Lalo Perez, Director of Administrative Services, and City Manager Jim Keene are aware of this, and that a consultant was hired around two years ago to provide training to staff on this issue.

Commissioner Melton asked if any of the cities that participated in a prepay transaction was financially harmed during the financial crisis. Dailey responded that the worst case did occur when Lehman Brothers collapsed and a prepay deal involving Lehman fell apart. However, the unwinding of the transaction happened exactly as contractually planned under such conditions and the bond holders lost their investment. The municipal utility involved lost only the discount to index for future deliveries, but was otherwise unharmed. Director Fong reassured that given the complexity of a prepay transaction, staff will present more details on the structuring of a prepay transaction to the UAC. Chair Waldfoogel supports a reasonable cost for the consultant study for prepay.
No comments were made on Initiatives 5, 6 and 7. On Initiative #8, Commissioner Eglash asked about the Return on Investment of reviewing the cost of non-fossil gas. Dailey responded that Palo Alto’s share of the NCPA due diligence study is $5,000, which is a relatively low investment. Chair Waldfogel asked if we have ruled out offsets. Dailey explained that customers can currently purchase offsets from many sources for personal travel and energy usage. Palo Alto does not provide unique value by offering offsets to customers and that offsets would be difficult to market.

**ACTION:**
Commissioner Eglash moved, and Commissioner Foster seconded, that the UAC recommend that the City Council approve the proposed Gas Utility Long-term Plan (GULP) Implementation Plan. The motion passed unanimously (7-0).
ATTACHMENT E

FINANCE COMMITTEE – MEETING
EXCERPTED DRAFT MINUTES OF NOVEMBER 16, 2010

ITEM 3: ACTION: Utilities Advisory Commission recommendation to Approve the Proposed Gas utility Long-term Plan (GULP) Objectives, Strategies and implementation Plan (Continued from the November 2, 2010)
Senior Resource Planner Karla Dailey provided a brief presentation on GULP noting that the UAC unanimously approved the objectives, Strategies, and Implementation Plan at its October 2010 meeting. She highlighted the differences between the current and proposed GULP Objectives and the Strategies and Implementation Plan to meet those objectives.

Council Member Klein asked what the benchmark is for “lower cost” referred to in proposed GULP Objective 2. Staff explained that “lower” is better than a do-nothing strategy and that gas prepay transactions are the only means to lower cost relative to the market/PG&E. Council Member Klein noted that the report contained no explanation for avoiding long-term fixed price contracts in proposed Strategy 1. Council Member Klein said he did not have a preference between stable rates and competitive (market-based) costs.

Council Member Scharff requested that staff do more analysis on laddering strategy alternatives and discuss with the UAC. Council Member Scharff also asked what the purpose of the carbon adder is when evaluating energy efficiency as stated in proposed Strategy 3. Staff explained that it expects that the City will have to pay for greenhouse gas emissions in the future. Therefore reducing these emissions has value and, since energy efficiency is a long-term investment, those avoided costs are included in the value of energy efficiency.

Vice Mayor Espinosa noted that it is important to communicate with the public on why the City’s gas purchasing strategy sometimes leads to the City’s gas rates being higher than PG&E’s. Staff indicated that this would be part of the job of the new position Council approved in the FY 2010 budget, the Utilities Communications Manager.

Council Member Schmid expressed concern about the City’s gas cost relative to the market and commented on the need for more information regarding prepay transactions.

ACTION: Council Member Klein moved, seconded by Vice Mayor Espinosa to request that Staff bring revisions to the Staff Report back to the Finance Committee that clarify the justifications for the proposals Staff is making.

INCORPORATED INTO THE MOTION WITH THE CONSENT OF THE MAKER AND SECONDER for Staff to refer the laddering strategy to the Utilities Advisory Commission for further study and return to the Finance Committee at a later date.

Motion Passed: 4-0
FINANCE COMMITTEE – MEETING
EXCERPTED DRAFT MINUTES OF NOVEMBER 16, 2010


Senior Resource Planner Karla Dailey provided a brief presentation on GULP noting that the UAC unanimously approved the objectives, Strategies, and Implementation Plan at its October 2010 meeting. She highlighted the differences between the current and proposed GULP Objectives and the Strategies and Implementation Plan to meet those objectives.

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Council Member Schmid expressed concern about the City’s gas cost relative to the market and commented on the need for more information regarding prepay transactions.

MOTION: Council Member Klein moved, seconded by Vice Mayor Espinosa to request that Staff bring revisions to the Staff Report back to the Finance Committee that clarify the justifications for the proposals Staff are making.

INCORPORATED INTO THE MOTION WITH THE CONSENT OF THE MAKER AND SECONDER for Staff to refer the laddering strategy to the Utilities Advisory Commission for further study and return to the Finance Committee with at a later date.

Motion Passed: 4-0
ITEM 3: ACTION: Utilities Advisory Commission recommendation to Approve the Proposed Gas Utility Long-term Plan (GULP) Objectives, Strategies and Implementation Plan
Assistant Director of Utilities for Resource Management, Jane Ratchye, provided a brief explanation of the changes in the report compared to the November 16, 2010 version to be responsive to the direction provided by the Finance Committee. She highlighted the following:

1. An implementation step to review the laddering strategy with the Utilities Advisory Commission (UAC) by June 2011 was added to the Implementation Plan.
2. Text and 2 graphs were added showing the cumulative residential gas bill savings compared to PG&E for the bundled bill and the commodity portion only of the bill. Ratchye pointed out that for the total gas bill, Palo Alto customers have paid the same amount as PG&E customers for the time period for the last 13 years. For the period July 2006 through present, Palo Alto customers have paid approximately $140 more than PG&E customers for gas commodity only.
3. A paragraph detailing the fixed-price purchase targets for the next 36 months was added.
4. The reasons for not engaging in transactions for fixed-price contracts beyond 10 years were listed.
5. Clarification was made that lowering cost does not refer to “beating the market”.
6. More explanation regarding the carbon adder for comparing energy efficiency to natural gas resources was provided.

Council Member Scharff asked if natural gas could be purchased at the current spot market price of $4 per MMBtu for the next several years. Ratchye explained the difference between the spot market and the market for deliveries of gas in the future and presented a forward curve for gas showing that the price for gas for delivery two years from now is $5.90 per MMBtu despite gas costs for delivery in the next month being closer to $4.00 per MMBtu. Ratchye also pointed out that interested people can view similar graphs in the quarterly update reports to the UAC available on the City’s website.

Council Member Schmid expressed an opinion about the forward curve lagging compared to the spot market and commented on the need for more information regarding prepay transactions. Utilities Director Valerie Fong acknowledged the need for staff to provide more information on gas prepay transactions.

MOTION: Council Member Espinosa moved, seconded by Schmid, that the Finance Committee recommends to the City Council approval of the proposed Gas Utility Long-term Plan (GULP) objectives, strategies, and implementation plan.

MOTION PASSED 3-0, Klein absent
## Existing and Proposed GULP Objectives

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<th>Objective 1</th>
<th>Existing GULP Objectives</th>
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<th>Objective 2</th>
<th>Existing GULP Objectives</th>
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</thead>
<tbody>
<tr>
<td>Supply Cost Management</td>
<td>Provide superior financial performance to customers and the City by managing the supply portfolio cost in a competitive manner compared to market cost and a retail supply rate advantage compared to PG&amp;E.</td>
<td>Lower delivered gas cost over the long term.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective 3</th>
<th>Existing GULP Objectives</th>
<th>Proposed GULP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency</td>
<td>Balance environmental, rate, and cost impacts when considering energy efficiency investments.</td>
<td>Ensure the deployment of all feasible, reliable, cost-effective energy efficiency measures.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective 4</th>
<th>Existing GULP Objectives</th>
<th>Proposed GULP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Protection</td>
<td></td>
<td>Reduce the carbon intensity of the gas portfolio in accordance with the Climate Protection Plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Objective 5</th>
<th>Existing GULP Objectives</th>
<th>Proposed GULP Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity with PG&amp;E</td>
<td></td>
<td>At a reasonable cost, protect the City’s interests and maintain access to transportation on par with PG&amp;E’s core customers.</td>
</tr>
</tbody>
</table>

## Existing and Proposed GULP Strategies and Implementation Plan Items

<table>
<thead>
<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy #1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Guideline #1: Market Risk Management –</strong> Manage market risk by adopting a portfolio strategy for gas supply procurement by: a. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms, and delivery points; b. Maintaining a prudent exposure to changing market prices by leaving some fraction of the forecasted gas pool needs exposed to near-term market prices; and c. Avoiding long-term (&gt;10 years) fixed-price commodity contracts.</td>
<td><strong>Strategy #1: Balance supply cost stability with market exposure by:</strong> a. Diversifying energy purchases for the pool across commitment date, delivery date, duration, suppliers, pricing terms &amp; delivery points; b. Leaving some fraction of the forecasted gas pool needs exposed to near-term market prices; and c. Avoiding long-term (&gt;10 years) fixed-price commodity contracts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Existing Implementation Plan</th>
<th>Proposed Implementation Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>No initiatives were specified.</td>
<td>1. Continue to implement a laddered commodity purchasing strategy for the pool. 2. Review the laddering strategy and rate stability with the Utilities Advisory Commission and recommend changes, if appropriate.</td>
</tr>
</tbody>
</table>
**Existing Guideline**

<table>
<thead>
<tr>
<th>Guideline #2: Asset Acquisition and Management – Explore supply, pipeline, and storage acquisition options available to the City which may be assembled to yield reliable supply at a fair and reasonable cost, taking into consideration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Long-term supply cost for gas deliveries at PG&amp;E Citygate;</td>
</tr>
<tr>
<td>b. Operational needs including the need for daily balancing during Operational and Emergency Flow Orders;</td>
</tr>
<tr>
<td>c. Existing and potential regulatory mandates;</td>
</tr>
<tr>
<td>d. Potential operational streamlining opportunities with other agencies; and</td>
</tr>
<tr>
<td>e. City’s low cost of capital for asset acquisition.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proposed Strategy #2</th>
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<tbody>
<tr>
<td>Strategy #2: Lower delivered gas cost over the long term by:</td>
</tr>
<tr>
<td>a. Acquiring pipeline and/or storage assets that yield supply costs below market and meet operational needs;</td>
</tr>
<tr>
<td>b. Taking advantage of the City’s low cost of capital to acquire gas supply and assets; and</td>
</tr>
<tr>
<td>c. Optimizing existing assets.</td>
</tr>
</tbody>
</table>

**Existing Implementation Plan**

<table>
<thead>
<tr>
<th>Implementation Plan Items:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pursue cost-effective opportunities for natural gas storage capacity;</td>
</tr>
<tr>
<td>2. Do not acquire additional natural gas pipeline capacity at this time;</td>
</tr>
<tr>
<td>3. Take steps to analyze Palo Alto’s tax-exempt status to realize a discount to the City’s gas cost by:</td>
</tr>
<tr>
<td>a. Identifying risks and costs associated with prepay transactions including required modifications to City policies and operating procedures; and</td>
</tr>
<tr>
<td>b. Exploring alternative prepay structures</td>
</tr>
<tr>
<td>4. Pursue any low-cost, high-value prospects to acquire supply-related resources that may arise from time to time.</td>
</tr>
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<th>Proposed Implementation Plan</th>
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<tbody>
<tr>
<td>3. Pursue cost-effective gas storage services by:</td>
</tr>
<tr>
<td>a. Signing enabling agreements with available gas storage service providers;</td>
</tr>
<tr>
<td>b. Monitoring gas prices for seasonal differences; and</td>
</tr>
<tr>
<td>c. Purchasing gas storage services when cost-effective.</td>
</tr>
<tr>
<td>4. Pursue below-market assets available through the Gas Transportation and Storage Settlement by:</td>
</tr>
<tr>
<td>a. Evaluating the pipeline capacity reservation options available; and</td>
</tr>
<tr>
<td>b. Contracting with PG&amp;E for any pipeline capacity with an estimated cost below the forecasted market value.</td>
</tr>
<tr>
<td>5. Pursue opportunities for natural gas prepay transactions by:</td>
</tr>
<tr>
<td>a. Hiring a consultant to help staff with;</td>
</tr>
<tr>
<td>i. Identifying any internal policy changes needed including the policy on the use of financial instruments;</td>
</tr>
<tr>
<td>ii. Identifying system and internal processes required;</td>
</tr>
<tr>
<td>iii. Identifying opportunities; and</td>
</tr>
<tr>
<td>iv. Evaluating opportunities and quantifying the benefits and costs; and</td>
</tr>
<tr>
<td>b. Seeking UAC recommendation and Council approval regarding whether to proceed with a gas prepay transaction.</td>
</tr>
<tr>
<td>Existing Guideline</td>
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<tr>
<td>--------------------</td>
</tr>
<tr>
<td><strong>Guideline #4: Gas Efficiency and Solar Heating</strong> - Fund innovative programs that promote and facilitate deployment of all cost-effective, reliable and feasible energy efficiency and solar heating opportunities as high priority resources consistent with the Ten-year Efficiency Plan.</td>
</tr>
</tbody>
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<tbody>
<tr>
<td><strong>Implementation Plan Item:</strong> Develop comprehensive demand-side management goals and implementation plan by fall 2004 in time for incorporation into FY 2006 and future ratemaking and budget decisions. In the interim, continue implementation of current and planned FY 2005 demand-side management programs.</td>
<td>6. Develop an implementation plan by summer 2011 to meet the gas efficiency targets including the: &lt;br&gt;a. Evaluation of the cost-effectiveness of substituting gas-using appliance for electric-using appliances and vice versa and the greenhouse gas impacts of such substitutions; and &lt;br&gt;b. Incorporation of any cost-effective substitution measures in the implementation plan to meet the gas efficiency targets. &lt;br&gt;7. Track and report progress against adopted gas efficiency goals by: &lt;br&gt;a. Providing quarterly updates on the gas efficiency program achievements to the UAC; and &lt;br&gt;b. Providing annual updates on gas efficiency program achievements to the UAC and the City Council. &lt;br&gt;8. Continue evaluating new gas efficiency technologies and undertake pilot studies where appropriate.</td>
</tr>
<tr>
<td>Existing Guideline</td>
<td>Proposed Strategy #4</td>
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</tbody>
</table>
| **Guideline #5: Renewable Resources** – Develop alternatives to reduce the carbon intensity of the natural gas portfolio consistent with the Climate Protection Plan. | **Strategy 4: Reduce the carbon intensity of the gas portfolio by:**
| | a. Designing and implementing a voluntary retail program using reasonably priced non-fossil fuel gas resources; and
| | b. Purchasing non-fossil fuel gas for the portfolio as long as it can be done with no rate impact. |

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</table>
| Reduce the carbon intensity of the natural gas portfolio by  
a. Designing and implementing a voluntary retail program using low-carbon gas resources;  
b. Evaluating the participation of City facilities in the voluntary program; and  
c. Evaluating portfolio targets for low-carbon gas resources. | 9. Pursue reasonably priced non-fossil gas for a voluntary program through NGPP by:
| | a. Reviewing the due diligence report to be provided to NGPP participants by the end of October 2010; and  
| | b. Based on the results, recommending whether to continue participating in the projects. |

<table>
<thead>
<tr>
<th>Existing Guideline</th>
<th>Proposed Strategy #5</th>
</tr>
</thead>
</table>
| **Guideline #3: Management of Regulatory and Legislative Matters** – Serve as an effective voice to protect and enhance the City’s positions in regulatory and legislative arenas by:  
a. Intervening in the regulatory and legislative arenas that the City’s gas utility interests are protected and enhanced; and  
b. Exploring potential joint action with other public agencies. | **Strategy 5: Protect the City’s interests and maintain parity with PG&E’s core customers by:**
| | a. Participating in the regulatory and legislative arenas when the potential impact on the City is aligned with the cost to intervene and the probability of success;  
| | b. Negotiating with PG&E for fair access to transportation and storage; and  
| | c. Exploring potential joint action with other public agencies. |

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<tbody>
<tr>
<td>No initiatives specified</td>
<td>No Implementation Plan initiatives are recommended for this strategy as the strategy itself provides staff the direction needed.</td>
</tr>
</tbody>
</table>