Title: Utilities Resource Policies and Plans

Subject: Utilities Resource Management Operating Policies and Plans

From: City Manager

Lead Department: Utilities

This is an informational item that does not require Council action.

Executive Summary
Several key policies and plans provide direction to staff on Utilities resource acquisition and management. However, after adoption of the policies and plans, there has not been a single document where they can be found and reviewed. Therefore, staff has prepared a compendium of the relevant high-level plans and policies and will provide them to the Utilities Advisory Commission (UAC) and the City Council annually for review. The plans and policies included in the document are as follows:

1. The equity transfer policy, which describes the adopted methodology for making the equity transfer from the Gas and Electric Funds to the General Fund;

2. The policies for management of certain Utilities financial reserves, including:
   a. Emergency Plant Replacement Reserve for the Electric, Gas, Water, and Wastewater Collection Funds;
   b. The Rate Stabilization Reserves for Electric Supply, Electric Distribution, Gas Supply, Gas Distribution, Water, Wastewater Collection, and Fiber; and
   c. The Calaveras Reserve.

3. The latest Council approved Legislative Policy Guidelines, which provide direction on the City's positions on legislative initiatives; and

4. The long-term plans for resource acquisition and management including the Long-term Electric Acquisition Plan (LEAP), the Gas Utility Long-term Plan (GULP), and the Water Integrated Resource Plan (WIRP).

There are other relevant plans and policies, but they are broader than resource management or are reported to the UAC and the City Council separately. These policies and plans include the Utilities Strategic Plan, the Energy Risk Management Policy, the Urban Water Management
Plan, and the Demand-Side Management Implementation Plan.

**Attachments:**
- Attachment A: Resource Management Operating Policies and Plans  (PDF)

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City Manager Approval: James Keene, City Manager
Resource Management Operating Policies and Plans

March 2011

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1. Introduction

Purpose
This document is meant to collect all the Council-approved policies and plans that guide the management of the Utilities water, gas, and electric commodity resources. The document will be updated when new policies or plans are adopted, or existing ones are changed. Since a new Council is seated in January every two years, the document will be provided to Council in April annually so that the new Council will be aware of Council policy. This practice will afford the Council with an opportunity to review and direct revisions of any of the commodity resource management policies and plans on an ongoing basis.

2. Equity Transfer Methodology

Background
As a result of the initial investment made by the City and its citizens, Palo Alto’s residents and businesses have enjoyed favorable rates and utility services provided by the City’s municipal utility. The services provided by the Gas and Electric Funds provide a return on investment to the General Fund in the form of Utility Fund transfers, as established in the City’s Charter. Article VII, Section 2 – Public utilities revenue, of the City Charter states:

   The revenue of each public utility shall be kept in a separate fund from all other receipts and shall be used for the purposes and in the order as follows:
   (a) For the payment of the operating and maintenance expenses of such utility, including the necessary contribution to retirement of its employees.
   (b) For the payment of interest on the bonded debt incurred for the construction or acquisition of such utility.
   (c) For the payment of the principal of said debt, as it may become due.
   (d) For capital expenditures of such utility.
   (e) For the annual payment into a reserve fund for contingencies, of an amount not to exceed ten percent of the expenditure for capital outlay for the year, exclusive of bond fund expenditures. The total accumulated in this reserve for contingencies shall at no time exceed five percent of the book value of the utility's capital in service. This reserve fund shall be available for use by the utility, only for replacements or emergency repairs and after special appropriation by the council.
   (f) The remainder shall be paid into the general fund by quarterly allotments.

The methodology of calculating the equity transfer has changed over the years. In July 1982, the City executed a contract with Price Waterhouse to evaluate and determine the appropriateness of the method utilized for determining the transfer from the Utilities Funds to the General Fund. The Price Waterhouse study noted that the City had a practice for its 82-year history of generating net income based on the provisions of the City Charter cited above. As part of the
study, Price Waterhouse conducted a survey of how cities determine an appropriate transfer to their General Funds. This survey concluded that many methods were in use, but that cash transfers from proprietary funds to the General Fund are a common and accepted practice for cities in California and other states. The most common method was based on a percentage of revenues. The most common method for investor-owned utilities was the Utility Enterprise Method (UEM) that bases the equity transfers upon a rate of return on the asset base. The method links the transfer to the total investment made in the utility.

In January 1983, Council was provided with the Transfers to the General Fund Study completed by Price Waterhouse [CMR: 143:3]. The study recommended the use of the UEM in which the proprietary enterprises (water, gas and electric) are viewed as taxpayers’ assets that should yield a reasonable return on the assets dedicated to the systems. Using the UEM, the transfer to the General Fund is calculated by multiplying the net plant assets of each utility by the rate of return. The study also recommended the City Council consider a “range of reasonableness” in determining the appropriate transfer to the General Fund.

The recommended “range of reasonableness” included a lower and upper boundary on the rate of return to be used in the UEM calculation. The lower end of the range used a rate of return equal to the current rate on Treasury bonds, a long-term, risk-free investment. The upper end of the range would be based on the rate equal to that used by the California Public Utilities Commission for investor-owned utilities, such as PG&E.

In 1996, a landmark electric utility deregulation bill (AB 1890) was passed by the California legislature. It allowed, as of March 31, 1998, customers to choose their electric commodity supplier. In addition, the Utility Infrastructure Improvement Program (UIIP), which began in FY 1991, had led to increased funding of Capital Improvement Program (CIP) projects, increasing the asset bases of the Water, Gas, and Electric Funds. Since the UEM is based on the asset base, the UIIP led to an increase in the level of transfers to the General Fund.

The combined effect of customers potentially “leaving” the Palo Alto system in order to be served by an alternate commodity supplier and the upward pressure on rates caused by rapidly increasing transfers to the General Fund led staff to review the equity transfer methodology. Responding to these conditions, in 1997, the City Council froze transfers from the Gas, Water and Electric Funds to the General Fund at FY 1997 levels of $11.835 million annually.

In 1999, the City selected R. W. Beck to evaluate methodologies for Utility Fund transfers to the General Fund. The study’s scope included the review of existing transfer methodologies, identification of alternative methodologies, and the development of recommendations.

The R. W. Beck study, completed in March 2000, concluded that the current UEM transfer methodology is viable if it undergoes certain modifications to recognize the risk associated with the electric and gas supply business. The analysis performed in 2000 resulted in a recommendation that the City adopt an equity transfer policy similar to the UEM that had been adopted by the City after the 1982 Price Waterhouse study. The final recommendation contained in R.W. Beck’s 2000 report was not ultimately adopted by the City.
The UAC reviewed the R. W. Beck Utility Funds Transfer Study in March 2000 and concurred with staff’s recommendation to change the transfer methodology as follows:

- For the Water Fund, increase the transfer at an annual rate of 3 percent per year.
- For the Electric Fund, calculate the transfer based on 14.5 percent of Adjusted Sales Revenue (ASR), where ASR is defined as the metered sales revenue less the Capital Improvement Program (CIP) expenditures.
- For the Gas Fund, use the same basic methodology, but use 15 percent of ASR in the calculation.
- Include in the methodology a sharing arrangement in case of a loss faced by one of the utility funds.

In April 2000, the City Council approved the recommended methodology for the equity transfers (CMR: 223:00) beginning in FY 2001. However, the new UEM-based methodology was only in use for one year. In FY 2002 the equity transfer from the Electric and Gas Funds was changed so that the equity transfers increased by 3% from the previous year’s transfer amounts as was being done in the Water Fund.

The City hired the firm of Black and Veatch in 2008 to review the Water Fund equity transfer. After examining the water equity transfer methodology study and the practices of other public agencies, the City ceased the equity transfer to the General Fund from the Water Fund beginning in FY 2010. In addition, R. W. Beck was engaged in early 2009 to review its recommendations from 2000 and to again evaluate alternate equity transfer methodologies for the Gas and Electric Funds. R. W. Beck completed its review of the electric and gas equity transfers in February 2009, identifying alternative methodologies and recommending a methodology for the future that it considered fair and reasonable.

R. W. Beck recommended that the City employ a Return on Rate Base method similar to the UEM utilized in the past by Palo Alto. The method requires the annual calculation of the “rate base” for the Electric and Gas Funds. The rate base contains the following components that are added together:

- Net asset value of the utility assets as of the latest audited fiscal year. This is calculated every year by the Administrative Services Department. The net asset value is adjusted every year by that year’s capital additions and reductions for depreciation, which is based on the life of each asset. The latest audited net asset value will be found in the City’s Comprehensive Annual Financial Report (CAFR);
- Working capital for the supply purchases for the upcoming fiscal year. This is calculated by multiplying the budgeted cost for supply purchases by 1/12 since the City needs to reserve sufficient funds for one month of these costs;
- Working capital for the non-energy supply operating costs for the upcoming fiscal year. This is calculated by multiplying these costs by 1/8 since there is approximately a 45-day lag from customer usage of the energy deliveries and payment received for the energy deliveries;
- Additional capital projects budgeted during the current fiscal year. This is equal to the additional budgeted capital improvements minus the expected customer funded improvements;
- Depreciation for the current fiscal year. This is the estimated depreciation on the utility assets for the current fiscal year, which will result in a reduction of the asset base; and

The rate base is then multiplied by an appropriate return on equity to calculate the equity transfer. R. W. Beck recommends using an adjusted return on equity based on the return on equity allowed by the California Public Utilities Commission for PG&E. R. W. Beck recommended methodology has two adjustments to PG&E’s allowed return on equity to account for differences between an investor owned utility (IOU) like PG&E, and a municipally owned utility. The first adjustment is a tax adjustment and the second is a risk adjustment.

The tax adjustment compensates for the fact that the City of Palo Alto Utilities is a tax-exempt entity and the City does not pay taxes on its collected return. The tax adjustment is 30%, which is reflective of the total tax rate for taxable entities. The risk adjustment is based on the concept that an investment in a municipal utility is less risky than an investment in an IOU. R. W. Beck advised that the difference in yield between corporate bonds and municipal bonds cannot be entirely explained by the tax adjustment alone. R. W. Beck recommends a 15% factor for this risk adjustment.

The calculation of the return on equity appropriate for Palo Alto, then is equal to PG&E’s approved return on equity multiplied by 0.70 (1-.30, the tax adjustment) multiplied by 0.85 (1-.15, the risk adjustment). As an example, using PG&E’s current approved return on equity of 11.35%, the total return for Palo Alto would be equal to 11.35% times 0.7 times 0.85, or 6.75%. When this return on equity is multiplied by the rate base, calculated as described above, the answer is the equity transfer for the Electric and Gas Funds.

To illustrate, the methodology, if it were in place for FY 2009, the calculation would have been as follows for the Electric and Gas Funds:

Electric Equity Transfer:

\[
\begin{align*}
&\text{Electric Equity Transfer:} \\
&\quad \$143,377,000 \text{ – net asset value as of June 30, 2007 from the FY 2007 CAFR}^1 \\
&\quad + \ 6,393,000 \text{ – supply working capital (supply purchases divided by 12)} \\
&\quad + \ 5,241,000 \text{ – operating expenses working capital (operating expenses divided by 8)} \\
&\quad + \ 9,260,000 \text{ – FY 2008 budgeted CIP less customer funded improvements} \\
&\quad - \ 5,387,000 \text{ – FY 2008 depreciation} \\
&\quad \text{\$158,884,000 – total electric rate base} \\
&\text{Electric Equity Transfer} = \$158,884,000 \times 0.0675 = \$10,725,000
\end{align*}
\]

1 Adjusted for fiber optic net asset value
Gas Equity Transfer:

$ 65,471,000 – net asset value as of June 30, 2007 from the FY 2007 CAFR
+ 2,324,000 – supply working capital (supply purchases divided by 12)
+ 1,534,000 – operating expenses working capital (operating expenses divided by 8)
+ 6,365,000 – FY 2008 budgeted CIP less customer funded improvements
- 1,552,000 – FY 2008 depreciation

$ 74,142,000 – total gas rate base

Approved Equity Transfer Methodology

Council adopted the current equity transfer methodology, based on R. W. Beck’s recommendation on June 15, 2009 with the FY 2010 budget. The methodology is illustrated in the example above.

3. Legislative Policy Guidelines

2011 Legislative Policy Guidelines

Background

The utility industry is a high profile and heavily regulated industry that is subject to copious legislative action at both the state and federal level. Such legislation can influence, among other things, the reliability and security of the supply and distribution infrastructure, commodity procurement practices, customer service and billing, program design, rate design, and activities and costs associated with climate protection. Representatives of the City (elected officials and staff) participate in Federal and State legislative forums to advocate positions on energy and water-related issues that facilitate the City’s Utilities Department’s key objectives of providing valued utility services to customers and dependable returns to the City, and employing balanced environmental solutions. The City’s Utilities Department also participates in joint action efforts to advocate for goals and objectives shared by other publically owned utilities.

A set of policy guidelines is developed each year that identifies the goals and priorities for the Utilities Department to be applied by staff when evaluating legislation. While the guidelines are used by staff for evaluating legislation, any advocacy positions taken in alignment with these guidelines will be subject to the approval of the Utilities Director or City Manager per the City’s legislative advocacy process.

Approved Guidelines


All Utilities

Goals

1. Preserve/enhance local accountability in the control and oversight of matters impacting utility programs and rates for our customers while balancing statewide climate protection goals.
3. Support efforts to maintain or improve the reliability of the supply, transmission, storage and distribution/collection infrastructures.

4. Maintain the City of Palo Alto Utilities’ (CPAU’s) ability to provide safe, reliable, sustainable, and competitively-priced utility services.

Legislative Policy Guidelines
1. Advocate goals through active participation in joint action efforts.
2. Communicate the City’s record on environmental and energy efficiency programs with Legislature, California Energy Commission (CEC), California Air Resources Board (CARB), and Natural Resources Defense Council (NRDC) via California Municipal Utilities Association (CMUA), Northern California Power Agency (NCPA), and the Bay Area Water Supply and Conservation Agency (BAWSCA).

3. Support legislation that will result in the most cost-effective reduction of GHG emissions, recognition of early action, and inclusion of more efficient solutions, such as cogeneration, distributed resources, and demand control programs, in integrated resource plans.

4. Promote utility legislation and regulation that support reasonable reliability standards and compliance requirements, and effective and consistent reporting requirements, customer communications, and goal-setting.

5. Oppose cost shifts from Federal or State budgets and California Public Utilities Commission (CPUC) jurisdictional utilities through active participation in CMUA and NCPA legislative activities.

6. Advocate for State and Federal grants for local and regional applications of energy efficiency, conservation, renewable resources, fiber, wastewater collection systems and recycled water projects.

7. Maintain right of way access for utility infrastructure.

8. Protect the value of existing contracts and local regulatory approvals of such contracts.

Water Goals
1. Increase the security and reliability of the regional water system owned and operated by the San Francisco Public Utilities Commission (SFPUC).

2. Maintain the provision of an environmentally sustainable, reliable supply of high quality water at a fair price.

3. Support ability of municipal utilities to develop and manage their own conservation and efficiency programs and retain authority over ratemaking, including the ability to optimize volumetric and fixed charges to balance the goals of revenue certainty and water use efficiency.

4. Support efficiency and recycled water programs in order to minimize the use of imported supplies.

Legislative Policy Guidelines
1. Advocate goals through active participation in the Bay Area Water Supply and Conservation Agency (BAWSCA) and California Municipal Utilities Association (CMUA), with support from Palo Alto staff for BAWSCA and the San Francisco Bay Area Regional Water System Financing Authority (RFA).
2. Participate in California Urban Water Conservation Council (CUWCC) Best Management Practice (BMP) revisions and development to ensure that aggressive and cost-effective efficiency goals are incorporated and operating proposals are reasonable, achievable, and cost-effective.

3. Advocate to ensure that legislative actions regarding the Hetch Hetchy Reservoir and conveyance system include the following requirements:
   - timely rebuilding of the regional water system;
   - maintains the quality of delivered water;
   - minimizes any increase in the cost of water;
   - creates no additional exposure to more frequent or severe water shortages;
   - supports the existing water system and its operation.

4. Advocate for interpretations or implementation of Water Code provisions (such as those enacted by AB 1823 (2002), AB 2058 (2002) and SB 1870 (2002)) that maintain or reinforce the authorities and protections available to the City and BAWSCA members outside of San Francisco.

5. Support provision of sufficient resources for BAWSCA to enable it to advocate for:
   - an environmentally sustainable, reliable supply of high quality water at a fair price;
   - preservation of Palo Alto’s existing contractual water allocation and transportation rights on the SFPUC Hetch Hetchy system;
   - regional planning for conservation, recycled water, and other water supply projects.

6. Advocate for:
   - actions that preserve Palo Alto’s existing contractual rights
   - supporting actions that preserve local control over water use and limit encroachment from outside jurisdictions

7. Support infrastructure security and reliability including an interconnection between the SCVWD West Pipeline with the SFPUC’s Bay Division Pipelines 3 and 4.

8. Support notification requirements that aid residents/customers but do not inflict undue or unobtainable requirements on the utility.

9. Support local control of public benefit funds funding levels and program design.

10. Advocate for financing or funding for water conservation programs and recycled water projects that meet end-use needs and conserve potable water.

Gas Goals
1. Preserve /enhance the ability of municipal utilities to develop their own demand side efficiency and conservation programs, alternative gas supplies, and rate structure.

2. Support efforts to reduce greenhouse gas emissions and protect the environment.

3. Increase the security and reliability of the gas supply and transmission infrastructure. This includes retaining access to intra- and interstate gas transmission systems to reliably serve customers.

4. Preserve just and reasonable utility rates.

Legislative Policy Guidelines
1. Advocate most of these goals mainly through the American Public Gas Association (APGA) with minor support from Palo Alto staff.
2. Work with Northern California Power Agency (NCPA) and California Municipal Utilities Association (CMUA) to the extent that the City’s goals as a gas distributor align with generators’ use of natural gas.
3. Support increased production/incentives for renewable gas supplies.
4. Advocate for financing or funding for natural gas efficiency and solar water heating end uses.
5. Support market transparency and efforts to eliminate market manipulation through reasonable oversight.
6. Support municipal utilities ability to enter into pre-pay transactions for gas supplies.

Electric Goals
1. Preserve /enhance the ability of municipal utilities to exercise local accountability and oversight over matters impacting customer service, programs (such as demand side efficiency and conservation programs), and rate structure.
2. Preserve/enhance the reliability and security of infrastructure.
4. Preserve just and reasonable utility rates/bills.

Legislative Policy Guidelines
1. Advocate goals through Northern California Power Agency (NCPA), California Municipal Utilities Association (CMUA), American Public Power Association (APPA), Transmission Agency of Northern California (TANC), and Bay Area Municipal Transmission Group (BAMx) with support from Palo Alto staff to speak with a coordinated voice.
2. Advocate for legislation/regulations that provide local support for:
   • clean distributed generation and cogeneration projects, and standards for connecting such resources to the local distribution system;
   • electric efficiency programs;
   • implementation of renewable portfolio standards;
   • storage integration;
   • smart grid design and implementation, and
   • control of public benefit funds (as allowed in AB1890 (1996)).
3. Support cap-and-trade market designs that:
   • protect consumers from the exercise of market power;
   • allocate allowances that help mitigate impacts to Palo Alto customers while providing incentives for utilities to move to lower GHG emission portfolios;
   • provide flexible compliance mechanisms such as banking & borrowing of allowances.
4. Support renewable portfolio standards that:
   • promote the 33% goal for the state;
   • maintain local compliance authority; and
   • allow utilities to pursue low cost alternatives by utilizing existing transmission system to access out-of-state resources.
5. Support/encourage transmission, generation, and demand-reduction projects and solutions including advocating for financing or funding solutions/options for projects that:
   • enhance/ensure reliability;
• ensure equitable cost allocation (including protection against imposition of state-owned electric contract costs on municipal utility customers);
• improve procurement flexibility (e.g. resource adequacy rules that ensure reliability and provide flexibility or use of Renewable Energy Certificates (RECs) in meeting State renewable portfolio standards);
• improve market transparency (particularly transparency of IOU’s transmission and procurement planning and implementation activities); and
• lower the environmental impact on the Bay Area and the Peninsula.

6. Advocate for Congressional, legislative, or administrative actions on matters impacting costs or operations of the Western Area Power Administration such as:
• support of Congressional Field Hearings to explore modernizing flood control strategies, river regulation and generation strategies at CVP plants to enhance generation, water delivery, flood control and fisheries;
• protection of the status of Western Power Marketing Administration and cost-based rates; and
• provisions for preference customers’ first take at land available with economic potential for wind farms.

7. Advocate for Congressional, legislative, or administrative actions on matters relating to overly burdensome reporting and compliance requirements established by the North American Reliability Corporation (NERC), the Federal Energy Regulatory Commission (FERC) or the Western Electricity Coordinating Council (WECC).

8. Seek Congressional remedies (if needed) for punitive application of fees and fines established by NERC, WECC, or FERC.

9. Work with California Independent System Operator (CAISO) or through FERC:
• to give buyers of renewable intermittent resources relief from imbalance penalties; and
• to promote financial and operational changes that result in timely and accurate settlement and billing.

Wastewater collection
Goals
1. Increase the reliability of the local wastewater collection systems.
2. Maintain the provision of an environmentally sustainable, reliable high quality wastewater collection service at a fair price.
3. Support ability of municipal utilities to develop and manage their own conservation and efficiency programs and retain authority over ratemaking, including the imposition of non-volumetric customer meter or infrastructure charges for wastewater collection service.
4. Support equal comparisons of wastewater collection system with regard to regulations in order to minimize and reduce onerous, costly and time-intensive reporting requirements and improve value and accuracy of information reported to the public.

Legislative Policy Guidelines
1. Advocate goals through active participation in the Association of Bay Area Governments (ABAG).
2. Advocate to ensure that legislative actions regarding the comparison of wastewater collections systems for future regulations include the following requirements:
• timely rebuilding of the local wastewater systems;
3. Support provision of sufficient resources for ABAG to enable it to advocate for:
   • environmentally sustainable, reliable wastewater collection service at a fair price;
   • regional comparisons of wastewater collection projects for future state grant funding.

4. Support infrastructure security and reliability including equitable allocation of funds for increasing the security of infrastructure.

5. Advocate for funding for wastewater collections system projects that reduce overflows and improve collection system efficiency.

4. Financial Reserves

Emergency Plant Replacement Reserves

Background

The Emergency Plant Replacement (EPR) Reserve was established by Article VII, Section 2(e) of the City Charter for the Electric, Water, Gas, and Wastewater Collection Funds for unplanned emergencies (or “contingencies”) only. The City has rarely used the Electric, Gas, Water, or Wastewater Collection EPR Reserves. The last time any of these EPR Reserves was tapped was in 1998 when the Electric EPR Reserve was used to cover the cost to replace a blown transformer. The introduction of the minimum guideline level in February 2007 [CMR: 143:07] was made in recognition of the City’s property loss insurance policies.

On June 15, 2009, the Council modified the minimum guideline level of the EPR Reserves [CMR: 281:09] to ensure that the EPR Reserves can cover the deductible amount to be equal to the liability insurance coverage deductible amount (currently $1 million). This would ensure that the full amount needed would be available for any unforeseen emergency where equipment needed to be repaired or replaced in order to ensure that the distribution systems continued to operate.

Approved Guideline:
Currently, the minimum guideline level for the Electric, Water, Gas, and Wastewater Collection Emergency Plant Replacement Reserves is equal to the City’s liability insurance coverage deductible amount.

Rate Stabilization Reserves

Background

Council established Rate Stabilization Reserves (RSRs) in May 1993 [CMR: 263:93] for the Water, Electric, Gas and Wastewater Collection Funds. The purpose of the RSRs is to stabilize rates by ensuring funds are available to cover short-term situations when expenditures exceed revenues, to provide a depository of excess funds when expenditures are less than projected or revenues are higher than budgeted, and to plan for certain known future occurrences that are of a one-time nature, or to ramp up if the expense is of an ongoing nature. Over time, the RSR guidelines have been changed to respond to changing needs.
The approved guidelines include a requirement approved by Council in February 2007 [CMR: 143:07] that the development of an assessment of the risks facing each fund be undertaken as part of the annual budget and retail rate development and approval process. This short-term risk assessment has been performed annually starting with Fiscal Year (FY) 2008.

The last time Council changed the RSR guidelines was on June 15, 2009 [CMR: 281:09] when the minimum and maximum guideline levels for the Electric Distribution RSR, Gas Distribution RSR, Gas Supply RSR, Wastewater Collection RSR and Water RSR were changed. The Electric Supply RSR was last adjusted by Council in February 2007 [CMR: 143:07].

**Approved Guidelines**

1. All RSRs: The target level of the RSRs for each budget year to be established following an annual evaluation of risks to each fund as part of budget preparation.
2. Electric Distribution RSR: Minimum guideline level = 15% of sales revenue, maximum guideline level = 30% of sales revenue.
3. Electric Supply RSR: Minimum guideline level = 50% of supply purchase cost, maximum guideline level = 100% of supply purchase cost.
4. Gas Distribution RSR: Minimum guideline level = 15% of sales revenue, maximum guideline level = 30% of sales revenue.
5. Gas Supply RSR: Minimum guideline level = 25% of supply purchase cost, maximum guideline level = 50% of supply purchase cost.
6. Wastewater Collection RSR: Minimum guideline level = 15% of sales revenue, maximum guideline level = 30% of sales revenue.
7. Water RSR: Minimum guideline level = 15% of sales revenue, maximum guideline level = 30% of sales revenue.

These guidelines are summarized in the table below.

<table>
<thead>
<tr>
<th>Reserve</th>
<th>Minimum Guideline Levels</th>
<th>Maximum Guideline Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Distribution RSR</td>
<td>15% of sales revenue</td>
<td>30% of sales revenue</td>
</tr>
<tr>
<td>Electric Supply RSR</td>
<td>50% of supply purchase cost</td>
<td>100% of supply purchase cost</td>
</tr>
<tr>
<td>Gas Distribution RSR</td>
<td>15% of sales revenue</td>
<td>30% of sales revenue</td>
</tr>
<tr>
<td>Gas Supply RSR</td>
<td>25% of supply purchase cost</td>
<td>50% of supply purchase cost</td>
</tr>
<tr>
<td>Wastewater Collection RSR</td>
<td>15% of sales revenue</td>
<td>30% of sales revenue</td>
</tr>
<tr>
<td>Water RSR</td>
<td>15% of sales revenue</td>
<td>30% of sales revenue</td>
</tr>
</tbody>
</table>

Calaveras Reserve

**Background**

In 1983, the City Council established the Calaveras Reserve in the Electric Fund to help defray a portion of the annual debt service costs associated with the Calaveras Hydroelectric Project, which was put in service at that time. As originally established, the Calaveras Reserve policy did not provide for a target balance and depletion of the reserve was anticipated by 2002.

California Assembly Bill 1890 was adopted in 1996, which provided for the deregulation of California’s electric industry effective January 1, 1998. A key element of deregulation was the provision for Direct Access, which would allow electric customers to choose their electric
commodity supplier. The City of Palo Alto Utilities (City), along with other California utilities, were faced with the prospect of losing customers and load to Direct Access and being saddled with expensive generation assets purchased or built to serve these customers. In response, Council changed the purpose of the Calaveras Reserve in 1996 (CMR: 214:96) and authorized collections from electric ratepayers to cover the amount that certain electric assets’ costs were projected to be higher than their market value in the future (i.e., stranded cost). In 1999, Council ceased collecting funds for these stranded costs and established the Calaveras Reserve Target and Guidelines with a schedule to draw down the funds through the end of FY 2033.

In 2001, the California electric industry faced an energy crisis triggering wholesale power price spikes and rolling blackouts throughout the state. The crisis was blamed on poor deregulation market design and market manipulation by energy suppliers. As a result, Direct Access was suspended in California for the investor-owned utilities and, subsequently, the City suspended its Direct Access program. Further, as a result of changing market conditions and the assignment of certain electric assets, the estimate of the City’s stranded cost is lower now than when stranded cost collections stopped in 1999. In June 2008, the City permanently assigned away its share in the Seattle City Light Exchange. Further, a 15-year assignment of the City’s share in the California-Oregon Transmission Project (COTP) was executed in January 2009. The assignments of the COTP and Seattle City Light Exchange effectively eliminate stranded costs associated with these two electric assets.

On July 15, 2009, Council adopted updated Calaveras Reserve Guidelines [CMR: 275:09]. Since adoption of the new guidelines, statewide efforts are underway to reintroduce Direct Access in California, thus increasing the likelihood of above-market costs actually being “stranded”. Although the City suspended its Direct Access program when Direct Access was suspended in California in 2001 for the investor-owned utilities, Direct Access is likely to return. Senate Bill 695 (SB 695) was signed into law in October 2009. The bill lifts some of the emergency measures the Legislature imposed during the 2000-01 energy crisis, including suspension of the ability for customers to choose a Direct-Access electricity provider. SB 695 allows the expansion of Direct Access service to individual retail non-residential end-use customers and requires the California Public Utilities Commission to phase in Direct Access over a three to five year period. This process is currently underway.

Approved Guidelines
1. Require the calculation of the “stranded costs” for the electric supply portfolio during the annual budget process for the upcoming budget year(s) and set the minimum transfer from the Calaveras Reserve to the Electric Supply Operating Budget equal to this amount;
2. Require the calculation of the “stranded costs” for the long-term (until 2032 when Calaveras debt is paid off) of the electric supply portfolio during the annual budget process and ensure that the Calaveras Reserve balance will be sufficient to cover this amount;
3. Calculate “stranded cost” based on the above market cost of the Calaveras Hydroelectric Project and the California Oregon Transmission Project; and
4. To the extent that there are funds available in excess of long-term “stranded cost” needs, staff will work with the UAC to identify and recommend projects for Council consideration and approval. Such projects shall be to the benefit of electric ratepayers.

5. **Resource Plans**

Long-term Electric Acquisition Plan (LEAP)

**Background**

The LEAP Objectives and Strategies were approved by Council on March 7, 2011 [Staff Report 1313].

**Approved LEAP Objectives**

1. Meet customer electricity needs through the acquisition of least total cost energy and demand resources including an assessment of the environmental costs and benefits
2. Manage supply portfolio cost uncertainty to meet rate and reserve objectives.
3. Enhance supply reliability to meet City and customer needs by pursuing opportunities including transmission system upgrades and local generation.

**Approved LEAP Strategies**

1. **Resource Acquisition** – Pursue the least total cost resources including an assessment of environmental costs and benefits to meet the City’s needs in the long term by:
   a. Evaluating each potential resource on an equal basis by evaluating rate impacts and establishing costs and values for location, time of day and year, carbon, value of renewable supplies and any secondary benefits attributed to the resource; and
   b. Including all resources – conventional energy, local and remote renewable energy supplies, energy efficiency, cogeneration, and demand reduction – in the evaluation.
2. **Electric Energy Efficiency and Demand Reduction** – Fund programs that maximize the deployment of cost-effective, reliable and feasible energy efficiency and demand reduction opportunities as the highest priority resources by:
   a. Every three years, preparing a ten-year energy efficiency plan that identifies all cost-effective energy efficiency opportunities;
   b. Using the cost of long-term renewable energy resources adjusted for time of day factors and location as the avoided cost when evaluating cost effectiveness of energy efficiency measures;
   c. Designing and making energy efficiency programs available to all customers; and
   d. Considering the impacts (costs, benefits and GHG emissions) of substituting electricity-using appliances for natural gas-using appliances and vice versa in the ten-year energy efficiency plan.
3. **Renewable Portfolio Standard (RPS)** – Reduce the carbon intensity of the electric portfolio by acquiring renewable energy supplies by:
   a. Pursuing a target level of renewable purchases of 33% by 2015 with the following attributes:
      i. The contracts for investment in renewable resources shall not exceed 30 years in term.
      ii. Pursue only renewable resources deemed to be eligible by the California Energy Commission (CEC).
      iii. Evaluate use of Renewable Energy Certificates (RECs) to meet RPS.
b. Ensuring that the retail rate impact for renewable purchases does not exceed 0.5 ¢/kWh on average; and
c. Evaluating a Feed-In Tariff (FIT) contracting mechanism that considers the full value of locally sited renewable resources.

4. **Local Generation** – Promote and facilitate the deployment of cost-effective local resources by:
   a. Using the renewable market price referent (MPR) adjusted for time of day factors and location as the avoided cost when evaluating cost effectiveness of local resources;
   b. Considering energy delivery cost uncertainty and strategic value options when evaluating opportunities;
   c. Evaluating a Feed-in-Tariff to promote locally sited renewable resources;
   d. Evaluating cost-effective energy storage resources; and
   e. Evaluating the feasibility of developing a 25 to 50 MW generating facility connect to the City’s distribution system.

5. **Climate Protection** – Reduce the electric portfolio’s carbon intensity by:
   a. Supporting the City municipal government’s climate protection goals;
   b. Promoting the use of technologies (e.g. incentives for cogeneration systems, promotion of EVs, in-home energy displays) and programs that will reduce the community’s carbon footprint at a cost of up to the City’s value of carbon;
   c. Continuing to offer a renewable resource-based retail rate for all customers who want to voluntarily select an increased content of non-hydro renewable energy; and.
   d. Evaluating quantitative goals for possible future implementation.

6. **Hydro Resource Management** – Actively monitor and manage cost uncertainty related to variations in hydroelectric supply and maximize value of hydro resources by:
   a. Planning for an average hydro year on a long-term basis;
   b. Utilizing cost effective hydro resource management products; and
   c. Implementing opportunities to maximize benefits and reduce costs of the Western Base Resource and Calaveras hydroelectric resources.

7. **Market Price Exposure Management** – Actively monitor and manage operational, counterparty and wholesale energy price risk in the short-term (up to three to five years) by:
   a. Maintaining an adequate pool of creditworthy suppliers; and
   b. Diversifying supply purchases across commitment date, start date, duration, suppliers and pricing terms in alignment with rate stability objectives and reserve guideline.

8. **Transmission and Reliability** – Pursue the reliability of supply at fair and reasonable transmission and delivery costs by:
   a. Actively participating through collaborative efforts with other entities, in local, regional, statewide and federal regulatory and legislative forums;
   b. Participating in transmission and reliability market design forums to ensure that adopted market designs result in adequate reliability, workably competitive markets and equitable cost allocation;
   c. Evaluating interconnection options to the City to increase service reliability and lower delivery costs; and
   d. Exploring transmission opportunities and strategies to meet long-term renewable portfolio objectives beyond 2020.
Gas Utility Long-term Plan (GULP)

Background
The GULP Objectives and Strategies were approved by Council on March 7, 2011 (Staff Report 1317).

Approved 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.

Approved 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;
a. Negotiating with PG&E for fair access to transportation and storage; and
b. Exploring potential joint action with other public agencies.

Water Integrated Resource Plan (WIRP)

Background
The WIRP Guidelines were adopted by Resolution by the City Council on December 8, 2003 [CMR:547:03].

Approved WIRP Guidelines

Guideline 1 – Preserve and enhance SFPUC supplies: With respect to the City of Palo Alto Utilities’ (CPAU’s) primary water supply source, the San Francisco Public Utilities Commission (SFPUC), continue to actively participate in the Bay Area Water Supply and Conservation Agency (BAWSCA) to assist in achieving BAWSCA’s stated goal: “A reliable supply of water, with high quality, and at a fair price.” Objectives in support of that overall goal include:

A. That the regional water system gets rebuilt cost-effectively and that BAWSCA monitor implementation of AB 1823 – San Francisco should safeguard the water system against damage from earthquakes and other foreseeable hazards. BAWSCA will monitor progress on the system repairs and on completing the requirements of the legislation that the BAWSCA agencies supported to oblige San Francisco to repair and rebuild the regional system.

B. That the cost of improvements is fairly allocated – San Francisco should commit to maintaining cost-based pricing, with the costs of the wholesale water system shared between the City and its wholesale customers based on their proportionate share.

C. That future water needs can be met – San Francisco must evaluate the ability of the regional system to meet future supply and capacity requirements and must use the BAWSCA agencies’ long-term water demand forecasts as the basis for regional water demand projections.

D. That there are adequate supplies during droughts – San Francisco should arrange back-up supplies for dry years and should “drought proof” the entire service area, not just San Francisco itself. If rationing becomes necessary, San Francisco should use a system that allocates available water between San Francisco and wholesale customers in a way that (1) is fair and (2) avoids penalizing long-term conservation efforts and/or development of alternative supplies, such as recycled water.

E. That communities prepare for potential water outages – San Francisco should coordinate with the BAWSCA agencies to develop a crisis management plan.

F. That agencies implement cost-effective water conservation activities – San Francisco should provide agencies enough information so that they can prepare for possible outages, including the provision of conservation programs for their communities. BAWSCA can act as coordinator for these programs to improve the cost-effectiveness of agencies offering such programs.

G. That water received must meet drinking water standards – San Francisco should continue to protect the purity of Hetch Hetchy water and commit to provide its wholesale customers with water that meets EPA and California drinking water standards.

H. That the Master Contract is properly implemented and a new Master Contract is in place prior to 2009 – San Francisco should commit to maintaining cost-based pricing, with the costs of the wholesale water system shared between the City and its wholesale customers based on their proportionate share.
I. That there is ongoing support of efforts to protect health, safety and economic well being of the water customers and communities – BAWSCA should maintain the support of the many allies who supported the legislative effort to ensure San Francisco repairs, rebuilds, and maintains the regional system.

Guideline 2 – Advocate for an interconnection between SFPUC and the District: Work with the Santa Clara Valley Water District (District) and the SFPUC to pursue the extension of the District’s West Pipeline to an interconnection with the SFPUC Bay Division Pipelines 3&4. Continue to re-evaluate the attractiveness of a connection to an extension of the District’s West Pipeline.

Guideline 3 – Actively participate in development of cost-effective regional recycled water plans: Re-initiate discussions with the owners of the Palo Alto Regional Water Quality Control Plant (PARWQCP) on recycled water development. In concert with the PARWQCP owners, conduct a new feasibility study for recycled water development. Since the feasibility of a recycled water system depends upon sufficient end-user interest, determine how much water Stanford and the Stanford Research Park would take.

Guideline 4 – Focus water DSM programs to comply with BMPs: Continue implementation of water efficiency programs with the primary focus to achieve compliance with the Best Management Practices (BMPs) promoted by the California Urban Water Conservation Coalition.

Guideline 5 – Maintain emergency water conservation measures to be activated in case of droughts: Review, retain, and prioritize CPAU’s emergency water conservation measures that would be put into place in a drought time emergency.

Guideline 6 – Retain groundwater supply options in case of changed future conditions: Using groundwater on a continuous basis does not appear to be attractive at this time due to the availability of adequate, high quality supplies from the SFPUC in normal years. However, SFPUC supplies are not adequate in drought years and circumstances could change in the future such that groundwater supplies could become an attractive, cost-effective option. Examples of changing circumstances could be that the amount of water available to CPAU from the SFPUC for the long-term is reduced. This could occur if regulations or legislation require additional water to be made available to the Tuolumne River fisheries. In addition, in the future allocations or entitlements to SFPUC water may be developed. If those allocations are based on the dry-year yield of the system, allocations to all the users of the system, including CPAU, could be well below their current and projected future needs. CPAU should retain the option of using groundwater in amounts that would not result in land surface subsidence, saltwater intrusion, or migration of contaminated plumes.

Guideline 7 – Survey community to determine its preferences regarding the best water resource portfolio: Seek feedback from all classes of water customers on the question of whether to use groundwater during drought to improve drought year supply reliability. At the same time, seek feedback on the appropriate level of water treatment for groundwater if it were to be used in droughts. Survey all classes of water customers to determine their preferences as to the appropriate balance between cost, quality, reliability, and environmental impact.