CITY AND COUNTY OF SAN FRANCISCO

BOARD OF SUPERVISORS

BUDGET ANALYST

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December 21, 2004

Honorable Chris Daly, Chair of the Finance and Audits Committee
And Members of the Board of Supervisors
City and County of San Francisco
Room 244, City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

Dear Supervisor Daly and Members of the Board of Supervisors:

The Budget Analyst is pleased to submit this *Phase II Management Audit of the Public Utilities Commission, Hetch Hetchy Enterprise Fund.* On May 18, 2004, the Board of Supervisors adopted a motion directing the Budget Analyst to conduct a management audit of the San Francisco Public Utilities Commission, pursuant to its powers of inquiry defined in Charter Section 16.114 (Motion No. M04-57). The purpose of the management audit has been to (i) evaluate the economy, efficiency and effectiveness of the Public Utilities Commission's programs, activities, and functions and the Public Utilities Commission's compliance with applicable State and Federal laws, local ordinances, and City policies and procedures; and (ii) assess the appropriateness of established goals and objectives, strategies and plans to accomplish such goals and objectives, the degree to which such goals and objectives are being accomplished, and the appropriateness of controls established to provide reasonable assurance that such goals and objectives will be accomplished. The scope of the management audit includes all of the Public Utilities Commission's programs, activities, and functions.

The results of the management audit are being presented in four phases:

- The *Phase I Management Audit of the Public Utilities Commission – Clean Water Enterprise Fund* report was submitted to the Board of Supervisors on September 27, 2004.

- Phase II, which is the subject of this report, is a review of the Hetch Hetchy Enterprise's programs, activities and functions.

- Phase III will be a review of the Water Enterprise Fund's programs, activities, and functions, including water supply, treatment, and distribution for regional and City customers.

- Phase IV will be a review of the programs, activities, and functions of the Public Utilities Commission as a whole, including the Water System Capital Improvement Program, administrative functions, and enterprise functions, such as asset management, that affect all three enterprise funds.

This Phase II report reviews the Hetch Hetchy Enterprise in terms of:

- Business planning and risk management processes.

- Implementation of analytical software.

- Maintenance and operations functions.

- Personnel management.

- The billing and collection of retail electricity accounts.

- Streetlight management.

- The Power Policy Division's output and organization.

This management audit has been conducted in accordance with *Government Auditing Standards, 2003 Revision,* issued by the Comptroller General of the United States, U.S. General Accounting Office. As part of the management audit, the Budget Analyst interviewed the senior management and other Public Utilities Commission staff and representatives from other City and County departments. Additionally, the management audit staff reviewed various State statutes and local codes; examined various documents, reports and work products prepared by the Public Utilities Commission; reviewed the Hetch Hetchy Enterprise Fund's audited financial statements and reports prepared by various consultants; obtained and analyzed various data and financial reports; and evaluated the effectiveness of the various tools used by Public Utilities Commission management to oversee the activities of the Hetch Hetchy Enterprise program.

This management audit report of the Hetch Hetchy Enterprise program includes nine findings and 39 related recommendations prepared by the Budget Analyst, that encompass major areas of the Hetch Hetchy Enterprise's operations. A list of the management audit recommendations are shown in the Attachment to this transmittal letter. Implementation of the Budget Analyst's recommendations would result in estimated one-time revenue increases of approximately $125,000 from improved collection of retail electricity accounts and annual expenditure decreases of approximately $185,000 from reorganization of maintenance positions to eliminate unnecessary payment of supervisory pay differentials and deletion of one Power Policy Division position in the Power Policy Unit. Additionally, implementation of the Budget Analyst's recommendations would reduce the risk of revenue loss or unnecessary expenditures from:

(i) Failure to implement software tools necessary for efficient forecasting of water and electricity resources and scheduling electricity on the State's electricity grid, for which $600,000 in costs have already been incurred.

(ii) Inefficient implementation of the San Francisco Electric Reliability Project, which could result in the City not receiving the full benefit of the $13,266,667 in State settlement proceeds from the Williams Energy Company for this project.

(iii) Inadequate business planning, including failing to undertake full analysis of the costs and benefits related to energy efficiency and alternative energy initiatives, and to alternative proposals for scheduling coordinator services. For example, each energy efficiency and alternative energy proposal needs to fully take into account any foregone revenues for the Hetch Hetchy Enterprise and realistic operational capacity projections.

(iv) Failure to implement risk management protocols to determine optimal levels of hydroelectric power generation under the water first policy, which would result in an estimated $1,000,000 in revenues for every one percent increase in hydroelectric power generation.

The following sections summarize our findings and recommendations.

Section 1: The Public Utilities Commission's Failure to Develop a Hetch Hetchy Enterprise Business Plan

Hetch Hetchy Enterprise management has not developed effective business planning processes or performance measurement systems. As a result, the Department has been less able to effectively advise the Mayor, the Board of Supervisors, and the Public Utilities Commission on its resource needs, appropriate retail power rates, the reasonableness of General Fund departmental rate discounts, and the costs and benefits of alternative energy use strategies. In addition, without a business plan, the Hetch Hetchy Enterprise has been slow to respond to changes in the deregulated energy market since 1998 and remains unable to obtain a credit rating for borrowing related to the voter approved Energy Efficiency and Renewable Energy Revenue Bonds.

Recognizing these concerns, the Board of Supervisors has previously requested and the Public Utilities Commission has repeatedly directed Department management to prepare a Hetch Hetchy Enterprise business plan. Despite these repeated directives, the establishment of an in-house planning group of senior managers and the expenditure of $57,071 on consultant contracts, the Department has not yet produced such a plan.

The Department's inability to produce a business plan can be attributed to frequent changes in project leadership; management's inability to resolve certain conflicts between the Power Policy, Power Operations, and Water Operations Divisions; and the lack of a coherent strategic vision with defined business goals. Efforts to produce a business plan have been suspended while Department management works with stakeholders to assess the planning process and determine power policy direction.

The General Manager should make the development of a Hetch Hetchy Enterprise business plan an early priority of her administration. To ensure timely completion, the Board of Supervisors should reserve 75 percent of FY 2005-2006 capital project appropriations for the Hetch Hetchy Enterprise until the Department transmits a business plan to the Board of Supervisors.

Section 2: Water Resource and Power Generating Risk

The Public Utilities Commission's primary responsibility is to provide water of high quality and sufficient quantity to its customers, and not to generate hydroelectric power. However, 80 percent of the Hetch Hetchy Enterprise's revenues come from the generation of hydroelectric power, equal to $106 million in FY 2003-2004. Because the Public Utilities Commission has not established an effective risk management program that provides the tools necessary to balance water storage and supply requirements against hydroelectricity generating obligations to its customers, the Hetch Hetchy Enterprise risks serious financial consequences, particularly in years when inflows to the Hetch Hetchy reservoir system are at median or below median levels.

For example, the Hetch Hetchy Enterprise did not generate sufficient electricity to meet its obligations to customers over the past three years, when there were below median water flows. As a result, the Department was required to spend nearly $50 million on purchased power in order to meet base electricity obligations to its customers. In 2003 alone, the Hetch Hetchy Enterprise purchased an estimated $12.7 million in power to supplement the hydroelectric power that it generated to meet its base obligations to customers and to allow certain capital improvements.

By establishing a comprehensive risk management program, the Public Utilities Commission would be better able to plan for hydroelectric power needs during low water years and during the construction of capital projects, thereby reducing its dependence on purchased power. At a minimum, such plan should (i) define the risk criteria that are inherent when making decisions to release water and generate hydroelectricity, (ii) determine risk thresholds that the Public Utilities Commission is willing to tolerate when releasing water to generate hydroelectricity, and (iii) provide policy direction and procedures to ensure that decisions to release water and generate hydroelectricity are within the Public Utilities Commission's risk parameters.

Section 3: Analytical Software Implementation

In the last four years, the Hetch Hetchy Enterprise has spent over $600,000 on the purchase and implementation of Vista and Aces analytical software and on the Data Mart data warehouse, and has committed significant staff and consultant resources on software implementation. However, to date the software programs have not been successfully implemented and there is considerable uncertainty regarding the timeline and additional cost to fully implement short range and long range planning, and water release and electricity scheduling tools.

Delayed implementation of the Hetch Hetchy Enterprise's Data Mart, which will compile wholesale and retail electricity meter reading and billing data from different sources, hinders the Hetch Hetchy Enterprise's ability to accurately reconcile electricity bills with the Pacific Gas and Electric Company's electricity meter data. Further, these delays increase the risk of an adverse settlement in the $28 million dispute with the Pacific Gas and Electric Company, in which the Hetch Hetchy Enterprise has challenged PG&E meter data from 2000 through 2003 to determine whether meter usage and payments to PG&E had been correctly computed.

Costly delays in Hetch Hetchy's efforts to implement software solutions for its most pressing analytical needs will likely continue unless clear responsibility is assigned to senior managers, implementation timelines are established, and key milestone accomplishments are monitored by the Assistant General Manager of Operations. Without successful implementation of these critical software tools, management will be less able to manage core utility functions or avoid many risks that are inherent to utility enterprises.

Section 4. Maintenance and Materials Management

The Superintendent of Operations has various oversight responsibilities that impair his ability to effectively manage maintenance activities within the Project Operations Section. This impairment manifests itself in a lack of comprehensive policies and procedures, the absence of comprehensive performance measurement and reporting tools, and weak maintenance planning and scheduling processes. In addition, the Section has not established strong systems for materials management or for the control of tools and equipment.

The Hetch Hetchy Enterprise should evaluate its maintenance organization to develop a new organizational structure that incorporates efficient supervisory assignments and minimizes supervisory pay differentials. The Budget Analyst found that the Project Operations Maintenance Section assigned staff in a manner that resulted in supervisory differential pay for the section's staff. Three Water and Power Maintenance Supervisor I positions have each been assigned to manage three Operating Engineer, Universal positions, which are higher paid positions, resulting in the payment of supervisory pay differentials to each of the Water and Power Maintenance Supervisor I positions, equal to approximately $16,000 to $17,000 in increased pay annually per position. The Hetch Hetchy Enterprise could save approximately $48,000 to $51,000 annually in salary costs for the three Water and Power Maintenance

Supervisor I positions currently receiving supervisory pay differentials by reorganizing the maintenance work crews.

Section 5: Hetch Hetchy Enterprise Personnel and Administration

The Hetch Hetchy Enterprise has not established effective administrative, personnel management or asset security policies or procedures. General personnel policies and procedures related to employee conduct, work hours, job performance and health and safety are absent; and, no policies or procedures have been developed to provide management direction on emergency medical coverage, housing assignment or official travel for employees assigned to the remote Moccasin Powerhouse.

In addition, annual employee performance evaluations are inconsistently conducted. For example, the Maintenance Engineering Division conducted only one of 14 required evaluations in FY 2002-03 and FY 2003-04. Further, the Department does not comply with employee "Entrance and Exit" policies that are designed to safeguard City assets. Out of 63 temporary and permanent employees who left Hetch Hetchy employment between July 2002 and September 2004, only eight equipment and tool control forms were collected and reviewed by Human Resources Division personnel.

Hetch Hetchy Enterprise management should immediately develop water and power operations policies and procedures for the Hetch Hetchy Enterprise as a whole and for Moccasin operations specifically. In addition, during FY 2004-05, management should develop and comply with procedures to ensure that annual employee performance evaluations are conducted within all divisions. Further, management should strictly adhere to Entrance and Exit policies that are designed to safeguard City assets.

Section 6: Billing and Collection of Electricity Accounts

At the time of this report, tenants who occupy municipal buildings had past due electricity account balances of approximately $125,000 out of $607,000 in monthly billings, which equates to a 20.6 percent delinquency rate. More than 11 percent of Port tenant account balances were 90 days past due. For example, one Port tenant, who opened an account in March of 2002, had an average account balance of $20,852 in 2002, $46,036 in 2003, and $48,992 in 2004. This high delinquent rate and the rate of growth in delinquent balances results in part because the Public Utilities Commission has not established adequate policies or procedures for collecting this subcategory of electric accounts.

The Public Utilities Commission should develop more rigorous policies and procedures for enforcing collection of delinquent accounts. Specifically, penalty fees should be established for retail accounts that are 30 days or more past due and policies should be adopted for discontinuing service on retail electricity accounts when they become 90 days past due. In addition, regular reports should be developed and routinely provided to the Hetch Hetchy Enterprise Retail Services Manager to ensure more timely collections.

Development of rigorous collection policies and procedures, including establishing penalty fees for past due retail electricity accounts, could result in an estimated minimum of $125,000 in one-time electricity revenues if all accounts were current.

Section 7: Streetlight Management

Since streetlight management is not a core Public Utilities Commission function, the Streetlight Management Program has not been given a high priority. There is a significant capital improvement backlog, particularly with regard to energy efficiency initiatives. For example, the high voltage series loop lighting systems on certain major roads, including Van Ness Avenue and Lombard Street, are outdated, using non-energy efficient systems with very expensive parts. Previous efforts to retrofit the Van Ness Avenue streetlights in a joint project with MUNI were discontinued and the funds were reallocated following the 1989 earthquake. Further, there is no substantial proactive repair and replacement program currently underway. There is no comprehensive streetlight capital improvement plan, no Streetlight Management Program business plan, no development of alternative funding sources, no comprehensive assessment inventory of the City's streetlights, and no plan to eliminate the backlog of streetlight outages, which are estimated to be approximately 10 percent of the Public Utilities Commission's 22,000 street lights, or 2,200 streetlight outages at any one time.

Responsibilities for streetlight planning, design, construction, and maintenance are split between the Public Utilities Commission and the Department of Public Works. The Department of Public Works is also responsible for right of way projects, which can damage underground utilities, thereby directly impacting streetlight functionality and program costs.

Other cities place streetlight management programs in their major public works departments. By transferring the Streetlight Management Program from the Public Utilities Commission to the Department of Public Works or the Municipal Transportation Agency, the City could capitalize on organizational efficiencies that would (a) enhance right of way and traffic management services and coordination of capital improvement projects, (b) improve the ability to leverage alternative streetlight funding, and (c) allow the City to more aggressively pursue streetlight energy efficiency initiatives. The proposed transfer of responsibilities would be cost neutral, while simultaneously producing expanded revenue and cost reduction opportunities for the Streetlight Management Program.

Section 8: The Power Policy Division's Output

The San Francisco Electric Reliability Project has not met its project milestones or deliverables. The San Francisco Electric Reliability Project consists of the construction of two new electricity generating facilities at proposed sites on City-owned land at 25th and Illinois Street and at the Airport to house and operate four turbine generators that the City received as part of a settlement agreement negotiated by the State of California with the Williams Energy Company related to electricity price gouging and market manipulation beginning in June of 2000. Expediting this project's implementation would ensure that the unexpended balance of the $13,266,667 in State settlement proceeds, which the City is to receive as part of the settlement agreement with the Williams Energy Company to site and develop the electricity generating facilities, is used for maximum benefit. The City has not yet taken possession of the four turbines to be received under the settlement agreement. Each month that the four turbines have to be stored costs the City \$44,022 in storage, preventive maintenance and warranty extension costs, or \$528,260 annually, which could be used for other project purposes. On December 15, 2004, the Finance and Audits Committee approved the \$2,666,667 supplemental appropriation of the settlement amount of \$13,266,667 (with a \$1 reserve) to pay for: (a) a portion of the engineering and environmental studies costs for developing electricity generating facilities for three of the four gas turbine generators on City-owned land at 25th and Illinois Streets, and (b) the State Department of Water Resources and the California Power Authority for their expenses related to management of the San Francisco Electric Reliability Project, (c) the Pacific Gas and Electric Company's fees for electrical facility studies and an initial installment on the generator special facilities agreement, which will fund initial engineering and estimating work required to identify the facilities needed to connect the new City turbine generators to the Pacific Gas and Electric Company's transmission system, and (d) storage costs for the four gas turbine generators.

The projected benefits of the various energy efficiency and alternative energy initiatives being implemented by the Power Policy Division do not consider foregone revenues for the Hetch Hetchy Enterprise, operational capacity shortfalls, or ongoing operating and maintenance costs. Going forward, cost benefit analyses for such initiatives should include these factors so that the projects' maximum income is recovered.

The Electricity Resource Plan (December of 2002) is the City's mandated resources plan and the template for the Power Policy Division's work program. However, the Department has not met the Board of Supervisors' requirements to (a) submit an annual report on its progress towards implementing the plan's goals, and (b) evaluate and update the plan annually. These actions would ensure that this mandated resources plan remains a live document guiding the work of the Power Policy Division within the policy parameters approved by the Board of Supervisors.

Section 9: The Power Policy Division's Organizational Structure

The new General Manager has assigned the Power Policy Division to the Assistant General Manager, External Relations position established on October 15, 2004. The Budget Analyst considers this a workable option which could usefully promote (a) more transparent decision-making in a unit which has, at times, operated unilaterally, and (b) closer ties with the Planning Bureau. However, there are disadvantages. This organizational structure reinforces the current separation between policy and operations, and further removes the Power Policy Division from the Hetch Hetchy Enterprise's management structure and its daily management decision-making. These disadvantages could be managed through (a) a close working relationship between the Assistant General Manager, External Relations and the Assistant General Manager, Operations, within the context of a strategically oriented executive management team, and (b) the development of a Hetch Hetchy Enterprise business plan.

Compared to the Planning Bureau's ratio of 1.00 full-time equivalent (FTE) administrative support staff member for every 7.75 FTE other Planning Bureau employees, the Power Policy Division has the generous ratio of 1.00 FTE administrative support staff member for every 4.43 FTE other Power Policy Division employees. The elimination of an unjustified 1.00 FTE Classification 5643 Manager, Resource Planning and Administration position in the Power Policy Division would save up to $134,568 annually, while still providing 1.00 FTE administrative support staff member for every 6.20 FTE other Power Policy Division employees.

Department's Response

The Public Utilities Commission General Manager's written response is attached to this management audit report beginning on page 105. The Public Utilities Commission's written response agrees with 31, or approximately 79.5 percent, of our 39 recommendations, and is actively considering six recommendations. The Public Utilities Commission disagrees with two of our 39 recommendations.

In the written response under the heading "SFPUC Overall Comments", the Public Utilities Commission's General Manager states that "Regarding the Calpine energy services contract, the Budget Analyst fails to note that the losses posited in the Introduction are presented without showing the corresponding and offsetting third-party sales, which reduced actual losses to $11,848,855, rather than the $52,625,350 shown in Table 1." The Budget Analyst notes that if the Hetch Hetchy Enterprise were purchasing power at market prices, instead of the prices set under the Calpine agreement, offsetting revenues from third-party sales would result in net revenues to Hetch Hetchy instead of losses. The Budget Analyst notes that we have consistently used this approach to power price comparisons in prior reports to the Board of Supervisors concerning the Calpine agreement without objection from the PUC.

The General Manager also comments that the Budget Analyst has previously reported to the Board of Supervisors that the May of 2001 decision to enter into the Calpine agreement by the by the Public Utilities Commission and the Board of Supervisors was reasonable and prudent at that time based on the extraordinary wholesale electric market volatility and wholesale prices during the first four months of 2001. The Budget Analyst has not contradicted this statement, or any prior reports concerning the Calpine agreement in this management audit report. We have provided this information as a historical context that has obvious impacts on Hetch Hetchy operations and finances now and in the future, and have included no recommendations concerning the Calpine agreement.

As noted above, the General Manager has disagreed with two of our 39 recommendations. The General Manager has disagreed with Recommendation 1.3, which recommends that the Board of Supervisors should reserve all FY 2005-2006 capital project appropriations for the Hetch Hetchy Enterprise until the Department transmits a Hetch Hetchy Enterprise business plan to the Board of Supervisors. According to the General Manager's written response, "While the 2005-06 capital budget is not yet finalized, it will include funding for the San Francisco Electric

Reliability Project, for ongoing San Joaquin Pipeline repairs, Hetch Hetchy roads rebuilding, the Mayor's Energy Conservation Account and solar energy projects. Reserving all these funds could jeopardize progress on some of the projects, as well as the department's ability to meet its water and power delivery obligations."

The Budget Analyst has recommended reserving the Hetch Hetchy Enterprise's FY 2004-2005 capital budget to provide assurances to the Board of Supervisors that the Department will prepare and present a business plan, as previously directed by the Board of Supervisors. Although the General Manager, in her written response, has expressed concern that reserving all capital funds could jeopardize progress on some of the capital projects, the Budget Analyst notes that at least two of the projects, the San Joaquin Pipeline repairs and the Hetch Hetchy Enterprise's roads rebuilding projects, have significant available funds for capital projects. The Board of Supervisors has appropriated $3,559,000 for Hetch Hetchy Enterprises roads rebuilding between FY 1997-1998 and FY 2004-2005, of which $1,762,334 were available funds as of August 31, 2004, or approximately 49.5 percent of the total appropriation. Further, the Board of Supervisors appropriated $27,080,000 for the San Joaquin Pipeline repairs between FY 1997-1998 and FY 2004-2005, of which $7,124,167 were available funds as of August 31, 2004, or approximately 26.3 percent of the total appropriation. In November of 2004, at the request of the Public Utilities Commission, the Board of Supervisors approved a resolution (File 04-1430) authorizing the transfer of $4,448,000 in unexpended San Joaquin Pipeline repair funds for emergency fire repairs at the Hetch Hetchy Enterprise's Early Intake compound, still resulting in a remaining available balance of $2,676,167 for San Joaquin Pipeline repairs ($7,124,167 less $4,448,000).

In consideration of the General Manager's concern, stated in her written response to this report, that reserving all of the FY 2004-2005 capital funds could jeopardize progress on some of the Hetch Hetchy Enterprise's capital projects, the Budget Analyst has revised Recommendation 1.3 to recommend that, instead of reserving 100 percent, "Reserve <u>75 percent</u> of FY 2005-2006 capital project appropriations for the Hetch Hetchy Enterprise until the Department transmits a Hetch Hetchy Enterprise business plan to the Board of Supervisors."

The General Manager has also disagreed with Recommendation 2.4 to re-evaluate and expand the risk management functions of the existing Manager, Streetlights and Special Projects, position upon the proposed transfer of the Streetlight Management Program to the Department of Public Works. Although the General Manager states that, "While we are in strong agreement that our risk management functions should be strengthened and that some redeployment of staff time will help achieve this goal, we disagree that transferring the Streetlight Management Program is necessary to improve risk management". In fact, the Budget Analyst has <u>not</u> stated that the transfer of the Streetlight Management Program is necessary to improve risk management as a basis for Recommendation 2.4. On the contrary, the Budget Analyst has found that the Streetlight Management Program should be transferred to the Department of Public Works, depending on successful negotiations concerning the transfer of resources, as specifically stated in Section 7 (see pages 77 through 79 of this report). As a result, the existing Manager, Streetlights and Special Projects position would no longer have responsibility for managing the

Public Utilities Commission's Streetlight Management Program, and therefore, would be able to expand the position's existing risk management functions.

We would like to thank the General Manager of the Public Utilities Commission, her staff, and the various representatives from other City departments whom we contacted, for their cooperation and assistance throughout this management audit.

Respectfully submitted,

Harvey M. Rose
Budget Analyst

Cc: President Gonzalez
Supervisor Alioto-Pier
Supervisor Ammiano
Supervisor Dufty
Supervisor Elsbernd
Supervisor Ma
Supervisor Maxwell
Supervisor McGoldrick
Supervisor Peskin
Supervisor Sandoval
Mayor Newsom
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