



San Francisco
Water Power Sewer

San Francisco Public Utilities Commission 10-Year Financial Plan FY 2024-25 to FY 2033-34

A discussion of key policies, strategic goals, and assumptions that guide the 10-Year Plan.

February 2024

Financial Planning, SFPUC

Table of Contents

Introduction	4
SFPUC Overview.....	4
Purpose	4
Methodology.....	5
Executive Summary.....	6
Expenses	6
Revenues.....	6
Proposed Financial Plan	7
Financial Management Policies	9
Background	9
Debt Service Coverage Policy.....	9
Capital Financing Policy.....	10
Fund Balance Reserve Policy.....	10
Affordability Policy.....	11
Ratepayer Assurance Policy	12
Revenue Forecasts	13
Volumetric Sales Assumptions.....	13
Context for Volumetric Projections	13
Volumetric Sales Methodology.....	14
Account Growth Assumptions	14
Drought Assumptions	15
Pandemic Recovery’s “New Normal” Assumptions.....	15
Conservation, Efficiency, and Electrification Assumptions.....	16
Price Elasticity Assumptions.....	16
Water and Wastewater Sales Projections	17
Hetch Hetchy Power Sales Projections	19
CleanPowerSF Sales Projections	20
Adopted Rate Changes.....	21
Non-Rate Revenues	23
Expenditure Forecasts.....	24

Cost Allocations..... 24

Operations and Maintenance Expenditure Assumptions 24

 Operations & Maintenance Budget and Escalation 24

 Power Purchases & Delivery Charges 24

 Execution Factors & Budget Carryforwards..... 27

Capital Expenditure Assumptions 29

 10-Year Capital Plans 29

 Capital Expenditures After the 10-Year Capital Plan 31

 Capital Projects’ Impact on Cash Flow and Rates 31

 Capital Financing Expenditure Assumptions..... 32

Annual Cash Expenditures 35

 Water Enterprise..... 35

 Wastewater Enterprise 36

 Hetch Hetchy Power 36

 CleanPowerSF 38

10-Year Financial Plan 39

 Water Enterprise..... 39

 Wastewater Enterprise 40

 Hetch Hetchy Water and Power 42

 CleanPowerSF 44

Affordability 45

 Water and Sewer Bills 45

 Power Bills..... 47

Sensitivities 49

 All Enterprises 49

 Alternative Capital Improvement Program Expenditures 49

 Use of Operational Execution Factors 49

 Revenue Bond Borrowing Rate 49

Water and Wastewater Enterprises 50

 Timing of Drought and COVID-19 Recovery..... 50

Power Enterprise 50

 Power Supply Expenditures 50

Hetch Hetchy Power 50

 Sensitivity to Increased Volume Growth 50

Appendices..... 51

 Appendix A: Water Enterprise 10-Year Financial Plan..... 51

 Appendix B: Wastewater Enterprise 10-Year Financial Plan 52

 Appendix C: Hetch Hetchy Water and Power Enterprise 10-Year Financial Plan 53

 Appendix D: CleanPowerSF 10-Year Financial Plan 54

Introduction

SFPUC Overview

The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco and is responsible for utility services associated with operating and maintaining three enterprises: the Water Enterprise, the Wastewater Enterprise, and the Power Enterprise, which includes Hetch Hetchy Power and CleanPowerSF. The Enterprises are operated and managed as separate financial entities with separate enterprise funds.

As the largest water purveyor in Northern California, the Water Enterprise serves a population of nearly 2.8 million people in over 30 cities, providing water directly to customers in San Francisco and wholesale water service to 27 water agencies. Within San Francisco, the Wastewater Enterprise provides wastewater and stormwater collection, treatment, and disposal services, managing its combined sewer system and three water pollution control plants (Southeast Treatment Plant, Oceanside Treatment Plant, and the North Point West Weather Facility).

To meet the electricity needs of San Francisco's municipal, business, residential, and wholesale customers, the Power Enterprise operates two retail electricity programs: Hetch Hetchy Power, San Francisco's publicly owned utility (POU), and CleanPowerSF, San Francisco's community choice aggregation program. Hetch Hetchy Power generates, schedules, purchases, sells, transmits, distributes, meters and bills electricity to retail and wholesale customers, responds to outages, and owns, operates, and maintains the majority of the City's streetlight system. Hetch Hetchy Power customers include City and County agencies and a growing number of commercial and residential customers including those associated with the build out of redevelopment communities (like Treasure and Yerba Buena Islands, Candlestick/Hunter's Point, and Mission Rock). CleanPowerSF schedules, purchases, and sells electricity to residential and commercial customers located exclusively in the City, and is the power provider for the majority of San Francisco's energy supply.

Purpose

The 10-Year Financial Plan (Plan) is a summary of projected revenues, expenditures, fund balances, and financial metrics for each SFPUC enterprise over a 10-year period. As required by the San Francisco Charter Section 8B.125, these long-term projections are updated annually to reflect changes in operating budgets, capital spending, and revenue generation. The financial plan concludes with a projection of the rate revenue adjustments needed to fund the ongoing activities of the enterprises. In line with SFPUC's Strategic Plan goal of Financial Sustainability, the plan serves as an opportunity to transparently evaluate the financial challenges facing each enterprise and develop strategies to meet their financial goals and obligations. In addition, it is the primary method to assess future compliance with the targets set in the agency's adopted financial policies. Consolidating these key financial indicators into the 10-Year Plan serves to inform the SFPUC's long-term planning decisions, such as the biennial operating and capital budgets, long-range capital planning, and capital financing strategies.

It is important to recognize that the adoption of the financial plan does not constitute adoption of the projected rates, but serves as a forecast of the future rates. Rates for years that are not adopted will be

finalized via either an update to the models developed in each Enterprises' last rates study or when each utility completes its next comprehensive rate study, which occurs at least every five years as required by the SF Charter Section 8B.125. Future rate adoption follows the approval process governed by state and local laws, including separate Commission action.

Methodology

The financial plan is informed by the latest available financial and operational data and guided by City and Commission policies, goals, and objectives. To address the more complex financial planning needs facing the enterprises, this year's plan is the first to use completely new financial models developed over the last year by the Financial Planning team. The new models incorporate a much greater level of detail and allow the agency more flexibly to evaluate different scenarios regarding budgets, capital planning, and customer usage behavior and their impacts on the financial health of the enterprises.

Using the new financial model, staff incorporated historic actual revenues and expenditures, the proposed operating budget, the proposed capital plan, capital project spending schedules, updated debt service schedules for new debt issued in the latest fiscal year, customer growth and sales forecasts, and assumptions regarding capital financing costs. Staff then calculated the updated cash flow for each enterprise and the sufficiency of the revenue generated under the prior rate forecast. Upon completion of the preliminary analysis, the assumptions used were reviewed with key staff in each enterprise and proposed changes to the financial plan were presented to executive leadership. In the event that the enterprises were failing to meet any financial goals and obligations, staff worked with executive management and staff throughout the agency to identify opportunities to reduce costs, make adjustments to the capital financing plan, and update the projection of rate adjustments until all financial targets are met.

Executive Summary

Expenses

Over the next 10-year period, costs are anticipated to go up for each of the enterprises. On average, costs are growing annually for the Water Enterprise by 4.0 percent, Wastewater Enterprise by 9.6 percent, Hetch Hetchy Power by 7.8 percent, and Clean Power SF by 3.7 percent. For Water and Wastewater, capital investments are the primary driver for cost growth. Power supply costs are the main cost for CleanPowerSF, whereas both power supply and delivery and (to a lesser extent) capital projects contribute to increased costs for Hetch Hetchy Power.

Table 1. Total Operating and Capital Expenses by Enterprise, FY 2024-25 through FY 2033-34 (Million Dollars)

(\$M)	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual Growth
Water	\$776	\$815	\$846	\$890	\$933	\$961	\$981	\$1,002	\$1,039	\$1,068	4.0%
Wastewater	\$467	\$514	\$573	\$637	\$710	\$761	\$826	\$912	\$970	\$1,030	9.6%
Hetch Hetchy Power	\$336	\$372	\$411	\$462	\$478	\$515	\$555	\$588	\$608	\$637	7.8%
CleanPowerSF	\$425	\$428	\$437	\$444	\$450	\$454	\$475	\$501	\$497	\$520	3.7%

In Water and Wastewater, operating expenditure projections escalate across the 10-year time frame at projected inflationary rates, while Hetch Hetchy Power and CleanPowerSF's operating expenditures are largely driven by increased power supply costs and delivery charges. To account for some of the uncertainty in the future power markets, both Hetch Hetchy Power and CleanPowerSF have increased their budgeted power supply contingency to cover any unexpected cost overages during the year.

Capital expenditures in the financial plan reflect the projected cash need for each enterprise. The cash need is comprised of the appropriations for all revenue-funded capital and debt service payments for all debt-funded projects. Because SFPUC uses interim financing for debt-funded projects, and because debt spreads costs out over many years, there is a lag between when funds are appropriated for debt-funded capital and when those costs begin to impact the cash flow of each enterprise. Wastewater's growing Capital Improvement Program and subsequent increases in bond issuance and annual debt service increase are the driver of its high annual expense growth.

Revenues

As an Enterprise department, the SFPUC receives no tax revenues and relies on utility rates as its primary source of revenue. Additionally, the enterprises also generate a modest amount of income from miscellaneous revenue sources such as interest income earned on reserves, rental revenues, and non-rate penalties and fees. Table 2 summarizes the projected total revenues by Enterprise over the 10-year planning period.

Utility sales make up the majority of the revenues for each of the enterprises. Sales volumes are influenced by many external factors including the drought, recession, emergencies, and long-term trends such as population growth and price elasticity. In general, sales volumes are expected to rebound from the COVID-19 pandemic (in all Enterprises) by FY 2023-24 and from the impact of the drought (in Water and Wastewater) by FY 2025-26 (a three-year recovery from the drought ending in FY 2022-23). In Hetch Hetchy Power, significant growth is forecasted due to new customer acquisition and electrification. In addition to these large trends, volumetric utility sales projections include more modest adjustments to account for population and account growth, ongoing conservation, and reductions in consumption due to growing utility costs.

Table 2. Total Revenues by Enterprise, FY 2024-25 through FY 2033-34 (Million Dollars)

(\$M)	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual Growth
Water	\$765	\$815	\$855	\$908	\$938	\$967	\$989	\$1,006	\$1,040	\$1,074	4.3%
Wastewater	\$457	\$502	\$558	\$622	\$688	\$754	\$827	\$908	\$972	\$1,041	9.7%
Hetch Hetchy Power	\$305	\$355	\$402	\$454	\$488	\$516	\$558	\$593	\$621	\$641	8.3%
CleanPowerSF	\$463	\$462	\$467	\$473	\$477	\$483	\$489	\$497	\$502	\$509	2.5%

Proposed Financial Plan

Table 3 provides a summary of the projected rate adjustments required by the new budgets and to comply with all financial policies. For Water and Wastewater only the first two years of the retail rate plan are approved, and all years of wholesale water rates and Hetch Hetchy Power and CleanPowerSF rates have yet to be adopted. Forecasted rates will continue to change with updated data.

Table 3: Adopted () and Forecasted Rate Changes, FY 2024-25 through FY 2033-34*

Enterprise	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Annual Avg.
Retail Water	5.0%*	5.0%*	5.0%	5.0%	4.0%	4.0%	4.0%	3.0%	3.0%	3.0%	4.1%
Wholesale Water	7.7%	4.5%	2.6%	8.2%	3.1%	2.1%	0.3%	0.0%	3.5%	3.4%	3.5%
Wastewater	9.0%*	9.0%*	12.0%	12.0%	11.0%	10.0%	10.0%	10.0%	7.0%	7.0%	9.7%
Hetch Hetchy Power¹	14.0%	10.0%	9.0%	9.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	6.3%
CleanPowerSF Generation²	12.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%

¹ Hetch Hetchy Power rates shown are for retail, non-municipal customers.

² CleanPowerSF rate increases refer to the generation portion of the bill. CleanPowerSF customers also pay PG&E delivery charges and fees. A 12.0% generation rate increase represents an approximate 5% total bill increase

Rate adjustments are sized to meet the targets in the SFPUC's Debt Service Coverage and Fund Balance Reserve policies. The proposed financial plans are compliant with the SFPUC's financial policy targets. CleanPowerSF's fund balance in FY 2024-25 meets the minimum 150 days cash on hand, and reaches the target 180 days in FY 2025-26, to account for the increased financial pressures and need for rate stabilization faced by power supply market volatility impacting open positions.

The SFPUC's Financial Plan also includes a review of customer utility bill affordability, as defined by the recently approved Affordability Policy. The proposed Plan meets the adopted affordability targets for typical households and low-income households throughout the 20-year planning period.

Financial Management Policies

Background

The Commission has adopted various policies that set requirements and parameters guiding SFPUC financial activities and decision-making. These policies demonstrate to ratepayers, credit markets, investors, and rating agencies that SFPUC is committed to financial sustainability and prudent stewardship of resources. The primary purpose of these policies is to ensure each enterprise retains sufficient funds for future infrastructure needs, replacement of aging facilities,

bond reserves, and various operating expenses in a manner that mitigates unexpected disruptions to revenue or emergency expenditures. The SFPUC's Financial Policies can be found on its website, at <https://sfpuc.org/about-us/policies-plans/financial-plans-and-policies>.

SFPUC Key Financial Policies

- ✓ Debt Service Coverage Policy
- ✓ Capital Financing Policy
- ✓ Fund Balance Reserve Policy
- ✓ Affordability Policy
- ✓ Ratepayer Assurance Policy

Debt Service Coverage Policy

Adopted by the Commission in March 2017, [the Debt Service Coverage Policy](#) requires the SFPUC to maintain sufficient revenue to pay its annual debt service obligations. Debt service coverage ratios measure annual net revenues³ as a fraction of annual debt service. For example, a debt service ratio of 1.00x means that an issuer generates exactly enough in net revenues to pay its debt service obligations, with no excess funds left. Debt service ratios higher than 1.00x indicate the issuer has additional debt capacity.

Pursuant to covenants with bondholders, enterprise revenues pledged for debt service repayment must meet minimum requirements for two different coverage ratios:

- 1) Indenture Coverage, which includes the Enterprise's unrestricted fund balance in net revenues, must equal a minimum of 1.25x annual debt service and;
- 2) Current Coverage, which includes only current year annual revenues in the sources for calculation of net revenues. SFPUC's current coverage requirement is a minimum of 1.00x annual debt service. The unrestricted fund balance included in Indenture Coverage includes funds available to minimize risk, not meant to be used for debt repayment. Current Coverage, a more standardized measurement used by credit analysts, and is a better indicator of the agency's ability to sustainably pay its debt service obligations. Based on guidance from bond counsel, the Commission's Indenture documents allow for the inclusion of fund balances that have been appropriated for current year expenditures in its calculation of Current Coverage, which differs from the typical industry calculation. Therefore, SFPUC's Current Coverage is evaluated using both calculations for planning purposes.

³ Net revenue is calculated by subtracting operating expenses from total revenues.

Financial policies that impose higher standards than the minimum indenture requirements are essential to ensuring SFPUC maintains access to low-cost capital and retains financial flexibility to manage unanticipated economic impacts. Therefore, the Debt Service Coverage policy requires each SFPUC enterprise to adopt budgets, rates, and financial plans that generate net revenues such that **Indenture Coverage shall equal a minimum of 1.35x annual debt service** and **Current Coverage shall equal a minimum of 1.10x annual debt service**.

The City's Charter Section 8B.125 requires the SFPUC to maintain "high bond ratings." Most highly rated bond issuers with ratings in the double-A category (i.e., Aa or AA), have actual debt service coverage levels that exceed these planning levels. For example, based on medians published by Moody's Investors Service, Aa-rated Water and Wastewater bond issuers have annual debt service coverage from 1.70x to 2.00x. While the SFPUC has enjoyed very flexible covenants and lower coverage than its peers, it has still enjoyed high ratings based on the strength of the local service area and the relative overall strength and wealth of its ratepayers compared to peers. The policy minimums articulated above should be viewed as absolute minimums, and higher levels of coverage would be preferred by lenders, investors, and bond rating agencies.

Capital Financing Policy

Adopted by the Commission in March 2017, [the Capital Financing Policy](#) requires that a minimum ranging between **15 percent to 30 percent of each enterprise's capital budget be revenue-funded** (or cash funded capital) over the 10-year planning period. Use of cash funded capital reduces the need to pay interest on debt and reduces debt burdens on future ratepayers. On the other hand, cash funding causes current ratepayers to bear the full cost of projects financed in any one year. This may limit the capacity to undertake capital costs or may result in current ratepayers bearing the full cost of facilities that will be used for generations. Therefore, using revenue funding for recurring infrastructure repair and replacement projects is a prudent and sustainable approach to funding ongoing capital investments. Similarly, funding projects that will be built and then used over many years with debt, helps to spread the rate burden to create intergenerational equity. The appropriate mix of revenue versus debt financing varies based on the capital investment lifecycle of each enterprise.

Fund Balance Reserve Policy

The [Fund Balance Reserve Policy](#) was adopted by the Commission in April 2022. The policy requires that Water, Wastewater, and Hetch Hetchy Power maintain a Fund Balance Reserve **minimum equal to 90 days cash on hand or 25 percent of annual Operations and Maintenance Expenses⁴** in each year of the 10-year planning period. CleanPowerSF is required to maintain an operating reserve fund with a **minimum equal to 150 days cash on hand or 41 percent of annual operating expenditures and a target**

⁴ Inclusive of programmatic projects, but excluding all capital related expenditures

equal to 180 days cash on hand or 49 percent of annual operating expenditures⁵ in each year of the 10-year planning period.

The SFPUC faces several risks to revenue stability, including multi-year rate setting, economic recession, volatility in power purchase costs, regulatory changes, weather variability, drought, and rate structures that collect most revenues from volumetric rates. To ensure SFPUC can manage these risks and reduce susceptibility to emergency rate increases, each enterprise adopts budgets and establishes rates such that a reserve of undesignated fund balances provides sufficient capacity to bridge shortfalls in cash flow and cover unanticipated expenditures.

While CleanPowerSF operates under much of the same legal and policy framework as the SFPUC's other utility services, the program is also uniquely reliant on a volatile power supply market and faces competitive pressures that reduce its flexibility for rate increases. Moreover, CleanPowerSF's credit impacts not only lending terms, but also third-party power supply contracts, a key tool to mitigate market exposure. As such, the Fund Balance Reserve Policy was revised and adopted by the Commission in April 2022 for CleanPowerSF's reserves to be higher than in other utilities. Moreover, if CleanPowerSF's fund balance reserve ends the fiscal year below the target equal to 180 days cash on hand or 49 percent of annual operating expenditures, it must set budgets and rates to build back up to the target within three fiscal years.

Affordability Policy

The proposed 10-Year Plans balance affordability goals with the need to appropriately fund the utility's operations and to maintain long-term financial stability in the face of aging infrastructure, cost uncertainty, climate change, and the need for 24/7 reliable operations. As a self-sufficient City Department, the SFPUC acknowledges that its proposed capital plans and budgets rely on ratepayer dollars as its primary source of revenue.

Adopted by the Commission in November 2023, the [Affordability Policy](#) establishes agency-wide, retail performance metrics to evaluate the impact of the SFPUC's operating and capital budget on future residential rates. Each enterprise is required to measure its average individually-metered residential bill as a percentage of the 40th percentile income (Typical Customer Affordability Metric) and as a percentage of the 20th percentile income (Low Income Customer Affordability Metric) within a 20-year planning horizon. These metrics were chosen based on industry standards used by regulators, industry thought leaders, and other utilities, but adapted to fit San Francisco's local economy and policy priorities.

In the new policy, the typical household is defined as the 40th percentile income, rather than the 50th percentile (median) household income, to ensure the typical household being monitored better reflects San Francisco's high cost of living and the lower incomes of San Francisco's Black, Indigenous, and People of Color communities. The low-income household is defined by the 20th percentile household

⁵ Including operations and maintenance and personnel costs in annual funds, as well as power supply costs and related expenditures, but excluding contributions to the reserve fund

income, in line with affordability standards currently used by the Environmental Protection Agency. The addition of the low-income customer affordability metric aims to center customers who are most heavily burdened by San Francisco's high cost of living and widening income inequality. For the low-income household, bills are calculated both at retail rates and at retail rates after accounting for applicable discount or assistance programs.

Water and Sewer bills will **target less than 3% of the Typical Customer's income, less than 7% of the Low-Income Customer's income using standard rates, and less than 5% of Low-Income Customer's income after accounting for enrollment in applicable bill discount programs.** The CleanPowerSF and Hetch Hetchy Power bills are evaluated under this policy, but the targets for power affordability will be developed and included in a future version of this policy.

The Affordability Policy is intended to prompt consideration of the impact of rate increases on customer bills and drive the development and execution of strategies to address identified problems well in advance. These metrics are not a rate cap or similar restriction. In any instance where rate increases associated with capital and operating budgets are projected to exceed the affordability targets, Enterprise representatives will include with their budget proposal to the Commission (1) an identification of the which targets are exceeded, (2) the rationale for exceeding the targets, and (3) proposed strategies to address affordability.

The Affordability Policy reflects the Commission's commitment to consider the burden imposed by SFPUC bills on ratepayers and emphasizes customer rate affordability as a foundational priority in achieving all its Charter and other legal requirements, underlying its credibility with ratepayers and its authority to provide utility services.

[Ratepayer Assurance Policy](#)

Adopted by the Commission in February 2012 and revised in 2017, the [Ratepayer Assurance Policy](#) establishes SFPUC's guiding principles for prudent use of ratepayer funds, establishment of rates and charges, and transparency in budgeting and rate-setting processes. Prudent use of ratepayer funds ensures accountability to ratepayers regarding SFPUC's mission statement, asset and personnel management, operating cost containment, and social and environmental stewardship.

The Ratepayer Assurance Policy also ensures operating cost containment, to the extent that costs are determined by the SFPUC. Budget proposals that increase these costs above the level of inflation must be deemed necessary, as they impact prudent use of ratepayer funds. Information on this requirement is reported out in budget adoption documents. The Policy also ensures this prudent use of ratepayer funds through carrying out asset management in a cost-effective manner and structuring its workforce effectively and efficiently to minimize personnel costs.

While the Ratepayer Assurance Policy does not set any specific performance standards, its principles reinforce SFPUC's commitment to developing rates and charges that are affordable, predictable, easy to understand, based on cost of service, and that generate sufficient revenue for full cost recovery.

Revenue Forecasts

Volumetric Sales Assumptions

Context for Volumetric Projections

As the SFPUC's rate structures are currently highly volumetric in nature, future rate revenue calculations are sensitive to changes in projected volumetric sales. To partially mitigate revenue volatility, the SFPUC has made changes to its rate structure in recent years to recover a higher percentage of our fixed expenditures through monthly service charges instead of variable rates. For example, the bifurcation of the sewer rates into wastewater and stormwater components is increasing the fixed portion of wastewater revenues, as stormwater charges are not dependent on billed wastewater flows. Once the phase-in of the stormwater charge is complete, the fixed portion of wastewater bills will grow from approximately 5% of revenues in FY 2022-23 to 27% of revenues in FY 2029-30. The approved retail water rates for FY 2023-24 through FY 2025-26 maintained 15% of revenues recovered through the fixed monthly service charge.

Additionally, both retail and wholesale water and sewer rates have mechanisms that allow rates to adjust if water usage drops unexpectedly. In retail Water and Wastewater, drought surcharges are automatically implemented when the Commission declares a water shortage emergency and calls for conservation. With recent emergencies – both environmental and economic – impacting sales volumes, the SFPUC is also currently adopting rates for a shorter timeframe, allowing the agency to revise rates to current usage levels more frequently and ensure revenue stability. Wholesale water rates are revised annually and include a contractual true-up mechanism to account for the higher variability in wholesale water volumes.

Rate design is a balancing act, and the Ratepayer Assurance Policy directs the agency to consider the competing goals of revenue stability, environmental sustainability, and predictability for both customers and the agency. For example, a bill with high fixed charges that does not vary based on usage removes an incentive to conserve and can make customers feel as if they have no ability to control their costs. Tradeoffs like this one are addressed during the SFPUC's required periodic rate studies, and if usage continues to decline – either per capita or due to structural changes in the region's economic health – the agency has sufficient time and safeguards in place to adapt to the changing reality and ensure sufficient revenues for continued operation of the system.

When projecting account and volumetric sales projections, it is typical for utilities to use a conservative growth outlook. This approach is geared to minimize the risk of under-collection of rate revenue requirements – if usage is higher than forecasted, future projected rate increases can be reduced, while “counting on growth” runs the risk of under-representing the cost to customers. It is worth noting that other forecasts developed by the SFPUC, such as the Water Enterprise's Urban Water Management Plans or Power's Integrated Resource Plans, may use other projections. The differences between these projections reflect the different risks faced by the different planning initiatives and are the means to hedge against undesired outcomes for customers of the SFPUC.

Volumetric Sales Methodology

For Water and Wastewater, the SFPUC's 10-year financial model uses a bottom-up approach to calculating volumetric sales, building on historic changes in account growth and water usage behavior. First, account growth assumptions are calculated for each customer class to project the total number of accounts. Second, historic usage by customer class at the account level is adjusted by multiple factors, such as price elasticity, drought and pandemic recovery, and prolonged conservation efforts. The adjusted per-account volumes are multiplied by the calculated total number of accounts for each customer class and annualized to get the total projected water sales and billed wastewater discharge volumes.

For Hetch Hetchy Power, volumetric forecasts are more granular and are made at the level of individual customer accounts. This allows for more nuanced variation in customer trends; for example, office buildings are expected to plateau at lower usage levels due to the shift to hybrid work, while school buildings have already recovered fully to pre-pandemic levels.

The sections below discuss these factors included in the volumetric forecasts for each enterprise. During plan development, staff model alternative scenarios with different assumptions to ensure that the proposed schedule of expenditures and rate increase is resilient to a range of outcomes. Some of these are discussed in the "Sensitivities" section below.

Account Growth Assumptions

In water, wastewater, and CleanPowerSF, only minimal growth in usage is assumed due to population and job growth. For Water and Wastewater, the 10-Year Plan incorporates the assumed population and job growth assumptions from the SFPUC's 2020 Urban Water Management Plan and BAWSCA's 2022 Regional Water Demand & Conservation Study,⁶ which average around 0.6% annually for retail residential, 0.5% annually for retail commercial, and 0.4% annually for wholesale water during the 10-year period. CleanPowerSF has growth from commercial account opt-in enrollments that increases total sales through FY 2024-25, but then assumes no long-range account growth during the planning period.

In contrast, Hetch Hetchy Power is expanding its customer base significantly. This growth is defined by new facilities built by existing customers, as well as new customers and projects altogether. Each new account is modelled on an individual basis based on information from the planning teams within Power Enterprise. To allow for a gradual ramp up of power growth and to account for potential delays in construction and tenant move-in to new buildings, staff have adjusted down total load forecasts, both inserting delays in when a project comes online and applying more conservative assumptions to the total power sales provided by project managers.

The customers with the largest contribution to increases are the SF International Airport, SF Port Northern Waterfront Project in the outer years, SFPUC's Wastewater Enterprise, and the SFMTA. Airport loads are expected to grow by about 4 percent annually over the projection period due to load growth from new terminals and associated facilities, and other projects from the airport's master plan. Another

⁶ Presented to the Commission on February 13, 2024

customer expecting a large load growth is the SF Port, whose addition of Northern Waterfront Project will grow loads by about 8 percent annually over the planning period. The SFPUC's Wastewater Enterprise with construction at its Southeast Wastewater Treatment Plant will also increase power consumption, growing loads by about 3 percent annually over the planning period. The SFMTA growth is due to a bus electrification pilot and the central subway station project.

Retail non-municipal electric load growth is generally associated with large redevelopment projects and related customer growth in the southeastern portion of San Francisco, as well as some "infill" projects throughout the City, particularly affordable housing. Current redevelopment-area customers in the plan include Alice Griffith, Candlestick Point, HOPE SF (Potrero and Sunnydale), Hunters Point, India Basin, Mission Rock, Pier 70, Treasure Island/Yerba Buena Island, Transbay Transit Center, and Visitacion Valley (Schlage Lock).

Drought Assumptions

In November 2021, the Commission declared a water shortage emergency. As governed by the San Francisco Water Shortage Contingency Plan, retail customers were requested to voluntarily conserve water by 5% compared to FYE 2020 actuals, while wholesale customers were requested to conserve water by 16%. Usage dropped across the service area in response to these voluntary calls.

In April 2023, the Commission rescinded the Water Shortage Emergency Declaration, lifting the voluntary water reduction requests and removing the subsequent drought surcharge. Despite the lifted drought declaration, the plan assumes a gradual rebound in retail water deliveries over the next 3-4 years. For wholesale customers, we assume that a portion of the drought-related conservation lingers permanently, as customers have higher per-capita usage than in San Francisco and therefore more ability to make permanent changes to save water. Per-account water and wastewater usage is projected to recover from the drought restrictions at 1.72% per year for retail customers for FYE 2024 through FYE 2026; wholesale usage is anticipated to recover from the drought at 3.09% per year for FYE 2024 through FYE 2027.

Pandemic Recovery's "New Normal" Assumptions

Utility usage dropped precipitously during the COVID-19 pandemic. Closed offices and businesses in San Francisco, a commuter-oriented city, meant a lower demand for water, power, and sewer services. Increased residential usage with the shift to working from home only slightly offset these trends, especially in the wholesale service area. When compared to pre-pandemic averages (March 2018-June 2019), retail water usage during the COVID-19 shelter-in-place orders (March 2020-June 2021) for commercial customers was down 35 percent, municipal customers' usage decreased by 26 percent, and residential customers had 3 percent higher water usage. Usage by wholesale water customers during this timeframe varied depending on the residential vs. commercial composition of each utility, but was overall 7 percent higher than during the pre-pandemic period. FY 2020-21 total overall Hetch Hetchy Power loads were down 16.4 percent from FY 2018-19, or pre-pandemic levels, and CleanPowerSF FY 2020-21 commercial loads were down 16.9 percent from FY 2018-19.

However, usage has gradually increased since June 2021, when the City completely lifted the COVID-19 shelter-in-place order. The region has inched towards a "new normal," reflecting permanent changes

such as greater hybrid and remote work, reduced retail business, shifts in the population distribution, and generally adjusting the way people use utility services away from historic patterns.

At this point, we assume that the majority of usage reflects this “new normal,” and do not incorporate additional increases in usage to return to pre-pandemic levels of utility usage. One exception is in water and wastewater retail commercial sales, where we expect the slow pace of recovery means that usage will rise a final 5% during FY 2024-25 before levelling off.

For Hetch Hetchy Power, sales are mostly to municipal customers, where pre-pandemic impacts have been highly variable. As usage is forecasted at the individual account level, customers which have not already reached or exceeded their pre-pandemic volumes are forecasted to return to 90-93% of pre-pandemic levels by FY 2027-28. The “new normal” reduction from pre-pandemic levels and timeline for recovery varies based on department; tourism-related usage such as convention centers and SFO International Airport is expected to recover more slowly than municipal usage serving San Francisco residents, such as libraries or parks.

Conservation, Efficiency, and Electrification Assumptions

Beyond conservation associated with the drought, passive conservation from the gradual replacement of fixtures to water-efficient ones required by new plumbing codes is assumed to reduce per capita water usage over time. These assumptions are sourced from the SFPUC’s 2020 Urban Water Management Plan and reduce usage by 0.1%-0.2% annually for different sectors during the 10-year forecast period.

Less information is available regarding conservation’s impact on power usage, and it may be offset by the growth in electric appliances and San Francisco’s mandate that new homes be all-electric (as opposed to using natural gas). At this time, the effects of electrification and efficiency gains are expected to roughly equal each other, with only minor increases to usage for existing customers forecasted in CleanPowerSF as a result. While existing customers’ growth is flat, Hetch Hetchy Power forecasts do include several new projects that are driven by electrification, including transition to all-electric operations at the SFO International Airport and new electric charging bus yards for SFMTA. Electrification and energy efficiency is an area that staff will continue to revisit in coming years to refine the volume forecasts for Hetch Hetchy Power and CleanPowerSF.

Price Elasticity Assumptions

Basic supply and demand economics operate under the principal that as the price of a good or service increases, people will purchase less of it. Price elasticity is a measurement of the change in demand for a good or service in relation to changes in its price. Different goods can be more or less elastic, with demand for elastic goods decreasing more rapidly as prices increase and demand for inelastic goods holding more steady as prices change. Utility services are generally assumed to be a fairly inelastic good because they are necessary and do not have a readily available alternative. As such, increases in price typically do not have a significant impact on the amount of the utility volumes customers use. Moreover, San Francisco’s water and wastewater usage is already the lowest in the state of California, averaging 38 gallons per person per day for the 12-month period ending December 2023. With usage this low, there

is a floor beyond which most households are unable to conserve without drastic reductions to their quality of life.

Despite these considerations, it is prudent to assume that the rate increases forecasted in the 10-Year Financial Plan will cause some customers to conserve water. Because most customers pay attention only to their total bill, we are forecasting the impact of price elasticity based on the combined water and wastewater bill increase for an average residential customer. Data from the SFPUC's 2020 Urban Water Management Plan calculated a price elasticity of -1.4% for single family residential customers, -2.0% for multi-family residential customers, -2.2% for non-residential customers. This means, for example, that a 10% increase in the combined water and wastewater retail rates would decrease single family residential usage by 1.4%.

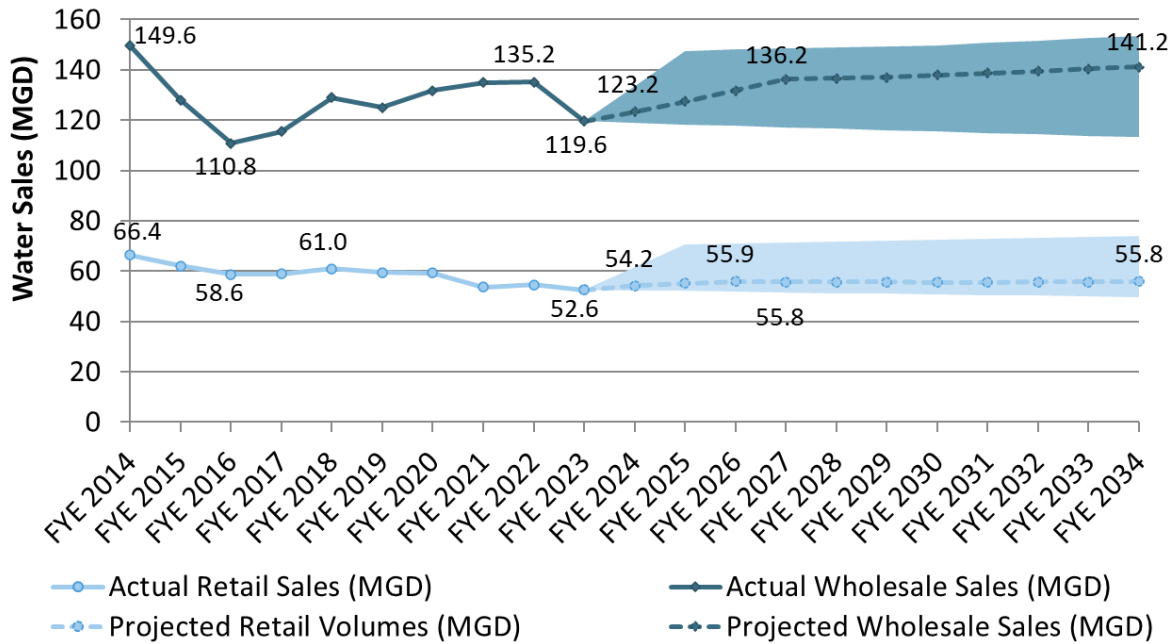
However, this analysis was based on historic data from 2010-2020, when per-capita water usage was approximately 20% higher than it is today. With increased conservation and hardened demand, it's unlikely these elasticity impacts would be as large now as they would be going forward. We have assumed that as per capita usage drops towards low indoor usage of 40 gallons per person per day, demand becomes more inelastic. During the 10-year period, this means elasticity ranges from -0.18% to -0.72%, depending on the customer class and year.

Again, less information is available on the impact of price elasticity on electricity usage. Moreover, electric rate schedules are much more complex than water and wastewater, with time-of-use periods, seasonality, and multiple rate schedule options for each customer class. Customers may respond to price increases by changing their usage patterns or rate choice rather than reducing total usage. At this time, CleanPowerSF and Hetch Hetchy Power volumetric forecasts do not incorporate price elasticity. We will continue to research this area to improve our forecasts.

[Water and Wastewater Sales Projections](#)

Overall, Water and Wastewater sales are projected to gradually increase from the recent low water sales in FYE 2023 caused by the combined impacts of the COVID-19 pandemic and drought. This is depicted in Figure 1, which shows the historic and projected retail and wholesale water sales for FYE 2014 through FYE 2034. A key feature of this chart is the decrease in water sales from FYE 2014 through FYE 2016 during the last drought and the subsequent rebound in water use through FYE 2018. Shaded areas around the dashed forecast line reflect upward and downward sensitivities in the sales forecasts. In particular, the upside sensitivity reflects growth up to the levels forecasted in SFPUC's 2020 Urban Water Management Plan and the BAWSCA 2022 Regional Water Demand and Conservation Projections.

Figure 1: Historic and Projected Retail and Wholesale Water Sales Volumes (Millions of Gallons per Day)

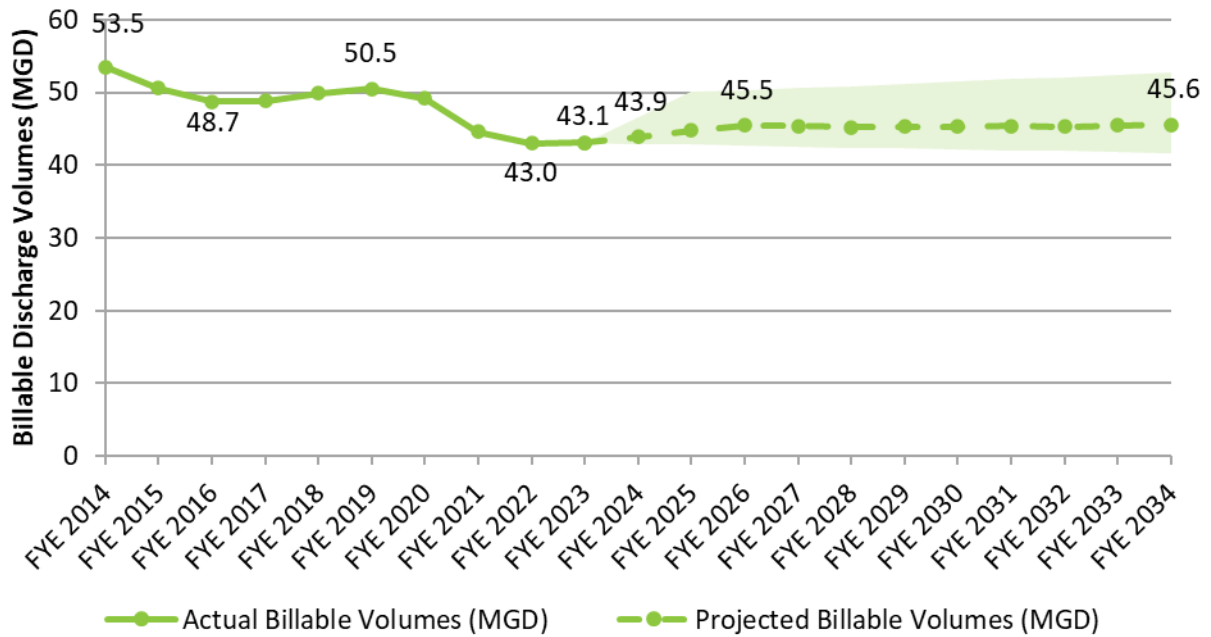


After reaching a relatively low total sales in out in FYE 2023, wholesale usage is expected to return to pre-drought normal of 136.2 MGD by FYE 2027. Over the remainder of the plan, wholesale usage rises slightly, driven by forecasted population and job growth.

Retail sales volume variation is lower, reflecting San Franciscan’s low per capita water usage and resulting smaller fluctuations in times of drought. The most notable trend here is the combined impact of the pandemic and recent drought, bringing retail water sales to a low of 52.6 MGD in FYE 2023. As the impact of both events fade, usage is forecasted to grow to 55.9 MGD in FYE 2026 before very gradually declining through the rest of the 10-year forecast period. This long-term trend reflects the impact of price elasticity and passive conservation compensating for assumed job and population growth, and is consistent with the observed historic trendline.

Because wastewater sales volumes are based on metered water usage, the forecast of billable wastewater volumes shown in Figure 2 is very similar to that of retail water sales.

Figure 2: Historic and Projected Billed Wastewater Discharge Volumes (Millions of Gallons per Day)



Wastewater volumes are forecasted to rebound from their all-time low of 43.0 MGD in FYE 2022 to 45.5 MGD in FY 2026 as the economy recovers from the pandemic and the current drought declaration ends. Volumes then hold relatively flat for the duration of the forecast period.

[Hetch Hetchy Power Sales Projections](#)

Hetch Hetchy Power volumetric growth is much more significant than the other business lines. Figure 3 shows the historic and forecasted change in Hetch Hetchy Power retail sales volumes over the past and future 10 years.

Figure 3: Historic and Projected Hetch Hetchy Power Retail Sales Volumes (Gigawatt Hours)

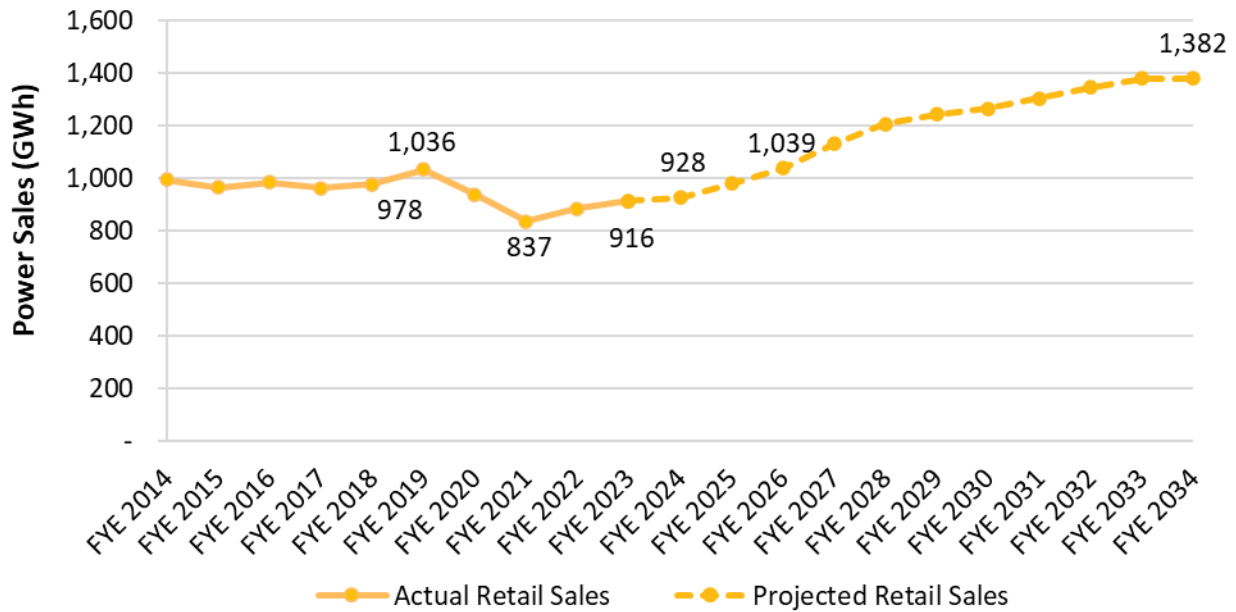


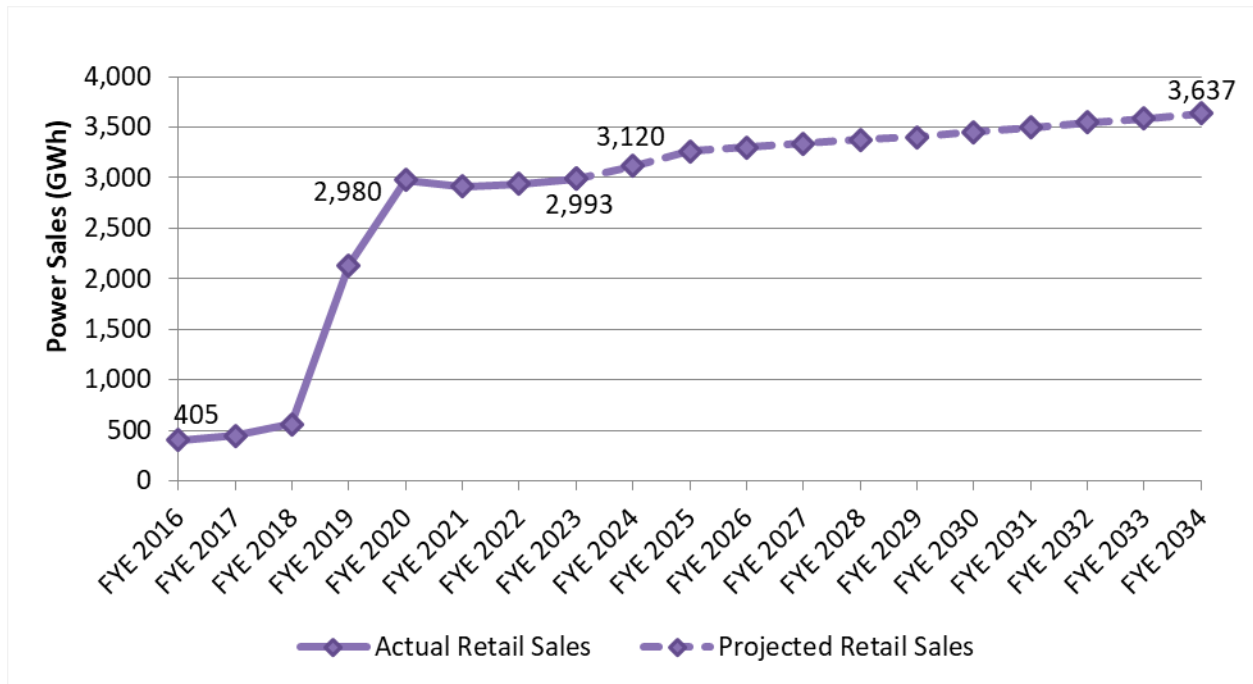
Figure 3 shows the drop in Hetch Hetchy Power sales due to the pandemic, with recovery to pre-pandemic levels by FYE 2026, with sales reaching 1,039 GWh. As described above, most existing accounts are not projected to change their usage beyond recovery from the pandemic, so the much of the increase shown in Figure 3 represents new facilities planned or under construction.

All of this considered, loads grow by an average annual rate of 4.0% over the ten-year planning period. While this growth is a key component of Power Enterprise’s business plan, it also means that their rates trajectory is dependent on economic growth that may be delayed or never materialize due to possible recession or other factors. With San Francisco’s struggling economic recovery and a history of project delays, the Financial Plan incorporates several adjustments for conservatism, as discussed in the Account Growth Assumptions section above. These adjustments aim to strike the right balance of correctly budgeting for the cost of servicing new customers (discussed below in the Expenditure Forecasts section) without under-projecting rate increases by assuming major new developments move at an aggressive schedule.

CleanPowerSF Sales Projections

Figure 4 shows the significant growth in CleanPowerSF from its launch in FYE 2016 through FYE 2020 as phased enrollment successfully grew the program to its current size.

Figure 4: Historic and Projected CleanPowerSF Retail Sales Volumes (Gigawatt Hours)



While usage dropped moderately during the pandemic, the impact was not as significant as the other Enterprises, and volumes have seen a bump up due to new enrollments of commercial customers. The plan projects loads to increase an average 1.2% over the course of the 10 years, reflective of overall growth from electrification, population growth, and other longer term electric trend projections.

Adopted Rate Changes

The SFPUC historically adopted multi-year rate packages, approving a series of rate increases over several years. This improves the certainty of financial planning for both the agency and customers but reduces the ability to react to changes in costs or volumetric sales. With significant uncertainty in recent times, from the COVID-19 pandemic and drought’s impact on sales volumes to huge fluctuations in the prices in the power supply market, the agency has reduced the time period covered in its rate proposals.

For years in which rates are not already adopted by the Commission, the 10-Year Plan forecasts what rate increases are needed to cover expenditures and comply with financial policies. These projections are presented at the end of this report. The following section describes the status of ongoing rate studies, and already-approved rate increases during the plan period.

Retail Water and Wastewater Rates

The most recent cost of service study for Water and Wastewater was completed in Spring 2023, with new rates adopted in May 2023. This study is the basis for three years of retail water and wastewater rates that have been adopted by the Commission for FY 2023-24 through FY 2025-26. For each of the three fiscal years, water rates increased by 5%, and sewer rates increased by 9%. Rate increases become effective on July 1, the beginning of each fiscal year.

As a part of the 2023 study, the sewer rates were split into wastewater and stormwater components. Historically, the Wastewater Enterprise has recovered the costs associated with both the sanitary sewer service and the costs for the collection and treatment of stormwater runoff from properties through wastewater rates. By updating the rate structure, the SFPUC has enhanced equity in its rate structure by billing customers for the total flows that they contribute to SFPUC's combined sewer system.

Wholesale Water Rates

Wholesale water rates are set on an annual basis following the process established by contract under the long-term Water Supply Agreement (WSA). The rates are driven by the estimated wholesale share of Water Enterprise and Hetch Hetchy Water operating and capital expenditures and forecasts of wholesale sales volumes. A true-up after each fiscal year provides a mechanism to adjust future rates for under- or over-collection in prior years. A 9.7% increase in the wholesale water rates was adopted for FY 2023-24. Wholesale water rates are adopted annually, so rates for FY 2024-25 will be approved by the Commission in spring 2024.

Power Rates

The most recent power rates study was completed in spring 2022 for both Hetch Hetchy Power and CleanPowerSF. Using the results of the study, the Commission approved Hetch Hetchy Power rates for FY 2022-23 and FY 2023-24 and CleanPowerSF rates for FY 2022-23. Rates for the current fiscal year for Hetch Hetchy Power reflect a 14% rate increase. CleanPowerSF's FY 2023-24 rates were subsequently approved in spring 2023 for a 15% rate increase, though individual rate classes had lower or higher changes depending on their specific cost of service.

For both business lines, the adopted rates ended the historic practice of following PG&E rates, either directly or at a differential above or below comparable PG&E rates. Instead, power rates change at the beginning of each fiscal year based on the SFPUC's own cost of providing service. This significant improvement allows for more robust financial planning, ensuring the Power Enterprise has the revenues needed to fund its operating and capital needs.

Adopted Hetch Hetchy Power rate increases completely overhauled Hetch Hetchy Power's legacy rate structure and were redesigned to gradually shift the business line towards standardized cost-of-service-based rates for all customer classes. In particular, municipal customers on General Use (GUSE) rates (for example, SF General and Laguna Honda Hospital, SFMTA's rail lines, streetlights, and SFUSD public schools) were realigned from the legacy flat \$/kWh rate for all customers to standard customer class rate structures and will be incrementally brought to cost-of-service rates at an effective increase of \$0.03/kWh each fiscal year. This translates to a FY 2023-24 GUSE adopted rate increase of 23.3%, as compared to the retail rate increase of 14%. All non-GUSE customers have been consolidated as retail customers with the same tariffs beginning FY 2023-24.

In the near term, Power Enterprise rates for both CleanPowerSF and Hetch Hetchy Power will be adopted on an annual basis due to significant volatility in energy markets and supply chain disruptions caused by the pandemic, geo-political conflict, changing relationship with Pacific Gas & Electric Company, and other environmental factors. Utilizing an annual power rate adoption allows the Power Enterprise to reevaluate its revenue requirements with stronger confidence, as staff are able to update

rates in a more timely and precise manner in reaction to market factors. To calculate the rate increases, staff update the rate models developed in the 2022 rates study with new expense and customer data. More complex changes to power rate structures are not expected until the next power cost of service and rate study, which will begin in the near future and be completed in spring 2026 for rates effective FY 2026-27.

Non-Rate Revenues

While utility rate revenues compromise the vast majority of each Enterprises' income, each enterprise also collects revenues from additional sources. Assumptions regarding these revenues vary based on the source:

- Interest income is calculated by multiplying an interest rate by the available fund balance in each Enterprise. Interest rates are estimate based on the U.S Treasury yield curve.
- Certain water revenue bonds and the 525 Golden Gate Certificates of Participation receive Federal Build America Bonds Interest subsidies, which provide approximately 35% of the interest cost of the bonds. Forecasts for these revenues are based on the debt service schedules of these bonds.
- Rental revenue from SFPUC-owned properties is provided by the Real Estate Services division and inflated by the forecasted Consumer Price Index.
- Revenue from miscellaneous fees, including water service installation charges, capacity charges, and permit issuance fees, is estimated for the current fiscal year, then inflated by the forecasted Consumer Price Index.
- Revenues designated for capital projects in Hetch Hetchy Power include Distributed Antenna System licensing fees, California Cap & Trade auction revenues, and Low Carbon Fuel Standard credits. These forecasts are developed by Power Enterprise staff.
- Due to its hydroelectric supply, Hetch Hetchy Power's generation has strong seasonal trends. During the spring runoff season of March-June, the melting snowpack tends to provide Hetch Hetchy Power with excess power beyond what its customers use, providing the opportunity to sell to the wholesale power markets. The plan models excess power sales based on the detailed monthly forecasts described in the expenditure section below. Price assumptions are assumed conservatively for sales – more so even than power purchase assumptions – since wholesale revenues are not the program's main business line and represent potential upside rather than an expectation.

Non-rate revenues offset a portion of expenditures, and therefore allow for lower rate increases.

Expenditure Forecasts

Cost Allocations

Some operating and capital expenditures are allocated to specific customers, and only influence the rates of those customers.

In the Hetch Hetchy Water Division (aka “Upcountry”), all costs associated with water operations within Hetch Hetchy Water and Power are funded by the Water Enterprise, while all costs associated with power operations are funded by the Power Enterprise. For projects that benefit both Enterprises, the costs are shared jointly, with 45 percent of the costs being shifted to the Water Enterprise and 55 percent being shifted to the Power Enterprise. In the Hetch Hetchy Water and Power financial model, each line item is allocated between water and power. The water share of expenses, net of any water-related revenues, is paid for by a transfer in from the Water Enterprise.

In Water Enterprise, “Regional Water” costs are shared between wholesale and retail customers based on their proportional annual volumetric water use. “Local Water” costs are solely paid for out of retail water rates. The Water financial model tracks these costs separately, and rates for each customer class are set to cover only the costs allocated to them.

Operations and Maintenance Expenditure Assumptions

Operations & Maintenance Budget and Escalation

For all Enterprises, operations and maintenance expenses are based on the SFPUC’s proposed two-year budget for FYE 2025 and FYE 2026.⁷ Beyond the budget years, the 10-Year Financial Plan for all enterprises assumes an annual 3 percent increase in operations and maintenance expenditures for most expense types. This assumed annual increase represents a proxy for the long-term average annual rate of inflation, as well as an assumption for increased operation and program spending. Inflation projections in fringe benefits, such as retirement, health care, and disability services, are based on projections of various expense types as listed in the Mayor’s 5-Year Financial Plan. A small subset of expenses, including programmatic expenses, grant programs, and some services of other departments are projected to remain level over the ten-year projection window.

Power Purchases & Delivery Charges

In Power Enterprise, including Hetch Hetchy Power and CleanPowerSF, purchased market power, resource adequacy purchases, and delivery charges such as Transmission Access Charges (TAC) and Wholesale Distribution Tariffs (WDT) vary based on the total customer loads or demand served in a year, as well as the forecasted price of these line items. Forecasts for these expenditures are developed collaboratively by Power Enterprises’ Risk Management and Business Analysis team, Retail Services team, Origination and Power Supply team, and Financial Planning. Assumptions regarding load projections are discussed above.

⁷ Presented to the Commission on February 13, 2024

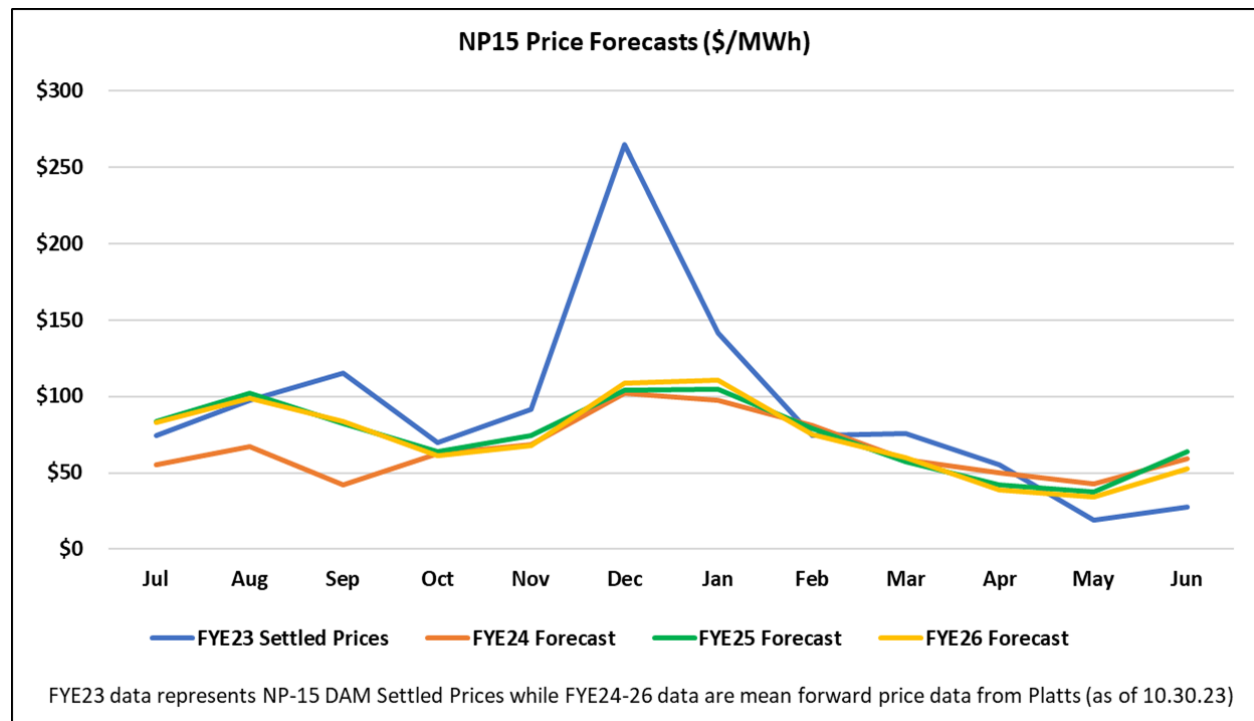
Power expense forecasts are developed monthly to account for significant seasonal variations in power markets, owned generation, and customer usage.

Purchased Power Supply Costs

CleanPowerSF’s energy portfolio throughout the 10-Year Plan includes existing and potential storage and renewable projects based on its 2022 Integrated Resource Plan, while Hetch Hetchy Power’s generation forecast is developed by Hetch Hetchy Water based on weather and asset maintenance projections. For both business lines, any power demand beyond existing resources is procured from the market, and any excess generation above what customers use is sold back to the market. From July-February, Hetch Hetchy Power’s generation is generally less than is required to fully meet its customers usage and it is normal for Hetch Hetchy Power to purchase additional energy from the wholesale power markets during this timeframe. In contrast, during the Spring runoff season of March-June, the melting snowpack tends to provide Hetch Hetchy Power with excess power beyond what its customers use, providing the program with the opportunity to sell to the wholesale power markets.

Load and energy supply are both assessed against forward energy price projections (available from either S&P Global’s Platts forecasting service, Intercontinental Exchange data that is pulled from Bloomberg, and/or Aurora Energy Research forecasts) and take into account weather simulations and market impacts such as natural gas supply and demand, and the Russia-Ukraine war. Because these energy price forecasts are updated daily and reflect the volatility of the energy market, contingencies are set to capture some of the higher end energy price projections seen at the time of the plans’ development. The outlook for power purchase costs can be volatile based on both weather, which impacts the generation outlook for Hetch Hetchy, and energy market prices.

Figure 5: Historic and Forecasted Power Market Supply Costs (Dollars per Megawatt Hour)



As shown in the chart above, energy prices were particularly high in the middle of FYE 2023, but have since dropped back down. The 10-Year Plan incorporates forward market pricing that forecasts a return to more normal levels over the next few years and through the end of the Plan.

Prices for other supply categories such as resource adequacy, renewable attributes, delivery charges, and CAISO charges are forecasted based on market broker quotes received by Origination and Power Supply team, third-party forecasts (e.g., Flynn Resource Consultants), or recent historical averages, depending on availability. Resource adequacy or capacity costs have been a growing expenditure for CleanPowerSF in particular, as new-build renewable energy project delays throughout California have caused prices to rise dramatically over the past year for renewable attributes and capacity as demand exceeds supply. In many months, the available capacity on California markets is barely enough to meet the needs of all regulated utilities, leading to enormous price increase and challenges fulfilling regulatory obligations. Prices are anticipated to remain at current heights for the next few years. Moreover, there will also be fundamental regulatory changes to the resource adequacy program in 2025 that adds complexity and uncertainty to that market. Long-term forecasts are generally not available for these supply categories; the 10 Year Plan assumes prices will gradually decrease after a few years and slowly return to year 2022 levels by the end of the Plan.

Purchased Power Delivery Charges

Hetch Hetchy Power also incurs purchased delivery charges, including Transmission Access Charges (TAC) paid to the California ISO and the Wholesale Distribution Tariffs (WDT) paid to Pacific Gas & Electric.

For Transmission Access Charges, our plan takes into account expected growth in loads while also incorporating estimated annual increase in these TAC rates. Our TAC rates are based on estimates from Flynn Resource Consultants and grow by a compound annual rate of 5.2% through FYE 2034. The potential for continued rapid increases in transmission costs across the state is an area of focus for staff in the near-term.

Hetch Hetchy Power's Wholesale Distribution Tariffs are based on our demand expectations and WDT rates, which are set by PG&E. These distribution expenses have been highly volatile over the past few years; they nearly quadrupled from FYE 2021 to FYE 2023 due to a change made by PG&E in the formula for calculating these expenses (the "WDT3" methodology), and sharp WDT rate increases in calendar year 2023, which resulted in a period of large adjustments and significant true-ups. Although FYE 2023 saw a marked 28% increase in distribution expenses driven by major WDT rate increases, FYE 2024 is expected to see a 14% decrease in these expenses, while FYE 2025 appears positioned to see further distribution expense decreases due to a sharp decline in rates. In order to minimize these swings, WDT rate forecasts after FYE 2026 remove any impacts from true-ups or other one-time adjustments and assume a 4% annual rate increase. Despite the near-term positive outlook for distribution expenses, we continue to be cautious on the long-term outlook given the volatility in these WDT3 rates.

Power Supply & Delivery Contingencies

Due to potential volatility in power supply and delivery charges, both CleanPowerSF and Hetch Hetchy Power budget for a contingency above and beyond the forecasted amount for these costs. Doing this

ensures the programs can quickly access the funds needed to secure power supplies on the open market without a need for a supplemental budget appropriation process, which can take many months. As a conservative approach to estimating costs and net revenues, the financial plans treat the contingency budget as if it will be spent each year. Any savings in a given year will fall to fund balance as a positive variance and may be used to reduce rates in future years. For purposes of calculating the fund balance reserve or days cash on hand targets, the contingency is considered a contribution to reserve and not included in annual operating expenses.

For this plan, staff performed scenario analyses of price and load volatility to determine if contingencies need to be increased, separate from the update to the baseline budget in this area. Hetch Hetchy Power continues to include \$8 million annual budget contingencies for power supply throughout the life of the plan. For CleanPowerSF, the budgeted contingency has been increased from 10% of power supply costs to 10% of power supply costs, resource adequacy, and renewable attributes, rising to 12% in the latter years of the plan.

Execution Factors & Budget Carryforwards

A feature of the financial model is the use of “execution factors” on the operating budget. These factors are based on review of actual expenditures as a percent of the original budget for FY 2018-19 through 2022-23. The goal of the execution factors is to project a revenue requirement that more accurately reflect the anticipated spending, rather than the budgeted authorities to spend. The following tables

Table 4 through Table 7 summarize the findings of the budget to actual analysis and the execution factors that have been applied to each forecast year in this 10-year plan. Years with greater than 100% spending reflect the use of carry forward funds from the prior fiscal year.

Table 4. Water Enterprise Percent of Budget Execution and Execution Factor Applied to All Future Years

Expense Type	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	Applied
Capital Outlay	29.9%	46.3%	37.1%	54.2%	49.0%	55.0%
City Grant Program	26.8%	11.9%	26.7%	4.9%	11.7%	100.0%
Mandatory Fringe Benefits	98.2%	95.4%	99.0%	94.0%	95.7%	100.0%
Materials & Supplies	91.1%	86.3%	74.4%	79.5%	83.6%	95.0%
Non-Personnel Services	78.0%	73.0%	68.0%	52.4%	72.9%	80.0%
Overhead and Allocations	110.1%	113.4%	107.0%	87.9%	87.3%	100.0%
Salaries	98.0%	94.4%	98.8%	93.4%	96.5%	100.0%
Services Of Other Depts	99.9%	92.4%	97.7%	91.5%	92.8%	100.0%
Transfers Out	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 5. Wastewater Enterprise Percent of Budget Execution and Execution Factor Applied to All Future Years⁸

Expense Type	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	Applied
Capital Outlay	30.0%	42.6%	25.5%	36.1%	26.0%	45.0%
City Grant Program	10.4%	1.9%	54.4%	47.2%	36.7%	55.0%
Mandatory Fringe Benefits	91.9%	94.0%	92.5%	87.3%	88.1%	95.0%
Materials & Supplies	95.8%	80.7%	73.2%	84.9%	93.2%	97.0%
Non-Personnel Services	84.9%	90.0%	77.6%	79.0%	72.6%	91.0%
Overhead and Allocations	90.4%	93.2%	89.4%	88.2%	61.6%	94.0%
Salaries	93.1%	93.8%	93.2%	88.8%	89.9%	95.0%
Services of Other Depts	97.6%	96.5%	93.4%	96.8%	78.5%	99.0%
Transfers Out	29.4%	28.5%	27.7%	26.8%	25.9%	30.0%

Table 6. Hetch Hetchy Water Division Percent of Budget Execution and Execution Factor Applied to All Future Years

Expense Type	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	Applied
Salaries	95.3%	95.6%	101.3%	95.8%	96.4%	100.0%
Mandatory Fringe Benefits	99.3%	103.4%	108.4%	99.8%	100.0%	100.0%
Materials & Supplies	95.7%	91.5%	92.3%	87.6%	92.7%	98.0%
Non-Personnel Services	86.6%	90.8%	73.3%	69.0%	72.5%	93.0%
Services of Other Depts	81.3%	75.8%	93.7%	108.8%	100.7%	100.0%
Overhead and Allocations	91.0%	94.2%	88.9%	89.9%	86.9%	97.0%
Capital Outlay	2.6%	38.3%	13.4%	16.6%	15.8%	45.0%

Table 7. Hetch Hetchy Power Division Percent of Budget Execution and the Execution Factor Applied to All Future Years

Expense Type	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023	Applied
Salaries	100.9%	94.8%	102.1%	104.5%	104.1%	100.0%
Mandatory Fringe Benefits	101.2%	100.9%	102.2%	99.2%	111.6%	100.0%
Materials & Supplies	72.8%	110.9%	56.7%	80.1%	78.5%	100.0%
Non-Personnel Services	81.2%	82.9%	81.1%	77.8%	85.5%	100.0%
Services of Other Depts	86.8%	79.6%	70.6%	63.6%	91.2%	93.0%
City Grant Program	N/A	N/A	N/A	100.0%	N/A	100.0%
Overhead and Allocations	111.1%	113.4%	106.7%	91.2%	89.5%	100.0%
Capital Outlay	1.8%	13.6%	22.2%	66.2%	100.1%	100.0%

⁸ For Wastewater Enterprise, the analysis evaluated actuals vs. the revised budget includes both the original budget for the fiscal year, as well as carryforwards from prior years. As a result, the percentages do not exceed 100%. For this reason, the numbers applied in the table below are lower than the other Enterprises. This is only a difference in the methodology, but produces similar results for all enterprises.

No execution factors are currently applied in CleanPowerSF; however, operating expenses besides power supply purchases make up only a small percentage of the entity’s annual costs, so this change would have only a minimal effect. We will incorporate execution factors for CleanPowerSF in future years.

In the City’s budget system, unspent operating budgets in a given year will by default “close out” to fund balance. However, departments may submit requests to “carryforward” some portion of the unspent budget to future years. The models assume that a portion of the unexecuted budget is closed out and that a portion is carried forward to future years. The carryforward amount is based on the historic percent of each expense type which is generally carried forward, and cannot exceed the unexecuted budget savings.

Capital Expenditure Assumptions

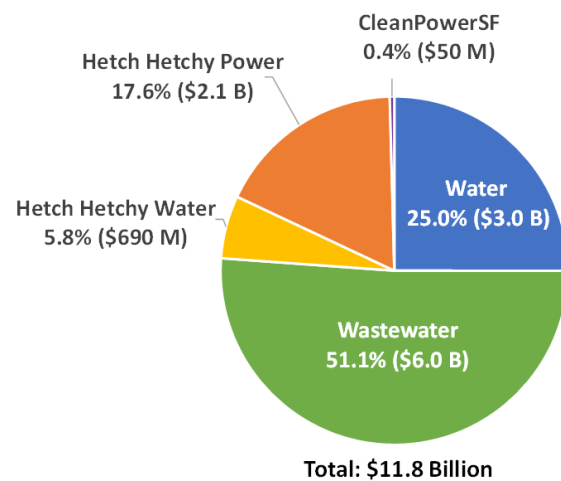
10-Year Capital Plans

The SFPUC adopts a 10-Year Capital Improvement Plan (CIP), which details the specific projects planned for each enterprise. Every year, the CIPs are updated to reflect the capital priorities of each enterprise over the next 10-year horizon. Every other year, a biennial budget is adopted, which includes the adoption and appropriation of CIP funding for the first two years of that plan. The Financial Plan includes both years of the proposed FY 2024-25 and FY 2025-26 budget and the capital project appropriations from the 10-Year CIP through FY 2033-34.

The CIP also identifies the funding sources for each year in the plan. Generally, funding is either 1) revenue-funded (also referred to as “pay-as-you-go,”) or 2) debt-funded using revenue bonds. However, in practice, the SFPUC actively seeks out lower cost borrowing opportunities through other borrowing sources such as State Revolving Fund (SRF) or Water Infrastructure Financing and Innovation Act (WIFIA). How these revenues impact the cash flow in the financial plan is discussed below.

In general, capital expenditures are the primary driver of increased costs in the Financial Plans for each Enterprise. Figure 6 provides a summary of the total budgeted capital appropriations for each of the enterprises. The combined CIP totals \$11.8 billion, of which over half is for Wastewater Enterprise. A brief summary of each enterprise’s CIP is provided below. For a detailed discussion of the development of the FY 2023-24 through FY 2032-33 10-Year CIP, including a description of major projects for each Enterprise, please refer to the Capital Plan report, which is presented for Commission adoption on the same date as this plan.

Figure 6: FY 2024-25 to FY 2033-34 10-Year Capital Improvement Plan by Enterprise (Million Dollars)



Water Enterprise Capital Improvement Program

The Water Enterprise 10-Year Capital Improvement Plan includes \$3.0 billion in total spending, with \$937 million (32 percent) being revenue-funded and \$2.0 billion (68 percent) debt-financed. The largest projects of the FY 2024-2025 to FY 2033-34 Water Capital Improvement Plan are local water pipeline replacements (\$517 million), new City Distribution Division (CDD) headquarters (\$343 million), Daly City Recycled Water Expansion Projects (\$115 million), and the Millbrae Lab improvements (\$411 million).

Water Enterprise and water ratepayers also pay for a portion of the projects in the Hetch Hetchy Water and Power CIP. The Water share of that plan totals \$690 million; debt funding makes up \$645.5 million of the CIP and cash funding covers the remaining \$44.1 million. The largest water- or joint-funded projects include the Eleanor Dam and Bridge Rehabilitation Project (26.7 million) and the O'Shaughnessy Dam Outlet Works Phase II Project (\$48 million).

Putting the pieces together, 27 percent of the Water CIP is funded by revenue – including the Water Enterprise and the Water share of Hetch Hetchy Water. This is within the 15 to 30 percent range required by SFPUC's Capital Financing Policy.

Wastewater Enterprise Capital Improvement Program

The Wastewater Enterprise 10-Year Capital Improvement Plan is \$6.0 billion in total spending, with \$1.1 billion (18 percent) being revenue-funded and \$5.0 billion (82 percent) debt-financed.

The primary cost drivers of the Wastewater Capital Improvement Plan are the Biosolids and Digester Project (\$753 million), Small Diameter Sewer Improvements (\$499 million), Large Diameter Sewer Improvements (\$450 million), and the Nutrient Removal Project (\$1.2 billion).

The Wastewater Enterprise's revenue-funding of 18 percent of the 10-Year Capital Plan is currently within the range required by SFPUC's Capital Financing Policies of 15 percent to 30 percent of the total capital plan.

Hetch Hetchy Water and Power Capital Improvement Program

The Hetch Hetchy Water and Power Capital Improvement Plan is \$2.7 billion, of which \$2.1 billion is allocated to Power Enterprise. The Water portion of the plan is discussed above. The Power Enterprise is debt funding \$1.5 billion of its share of the Hetchy CIP and cash funding the remaining \$533.8 million.

The Hetch Hetchy Power Capital Improvement Program includes increased investment to serve new Hetch Hetchy Power customers. The major in-City projects included in the Power Enterprise Capital Program are SFO Substation Improvements (\$147 million) and Distribution Interface for Redevelopment Projects (\$142 million). For major upcountry projects, the main drivers include the Moccasin Powerhouse & GSU Rehabilitation Project (\$321.8 million) and the Transmission Line Clearance Mitigation Project (\$63 million)

The Power Enterprise's revenue-funding of its portion of the 10-Year Capital Plan at 22 percent is currently within the range required by SFPUC's Capital Financing Policies of 15 percent to 30 percent of the total capital plan.

CleanPowerSF Capital Improvement Plan

CleanPowerSF's Capital Improvement Plan is \$50.1 million in total spending over the next 10 years, with 100 percent of its fundings sources coming from customer revenues. 98 percent of CleanPowerSF's CIP is the Local Renewal Energy Program, a \$48.5 million project over the plan period.

Capital Expenditures After the 10-Year Capital Plan

To ensure rate forecasts in the Financial Plan are accurate, it is important to account for large expenditures that may occur after the 10th year of the plan, and which would require rate increases to ramp up in the later years of the plan to afford these additional costs. For ongoing projects, such as repair and replacement, we incorporate an assumed 4% annual increase beginning in FY 2024-25. For one-time projects that begin during the 10-year CIP, we have spread the remaining costs through the end of the planned project construction period. In Hetch Hetchy Water, some additional projects that begin after the 10 years were provided by staff and have been added to the plan. Finance, Infrastructure, and Enterprise staff will continue to collaborate in future years to add additional known projects in the 20-year period to ensure rate increases reflect the most accurate forecasts.

Capital Projects' Impact on Cash Flow and Rates

As described above, the financial plan projects funding sources for the CIP using either current cash on hand or revenue bonds. The CIP is a budget document, and therefore lists sources and uses of funds in the year they are appropriated – not necessarily the year they will be spent. Indeed, most capital project expenditures happen over several years, and there is significant unspent appropriation from prior fiscal years in addition to the new appropriation in each CIP. For financial planning purposes, how the capital expenditures impact cash flow depends on whether they are revenue-funded or debt-funded.

Pay-as-you-go funding, as the name implies, requires funds to be available immediately. This may be from a specific revenue source earmarked for capital projects.⁹ If these dedicated sources are insufficient to cover the total revenue-funded sources, the remainder is appropriated from the Enterprises' available fund balance. Due to the requirements of the City's budget, it does not matter when the cash funded expenditures will happen – the funds are appropriated immediately. This means that rates must cover the necessary appropriations for revenue-funded capital in the year they are shown on the CIP.

Debt-funded capital is much more complex, as the SFPUC's Capital Finance team performs financial engineering to smooth expenditures over many years, reduce interest costs, and take advantage of low-cost grant and loan programs. Debt-funded projects will eventually be funded by a state or federal loan or by the sale of revenue bonds. These loans and bonds require annual debt service payments, and revenues are needed only to make the debt service payments, not the appropriated amount in the budget. As a result, there can be a significant delay between the year of appropriation for a debt-funded

⁹ Examples include capacity charges in Water and Wastewater, or Distributed Antenna System licensing fees in Hetch Hetchy Power.

project and the year that revenues are needed to pay for it. The following section describes the assumptions for capital financing of debt-funded projects.

Finally, as part of the development of the new financial models, Financial Planning worked with Enterprise and Infrastructure staff to develop assumptions around actual spending of appropriated funds. This task recognizes that appropriation is an authorization to spend up to a certain limit, but spending may not all happen in the year of appropriation. With that understanding, the plan spreads budgeted expenditures over multiple years based on the project schedule and the stage of the project (i.e., is the project in design or construction). These assumptions assisted with the smoothing of cash flow needs and especially the timing of debt issuance, limiting the risk of raising rates ahead of when the funding is needed. This is a process staff will continue to refine as we continue to track our ongoing delivery of project budgets.

Capital Financing Expenditure Assumptions

The SFPUC's Capital Finance team leverages a variety of tools to finance the enterprises' capital programs. These tools help to better align the payment for capital assets to the use of the assets so that current ratepayers are not bearing the full cost of projects that may be used for 40 or more years. In addition, these capital financing products allow for more gradual rate adjustments even when large assets are brought online over a short period.

A variety of capital financing decisions are made each time the SFPUC issues debt to finance capital projects to obtain the optimal interest rates and financing terms, based on prevailing interest rates and interest rate trends, market demand and other considerations. Due to the uncertainty of how each of these factors may change over time, several simplifying assumptions are incorporated in the planning process to project future debt service. However, many of the factors that determine future borrowing costs are beyond the SFPUC's control, including interest rates, inflation, federal and state policies and the volatility that has recently marked the global financial markets. There are high levels of uncertainty in projecting future debt service costs given the extended capital project planning horizon; therefore, debt service cost assumptions should be sufficiently conservative to mitigate risk and be reasonable in both historical context and current market expectations. The key assumptions governing new capital financing projections are discussed below.

The SFPUC works with an array of financial and legal advisors on its bond programs. In 2022 the SFPUC also engaged PFM Financial Advisors to provide broad strategic advice in managing the overall bond program, in addition to the transaction advice provided by advisors on individual transactions. As the market enters a period of greatly changed interest rates, the Capital Finance team is adjusting bond issuance strategies accordingly, by reevaluating past approaches, adjusting average life of borrowing, and taking advantage of lower interest costs options like federal and state loans.

Fixed Interest Rate Debt

Fixed-rate debt is a form of borrowing in which the interest rate is determined when the borrowing is made and fixed throughout the life of the debt. Historically, the SFPUC assumed its future fixed-rate debt would carry a 5% interest rate for all debt issued in the 10-year planning period. This assumption was lowered two years ago to a graduated interest assumption of 3.75% to 4.50% over the 10-year

planning period. In view of Federal Reserve actions to reduce inflation and the resultant interest rate volatility and rapid pace of Federal Reserve interest rate increases experienced beginning in FY 2021-22, the SFPUC is increasing our assumption to a 6 percent interest rate for future long-term financings through FY 2033-34, and 5% in FY 2034-35 and thereafter.

Given the SFPUC's success in selling revenue bonds at interest rates considerably lower than the 6% assumed rate, these assumptions are appropriate given the interest rate volatility observed in the capital markets in 2021 and 2022. The rate assumption for projected debt issuances of 6% over the next 10 years allows for continued conservatism in projections and better aligns with assumptions used by other City agencies and peer public utilities.

The SFPUC's fixed-rate debt includes fixed-rate revenue bonds, fixed-rate direct loans, and short-term notes (specifically, the 2021A and B Notes with 4-5 year maturities). Fixed-rate revenue bonds typically have long repayment periods and market-rate interest levels. Fixed-rate direct loans, such as Water Infrastructure Finance and Innovation Act (WIFIA) and State Revolving Fund loans, provide financing at below-market interest rates and over longer terms in some cases. The current plan assumes regular draws on the SFPUC's existing WIFIA and SRF loans throughout the construction period of the funded projects, with interest accruing at the loan rates of 1.45% until the start of repayment. The SFPUC assumes all long-term fixed-rate debt, including WIFIA loans, to be amortized over a 30-year term. While 40-year debt will be considered, 30 years represents a more conservative planning assumption.

Variable Interest Rate Debt

Variable-rate debt is a form of debt that carries an interest rate that changes over the life of the debt, depending on market conditions throughout the life of the debt. The SFPUC's variable-rate debt includes variable-rate revenue bonds and Commercial Paper. Variable-rate bonds typically have long repayment periods and provide financing at lower costs than fixed-rate bonds because they are marketed to investors based on a shorter period. For example, the commercial paper is typically marketed to investors for 30 to 120 day periods (although they could legally be remarketed for up to 270 days). All variable-rate bonds are assumed to be amortized over a 25-year term.

To mitigate interest rate risk and ensure financial sustainability, SFPUC's debt management policies stipulate that no more than 25 percent of any enterprise's long-term debt be in variable-rate mode. The Wastewater Enterprise is the only Enterprise that has outstanding long-term variable rate debt, which consists of the 2018 Wastewater Revenue Bonds Series C. Series 2018C was issued in August 2018 with a "soft put" provision requiring that purchasers of the bonds tender or "put" the bonds back to the SFPUC on a date established at the time of issuance (the "put date"). The bonds are then remarketed to new purchasers at interest rates that reflect the length of the new put period and market conditions at the time of the remarketing. In April 2023, the Series 2023 Series C bonds were issued as tax-exempt Green Bonds to refund all of the outstanding 2018 Series C bonds with a "put date" of October 1, 2029. These bonds make up 6.0 percent of the Enterprise's outstanding revenue bond portfolio.

Commercial Paper ("CP") is a form of short-term variable-rate debt that is refunded by revenue bonds. While CP has a maturity of 270 days or less, principal payments on maturing CP are usually funded by issuing new CP, a process referred to as "rolling" or "remarketing" the CP. Bank facilities, typically in the

form of a letter of credit or liquidity facility, are used to guarantee that funds are available to pay investors at each maturity in the unlikely event of a failed remarketing or inability of the SFPUC to fulfill CP repayment. Commercial paper interest rates are currently assumed to be 3.5 percent.

Issuance Costs and Capitalized Interest

Bond Issuance costs are projected at 0.40 percent of the par amount of each issuance, including bond underwriting fees. Issuance costs include underwriting fees, legal fees, financial advisory fees, credit enhancement fees, and other miscellaneous fees typically associated with a bond financing. Other issuance costs include the costs of interim, short-term funding for projects by each enterprise's Commercial Paper Program, such as accrued interest and credit bank and dealer fees associated with outstanding commercial notes. These costs are not treated as part of the bond issuance costs cited above, but instead are fixed costs related to the Commercial Paper Program added to the par value of each bond issuance when it occurs.

Capitalizing interest is a financial tool based on the fundamental principle of not passing on capital financing costs to ratepayers until the asset is completed and placed into service. The projections assume that interest during project construction is funded out of debt proceeds for a period of 24 months (called "capitalized interest"). This assumption in prior 10-Year Plans was 30-36 months; reducing the assumed capitalized interest period reduces debt service interest over the life of the bond, but increases short-term borrowing costs.

Debt Service Reserve

While the SFPUC has previously issued bonds with Debt Service Reserve Funds – bond proceeds equal to approximately 10% of the par size or a smaller amount as permitted by tax law – more recently the SFPUC has stopped funding such reserves, thereby reducing the size of the bond transactions. New debt issuance projections assume that a debt service reserve fund is not necessary due to the SFPUC's strong Aa/AA credit quality, which provides sufficient market assurances on debt service repayment. The Water, Wastewater, and Power indentures do not require a debt service reserve be funded and the SFPUC has maintained its high ratings without funding such reserves.

Timing of Debt Issuance

The timing and sizing of debt issuance is typically reflective of the projected financing needs of each enterprise over the 10-Year Financial Plans. The debt issuance schedule reflects coordination with the needs of capital project managers and the reality of contract bidding and execution. Timing and issuance amounts are subject to market conditions and actual project spending. Generally, the SFPUC's enterprises first borrow from the commercial paper programs established for each enterprise and when that capacity is exhausted, the commercial paper is refinanced with long term bonds, therefore freeing up the commercial paper capacity again. The proceeds of these future revenue bonds will be used for capital improvements, to retire outstanding commercial paper, to fund capitalized interest, and pay the costs of issuing bonds. Projected bond issuance amounts do not include estimates for future refinancing opportunities, although the Capital Finance Team is continually exploring opportunities to refinance and reduce debt service costs. The following table shows the assumed par amounts of revenue bond issuances for each enterprise for the Plan.

Table 8: Projected Annual Par Amounts of Revenue Bond Issuance by Enterprise (Million Dollars)

(\$M)	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Total
Water	\$762	\$439	\$0	\$713	\$0	\$494	\$0	\$554	\$0	\$477	\$3,439
Wastewater	\$1,108	\$774	\$699	\$0	\$1,373	\$0	\$990	\$0	\$1,274	\$0	\$6,218
Power	\$0	\$276	\$0	\$301	\$0	\$280	\$0	\$327	\$0	\$272	\$1,456
Total	\$1,870	\$1,489	\$699	\$1,014	\$1,373	\$774	\$990	\$881	\$1,274	\$749	\$11,113

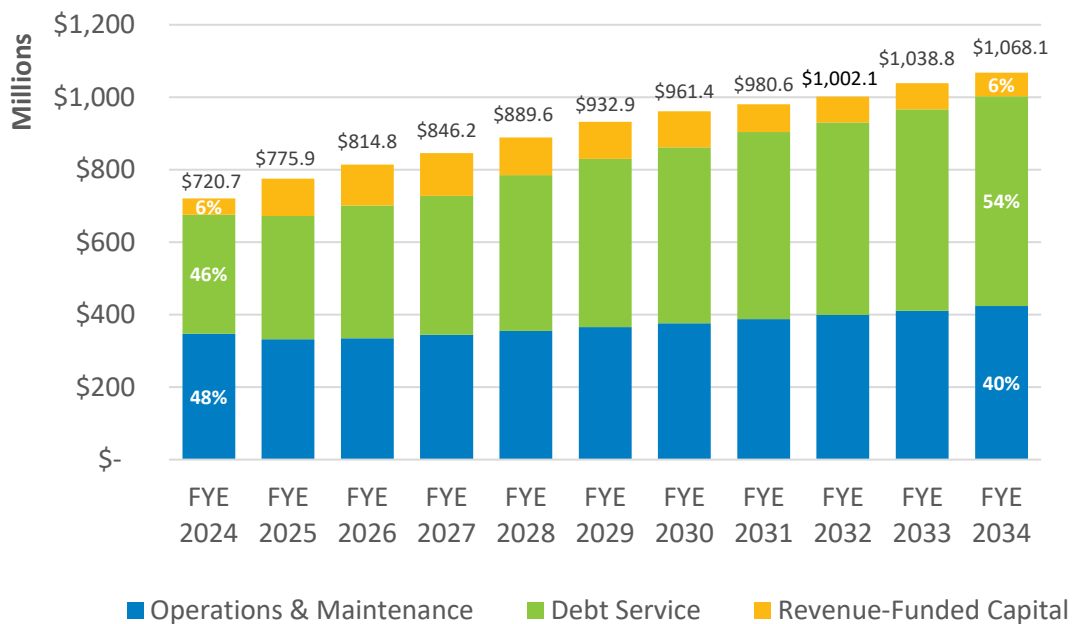
Annual Cash Expenditures

The section below provides a summary of the total cash needs, comprised of the annual operations and maintenance expenses as well as the various forms of capital funding, for each enterprise over the 10-year forecasting period.

Water Enterprise

Water Enterprise expenses are expected to grow from \$721 million to \$1.1 billion during the 10 years (an average of 4.02 percent per year), as shown in Figure 7. The bulk of this growth is in debt service, as funding for capital projects increases the annual debt service payments by approximately \$25 million per year over the 10-year projection horizon. As Water Enterprise is already coming out of the completion of the Water System Improvement Program and has the most debt outstanding of any Enterprise, these increases are fairly manageable. In addition, it’s important to note that water costs are split between the retail and wholesale customers, and this larger population base over which to allocate costs reduces the burden of increases.

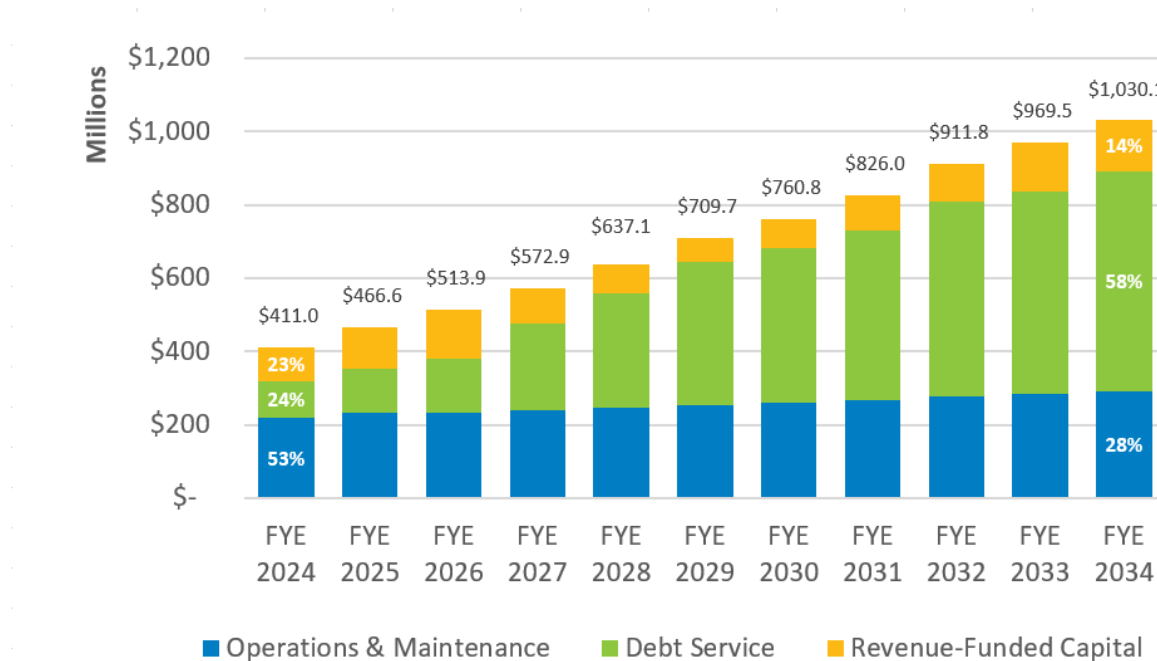
Figure 7: Projected Water Enterprise Annual Expenditures (Million Dollars)



Wastewater Enterprise

Wastewater annual expenditures more than double from \$411.0 million in the current year to \$1.03 billion in FY 2033-34, as Figure 8 shows. This increase is predominantly driven by the growth in debt service, which increases from 24% of annual expenses to 58% by the end of the ten-year period, or from \$98.4 million to \$596.3 million. This increase in debt service over the ten-year plan is driven by the Enterprise’s large Capital Improvement Plan and represents a major financial challenge. While the projects being financed under this plan are all critical for responding to climate change, meeting regulatory requirements, and maintaining aging infrastructure to ensure system reliability, the SFPUC is actively pursuing ways to achieve these goals without requiring massive rate increases for retail customers. Refer to the Financial Plan and Affordability sections of this report for more discussion of the agency’s approach to this issue.

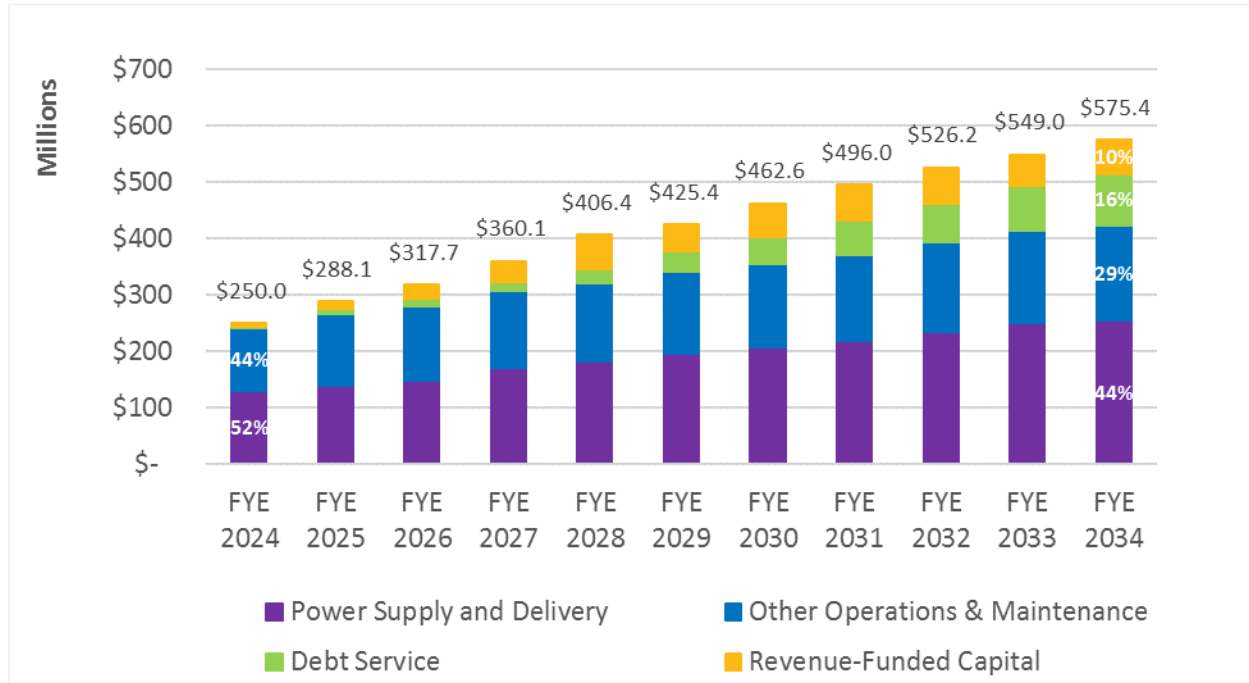
Figure 8: Projected Wastewater Enterprise Annual Expenditures (Million Dollars)



Hetch Hetchy Power

As shown in Figure 9, Power’s share of Hetch Hetchy Water & Power expenditures are forecasted to grow from \$250.0 million to \$575.4 million over the ten years, an average of 9.4% annually.

Figure 9: Projected Hetch Hetchy Power Annual Expenditures (Million Dollars)¹⁰



Most of this growth is in purchased power supply and delivery charges (Transmission Access Charges and Wholesale Distribution Tariffs), which has grown on average over 45% of the overall budget annually, with the near term closer to 50% of the total budget. Power supply and delivery represents the largest increase in any line item, growing by \$116.7M over this ten-year planning period. This line item includes the budgeted \$8M annual contingency above forecasts.

In addition, capital costs are forecast to continue rising in Hetch Hetchy Power. In 2018, Proposition A gave Hetch Hetchy Power authority to issue revenue bonds to construct facilities to serve new customers. These bond issuances, as well as those for existing power’s share of assets under the Hetch Hetchy Water Division, mean that debt service grows from just \$10.5 million annually in FY 2024-25 to \$90.9 million by the last year of the plan.

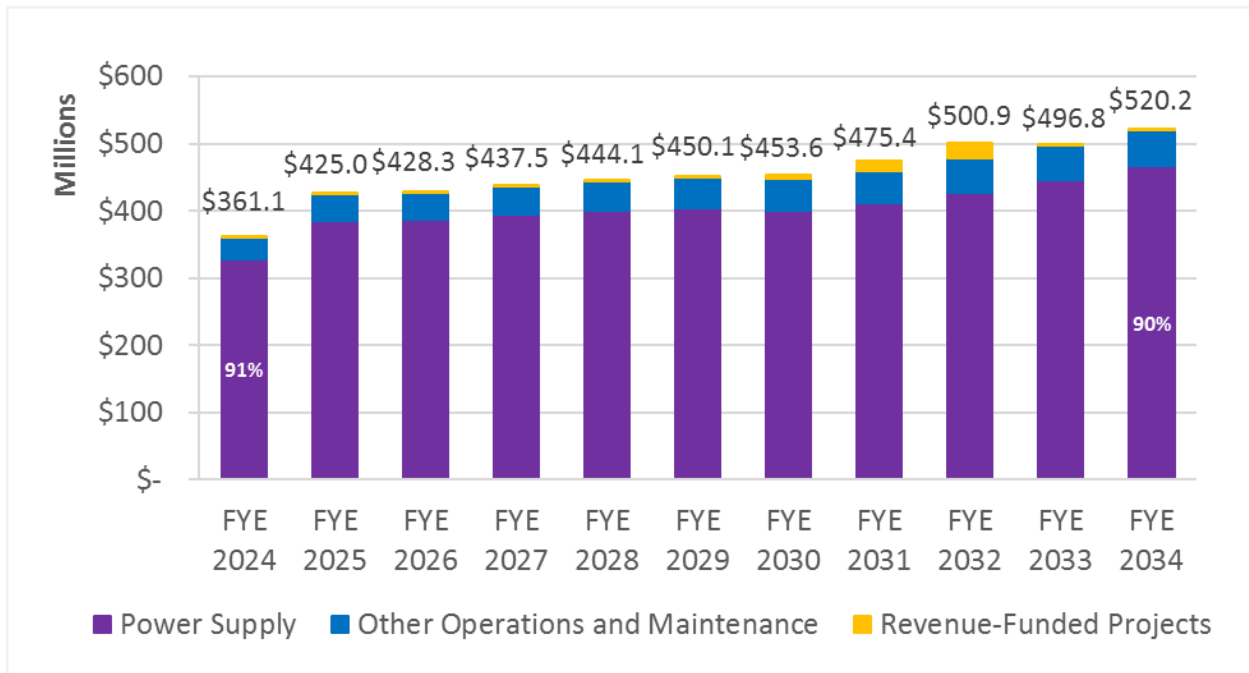
Both power supply and delivery costs and capital expenditures are driven by the program’s planned expansion of its customer base; Hetch Hetchy Power’s cost structure is more variable based on sales volumes than the other Enterprises, where costs are largely fixed and independent of utility usage. As a result, some of the risk of increasing costs comes with the upside of increased revenues, spreading the cost of a larger customer base and therefore helping to reduce rate increases.

¹⁰ Figure does not include the Water share of Hetch Hetchy Water Division expenses. These are shown in the Water Enterprise expenditures graph since they are funded via a transfer in from Water and paid for by water rates.

CleanPowerSF

Figure 10 shows the total annual expenditures for CleanPowerSF for the current and next ten fiscal years. Unlike the other Enterprises, the growth rate is relatively flat, and purchased power supply costs represent roughly 90% of the expenditures in every year. As with Hetch Hetchy Power, CleanPowerSF has recently faced huge increases in its annual power supply costs and has revised the forecasted expenditures to reflect these increased costs.

Figure 10: Projected CleanPowerSF Annual Expenditures (Million Dollars)



10-Year Financial Plan

The 10-Year Financial Plan provides a roadmap for how each enterprise will plan to fund its updated projections of operating and capital expenditures over a 10-year planning period. The financial plan summarizes the sources and uses of funds, presents a cash flow projection, and defines any adjustments that may be needed for utility rates. Sources are projected operating revenue streams such as water, wastewater, and power sales, as well as non-operating and capital revenues such as state and federal grants or general obligation bonds from the City. Uses are projected expenses such as operations and maintenance, debt service, and revenue-funded projects. These cash flow projections help each enterprise evaluate its performance on various financial sustainability metrics established in SFPUC’s Financial Management Policies, including fund balance reserve levels, debt service coverage, and revenue-funded capital.

Water Enterprise

The Water Enterprise’s financial forecast indicates the need for a continued 5.0 percent retail rate increase for the first four years of the plan, gradually tapering off in the outer years to levels more in line with inflationary rates (Table). Wholesale rate changes are more volatile than retail rates across the 10 years plan, with annual rate adjustments ranging from 0.0 percent to 8.2 percent. Appendix A contains a table summarizing the cash flow and demonstrates the need for the proposed rate adjustments.

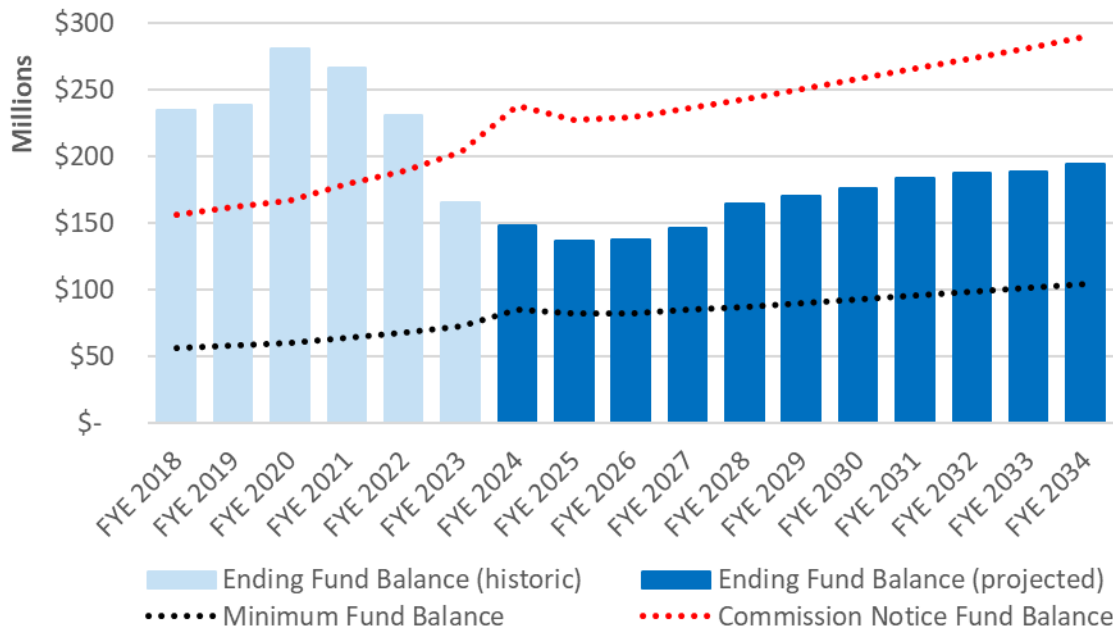
Compared to the prior FY 2023-24 to FY 2032-33 10 Year Financial Plan, retail’s average annual rate change is the same as previously forecasted, whereas wholesale’s rate changes have slightly increased from its previously forecasted 2.5 percent increase.

Table 9: Adopted () and Projected Water Enterprise Rate Change*

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual
Retail Rate Change	5.0%*	5.0%*	5.0%	5.0%	4.0%	4.0%	4.0%	3.0%	3.0%	3.0%	4.1%
Wholesale Rate Change	7.7%	4.5%	2.6%	8.2%	3.1%	2.1%	0.3%	0.0%	3.5%	3.4%	3.5%

Based on the proposed plan, the Water Enterprise’s fund balance reserve is projected to remain higher than the minimum level required by SFPUC’s Fund Balance Reserve Policy of 90 days or 25 percent of operating and maintenance expenses. Figure 11 shows that over the next 10 years, the Water Enterprise fund balance is projected to remain consistently in the 40-50% range, with a high of 47.7 percent in FY 2030-31.

Figure 11: Historic and Projected Water Enterprise Ending Fund Balance (Million Dollars)



The Water Enterprise’s debt service coverage is projected to remain higher than the minimum levels required by SFPUC’s Debt Service Coverage Policy of 1.35x annual debt service for Indenture Coverage and 1.10x for Current Coverage.

Table 10: Water Enterprise Indenture and Current Debt Service Coverage Ratios

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Indenture Debt Service Coverage	1.71	1.71	1.74	1.69	1.62	1.60	1.53	1.50	1.48	1.47
Current Debt Service Coverage – without Appropriated Fund Balance Revenue	1.28	1.32	1.34	1.29	1.23	1.22	1.16	1.14	1.13	1.12
Current Debt Service Coverage – with Appropriated Fund Balance Revenue	1.31	1.32	1.34	1.29	1.23	1.22	1.16	1.14	1.13	1.12

Wastewater Enterprise

The Wastewater Enterprise’s financial forecast indicates the need for multiple years of double-digit rate adjustments beyond the already adopted series of 9 percent rate adjustments (Table 11). Compared to the prior FY 2023-24 to FY 2032-33 10 Year Financial Plan, the projected rates over the 10 years are 1.2% higher, driven by the significant increase in Wastewater’s Capital Improvement Plan. Appendix B

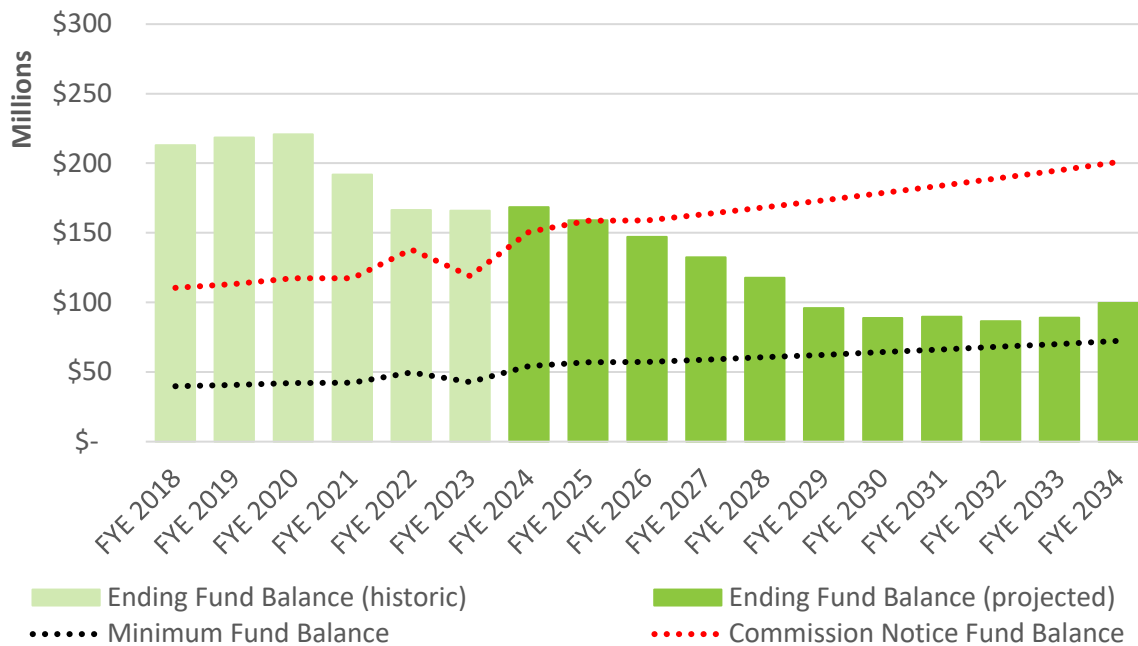
contains a table summarizing the cash flow and demonstrates the need for the proposed rate adjustments.

Table 11: Adopted (*) Projected Wastewater Enterprise Rate Change

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 3030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual
Retail Rate Change	9.0%*	9.0%*	12.0%	12.0%	11.0%	10.0%	10.0%	10.0%	7.0%	7.0%	9.7%

Over the next 10 years, the Wastewater Enterprise’s fund balance reserve is projected to remain higher than the minimum level required by SFPUC’s Fund Balance Reserve Policy of 90 days or 25 percent of operating and maintenance expenses. The fund balance is currently higher than the level requiring Commission notice in the Fund Balance Reserve Policy. This build-up of reserves was done in anticipation of the major capital expenditures on the horizon, and the current plan relies on use of these reserves to prevent even higher rate increases than those already forecasted. Throughout the 10-year planning period, the Wastewater Enterprise fund balance is projected to range from a high of 68.7 percent of operating expenses in FY 2024-25 to a low of 31.3 percent in FY 2031-32 and FY 2032-33.

Figure 12: Historic and Projected Wastewater Enterprise Ending Fund Balance (Million Dollars)



The Wastewater Enterprise’s debt service coverage is projected to remain higher than minimum levels required by SFPUC’s Debt Service Coverage Policy of 1.35x annual debt service for Indenture Coverage and 1.10x for Current Coverage. As Wastewater Enterprise issues significant quantities of debt throughout the 10 years, meeting debt service coverage becomes the primary driver of the large rate increases shown above in Table 11.

Table 12: Wastewater Enterprise Indenture and Current Debt Service Coverage Ratios

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Indenture Debt Service Coverage	3.21	2.87	1.92	1.60	1.37	1.39	1.41	1.36	1.41	1.43
Current Debt Service Coverage – without Appropriated Fund Balance Revenue	1.88	1.85	1.36	1.21	1.12	1.18	1.21	1.19	1.25	1.26
Current Debt Service Coverage – with Appropriated Fund Balance Revenue	1.96	1.94	1.42	1.26	1.18	1.19	1.21	1.20	1.25	1.26

Hetch Hetchy Water and Power

The 2022 Power Rates Study informed rate changes in FY 2022-23 and FY 2033-24 for Hetch Hetchy Power. This included a consolidation of the existing Retail and Enterprise municipal rate schedules into the same retail rates beginning FY 2023-24 for the same customer class. General Use Municipal (GUSE) rates are increasing from their subsidized levels toward cost of service at an effective rate increase of \$0.03/kWh annually. When GUSE rates for a given rate schedule reach cost of service, they switch over to retail rates. A couple of the rate schedules are projected to reach cost of service by FY 2026-27; however, due to increased costs for Hetch Hetchy Power, the majority of customer classes are currently projected to reach cost of service between FY 2029-30 and FY 2032-33. The exact timing of this changeover is subject to change based on changes to the rate plan and the results of the next power cost of service and rate study. Table 13 shows both Enterprise and General Use (GUSE) municipal rates increases. Rates for FY 2024-25 have not yet been adopted; a separate agenda item will be presented to the Commission later in spring 2024.

Table 13: Projected Hetch Hetchy Power Rate Change

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual
Retail Rate Change	14.0%	10.0%	9.0%	9.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	6.3%
General Use Municipal Rate Change	18.9%	15.9%	13.7%	12.1%	10.8%	9.7%	8.9%	8.1%	7.5%	7.0%	11.2%

Hetch Hetchy Power's financial forecast (Appendix C) results in an average annual retail rate increase of 6.3 percent annually over the Plan, with the highest increases in the earlier years of the Plan, leveling out to increases closer to inflation.

Hetch Hetchy Power’s fund balance is projected to remain above the minimum level required by SFPUC’s Fund Balance Reserve Policy of 90 days or 25 percent of operating and maintenance expenses. Throughout the 10-year planning period, fund balance is projected to range from a high of 55 percent of operating expenses in FY 2024-25 to a low of 33 percent in FY 2030-31 and FY 2031-32.

Figure 13: Historic and Projected Hetch Hetchy Power Ending Fund Balance (Million Dollars)

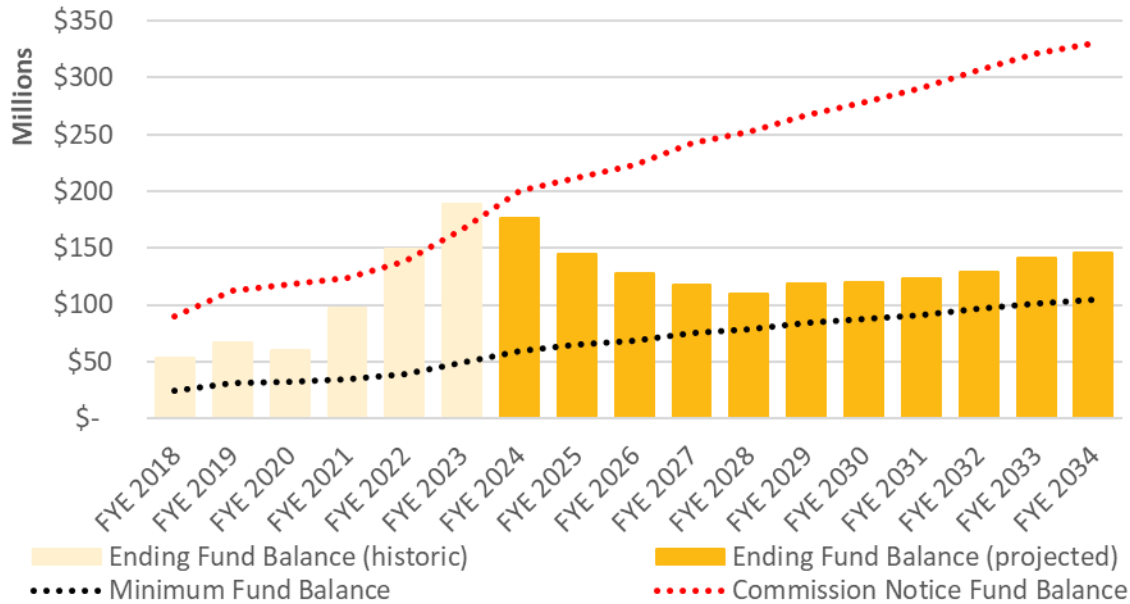


Table 14 shows that Hetch Hetchy Power’s debt service coverage in the Financial Plan is higher than minimum levels required by SFPUC’s Debt Service Coverage Policy of 1.35x annual debt service for Indenture Coverage and 1.10x for Current Coverage with fund balance appropriated as revenues. Hetch Hetchy Power’s Current Coverage without the use of fund balance appropriated as revenues also meets the minimum levels of 1.10x, except for FY 2024-25. As discussed above, Hetch Hetchy Power has faced significant increases in power supply costs over the past few years and would require very large rate increases to meet the 1.10x target. Fortunately, high power market prices have also allowed the program to earn greater-than-expected wholesale power sales revenues, meaning the fund balance levels currently sit above the threshold of 68% established in the Fund Balance Reserve Policy (as shown in Figure 13). As directed by the policy, the SFPUC is drawing down on these reserves to ensure rate stabilization and using the excess balances to meet current-year debt service coverage during FY 2024-25.

This growth in debt issuance puts pressure on Hetch Hetchy’s debt service coverage targets, which have not previously been a major issue for the program with so little debt outstanding. However, the increases are still relatively modest in comparison to the debt issued by the other Enterprises. The decrease in coverage seen in the later years of the 10-year period is primarily driven by Hetch Hetchy Power’s steep debt issuance increase throughout the 10 years, with annual debt service rising from \$10.5 million in FY 2024-25 to \$91.0 million FY 2033-34.

Table 14: Hetch Hetchy Power Indenture and Current Debt Service Coverage Ratios

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Indenture Debt Service Coverage	14.35	11.65	9.66	7.39	5.62	4.87	4.15	3.88	3.56	3.28
Current Debt Service Coverage – without Appropriated Fund Balance Revenue	-0.79	1.48	2.51	2.99	2.45	2.30	2.09	1.99	1.81	1.68
Current Debt Service Coverage – with Appropriated Fund Balance Revenue	2.22	2.77	3.03	3.30	2.45	2.30	2.09	1.99	1.81	1.68

CleanPowerSF

CleanPowerSF's financial forecast (Appendix D) requires a large rate increase in the first year of the plan to cover increased power supply costs and ensure compliance with the revised Fund Balance Reserve Policy. After this initial increase, rates are flat from FY 2026-27 onward in the ten-year planning period with a small 1% increase in FY 2025-26 to meet the target of 180 days cash on hand.

It's important to note that CleanPowerSF generation rates only reflect a portion of the bill, as CleanPowerSF customers also pay delivery charges and fees to PG&E. As such, a 15% increase of the generation portion of the bill represents an approximate 5% increase on the overall bill.¹¹

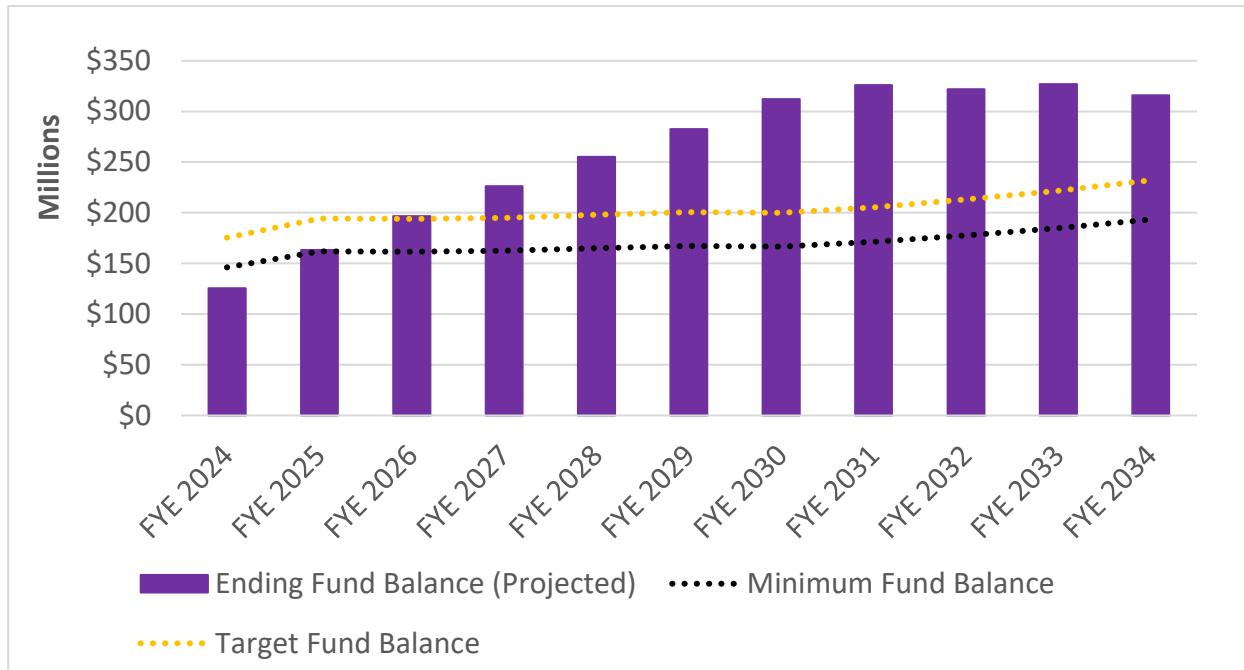
Table 15: Projected CleanPowerSF Generation Rate Changes

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034	Avg. Annual
Generation Rate Change	12.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%

The financial forecast for CleanPowerSF (Appendix D) projects fund balance to remain higher than the minimum level required by CleanPowerSF's Fund Balance Reserve Policy of 150 days of operating and maintenance expenses throughout the 10 years.

¹¹ Estimated using 2021 average usage patterns for a residential customer on the default E-TOU-C rate schedule.

Figure 14: Projected CleanPowerSF Ending Fund Balance (Million Dollars)



In FY 2024-25, fund balance does not reach the 180 days cash on hand policy target. This target was set in 2022, with a goal of building to it in three years. Unfortunately, these three years coincided with massive, unforeseen increases in power supply costs, as discussed previously in this report. Covering these expenses while building fund balance at the same time required significant rate increases; CleanPowerSF generation rates have experienced large increases over the past few years. The Fund Balance Reserve Policy allows the use of reserves for rate stabilization, smoothing the rate trajectory. Meeting the 180 days cash on hand target would require a 20% rate increase in FY 2024-25, followed by a rate decrease. Instead, staff instead are recommending a 12% increase to reach the minimum of 150 days, stabilizing rates and ensuring the program balances the need for sufficient liquidity with customer impact and competitiveness.

Affordability

As described above, the new Affordability Policy requires a forecast of average residential utility bills over a 20-year planning period. This information is used to inform the agency’s capital planning process; bills exceeding adopted policy targets require a justification and indicate that the agency should consider alternative strategies to reduce rates.

Water and Sewer Bills

As shown in Figure 15 and Figure 16, the Water and Sewer combined average bill is projected to meet the typical household target and low-income household targets set by SFPUC’s affordability policy. In the 20-year period the combined bill is forecasted to grow to a maximum of 2.9% of the typical household income and 6.9% of the low-income household income. For a low-income household enrolled

in applicable discount programs, the combined water and sewer bill during the 20-year timeframe reaches a maximum of 4.2% of income.

Figure 15. Projected Average Monthly Water and Sewer Bills and Affordability Targets

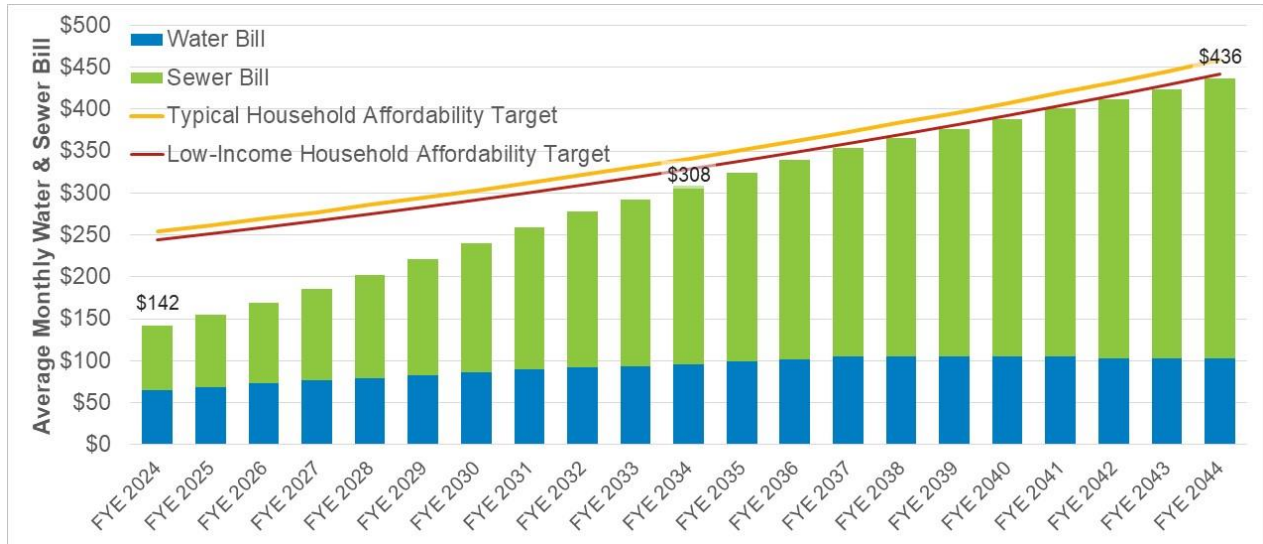
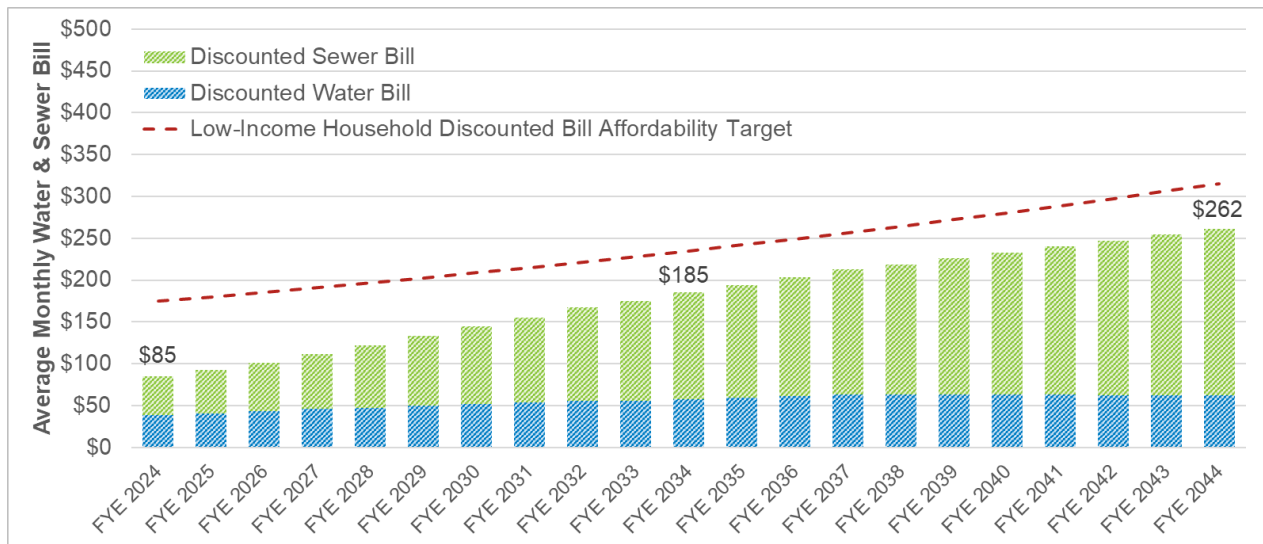


Figure 16. Projected Average Monthly Discounted Water and Sewer Bills and Affordability Target



As shown in Figure 15, the largest growth in customer bills is coming from the sewer portion of the bill. As mentioned earlier in this document, these increases are being driven by major capital investments. In the near term, this includes the completion of large projects such as the Southeast Plant biosolids digesters; however, the revised CIP now also includes additional projects to comply with upcoming regulations, respond to climate change, and address aging infrastructure. Most notably, the Nutrients project aims to significantly reduce the quantity of nutrients entering the San Francisco Bay, which have been linked to toxic algae blooms, and which is required to comply with state permit requirements. In

addition, the plan includes the replacement of the Southeast Outfall, a single pipe that carries 80% of the City's sewage and which is already over far beyond its useful life.

To keep rates below the affordability thresholds, both the Water and Wastewater Enterprises had to make substantial cuts to their CIPs and defer some projects to spread out the costs of capital investments. Additional cuts would be extremely challenging and would begin to risk operational reliability. Even with these changes, the forecasted rate increases are essentially level with the targets, providing no room for growth in expenditures in the event of cost overruns, new regulatory requirements, or emergency needs. As such, staff are preemptively beginning to pursue alternative strategies to reduce the impacts on ratepayers.

SFPUC is actively pursuing a multi-pronged approach to tackle this challenge head-on. In the case of the Nutrients project in particular, the issue is shared by all municipalities who discharge into the San Francisco Bay. We're actively engaging with other Bay Area municipalities, BACWA (Bay Area Clean Water Agencies), and state and federal associations to educate policy makers about the issue and potential solutions. Initial estimates suggest a regional cost exceeding \$10 billion, necessitating a multi-county/agency effort. To that end, we are exploring various existing funding sources or developing new ones at the local, regional, state, and federal level. As the project is not scheduled to begin construction until FY 2029-30, the agency will use the available time to try to secure funding partnerships and implement the most cost-effective solution.

Power Bills

Hetch Hetchy Power bills and CleanPowerSF bills are calculated for the Typical Household and the Low-Income Household metrics but are not held to any targets. These forecasts are shown in the graphs below, with its associated percentage calculation in the 10-year time frame reported in Appendix C and Appendix D. By the end of both Hetch Hetchy Power and CleanPowerSF's 20-year time frame, the average and discounted bills' metric reflect a 0.1-0.4% increase from FY 2033-34. Work is currently underway to perform the background research and internal policy development needed to set performance targets for the Power Enterprise. We expect to bring a revision to this policy in the next few years to add performance targets for the Power Enterprise once this additional analysis is complete.

Figure 17. Projected Average Monthly Residential Hetch Hetchy Power Bills

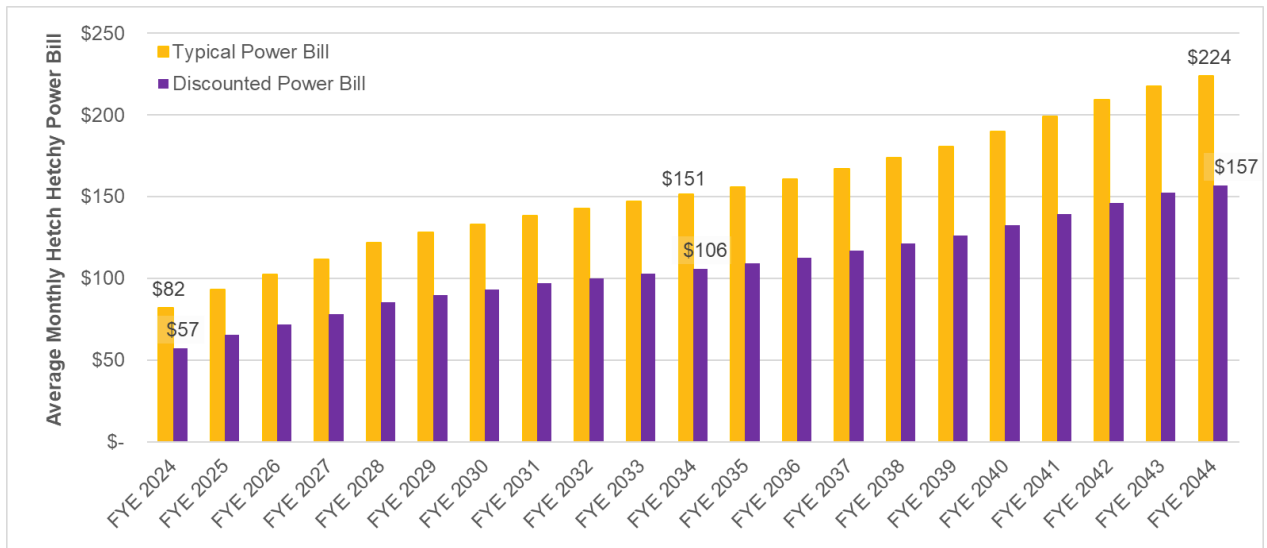
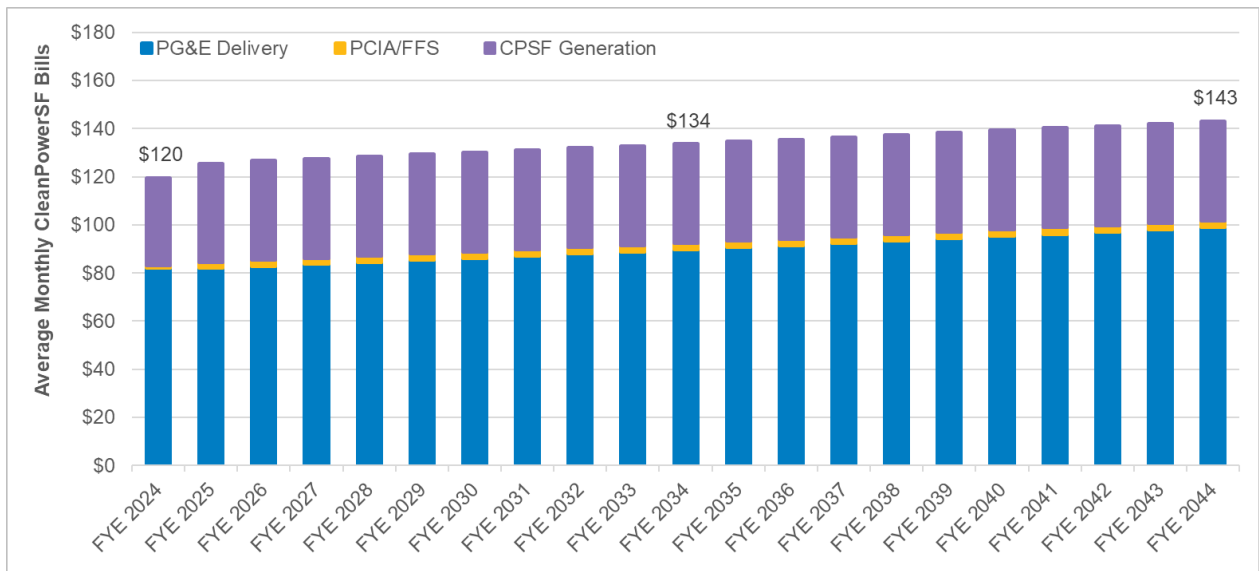


Figure 18. Projected Average Monthly Residential CleanPowerSF Bills



Sensitivities

All Enterprises

Alternative Capital Improvement Program Expenditures

As mentioned in the expenses section of the report, capital expenditures are one of the largest cost drivers in the plan for the Water and Wastewater Enterprises, and a material contributor of costs for Hetch Hetchy Power and CleanPowerSF. As part of developing the Financial Plan, significant efforts by the Financial Planning Team and the project teams in each Enterprise to were made to refine the budgeted capital appropriations and the assumptions used to determine the actual spending horizon for these projects. Different assumptions regarding capital timing and debt issuance have a major impact on the necessary rate increases, and staff worked through numerous iterations of the capital plan throughout the last six months.

As described in the SFPUC 10-Year Capital Plan, multiple versions of the CIP were prepared and compared for deliverability and rate impact. This process included structuring the CIP to minimize the overlap of multiple large capital projects, refining project schedules based on resource availability, and deferring some lower priority projects to temper the rate impact of capital investments. The current adopted CIP reflects staff's best efforts to balance the maintenance of critical infrastructure, while also providing the lowest possible rates to SFPUC customers. In the end, the proposed 10-Year CIPs represent an \$2.7 billion reduction from the original submissions, greatly reducing required rate increases.

Use of Operational Execution Factors

As mentioned in the "Use of Funds" section of the report, SFPUC is newly applying execution factors to the projected budgetary expenditures. A sensitivity analysis was conducted to evaluate the impact of using these factors on the annual expenses and the projected rate adjustments needed to continue to meet each enterprise financial policy objectives and debt service obligations. Application of these execution factors results in an \$8.1 million reduction of projected operating costs for the Water Enterprise in FY 2024-25 (2.6% of total operating costs) and \$56.8 million over the next ten years, resulting in 1.6% reduction of operating costs over the ten-year projection. The application of the Wastewater's execution factors results in an \$8.2 million reduction of projected operating costs in FY 2024-25 (3.7% of total operating costs) and \$92.9 million over the next ten years, resulting in 3.7% reduction to total operating costs over the ten-year projection. For Hetch Hetchy, the use of execution factors reduces costs by \$5.2 million in FY 2024-25 (1.7% of total operating costs) and \$46.4 million over the next ten years, resulting in 1.2% reduction to total operating costs over the ten-year projection.

Revenue Bond Borrowing Rate

Capital costs are typically the main driver of rate variability for utilities; consequently, the assumptions used to calculate borrowing costs can have a significant impact on projected rate revenue requirements. In the previous 10-Year Plan, borrowing costs were calculated using what was then a conservative five percent annual interest rate on the principal for all revenue bonds. However, with the Federal Reserve ratcheting up interest rates, SFPUC has increased that assumption to six percent for the next ten years.

Over the next ten years, using these higher interest rate assumptions increases our total debt service payments on future debt for each enterprise as follows:

- Water Enterprise costs increased by \$110.4 million
- Wastewater Enterprise costs increased by \$214.7 million
- Hetch Hetchy Power costs increased by \$37.1 million

SFPUC staff will continue to track the changes in the borrowing market and make adjustments to the borrowing rates. If rates begin to come down, we may be able to adjust our financial outlook accordingly.

Water and Wastewater Enterprises

Timing of Drought and COVID-19 Recovery

Given the high reliance on volumetric rates, Water and Wastewater revenues are highly sensitive to shifts in volumetric sales. During the drought, the Water and Wastewater Enterprises partially made up for the decline in sales through the use of a drought surcharge. However, following the end of the drought and the lingering impacts of the COVID-19 pandemic, water sales still remain below their historic levels. There is a high level of uncertainty how water sales will rebound in the coming years, especially in the near term. When preparing this plan, our team evaluated multiple water use recovery scenarios, considering how much of a bounce back in water use we could anticipate on a per customer class basis for drought and COVID-19. We considered different lengths of recovery as well as different levels of recovery, with some scenarios reaching a full return to prior use and other returning to a fraction of historic use.

Power Enterprise

Power Supply Expenditures

The power supply market, and particularly natural gas prices, has seen significant volatility in the last few years due to various external factors, including the war in Ukraine, weather patterns, and supply chain impacts. For both Hetch Hetchy and CleanPowerSF, this uncertainty is a major challenge to financial planning. Supply shortages in the market has also driven up costs for capacity and renewable attributes to record heights. As discussed above, the budgets for each business line were increased in this version of the plan, and the proposed plans forecast power purchase costs on the higher end of the projections with contingency added to address uncertainty.

Hetch Hetchy Power

Sensitivity to Increased Volume Growth

This plan includes many adjustments to expected Hetch Hetchy Power volumetric sales forecasts to account for construction project delays. It is entirely possible volumes could exceed base case loads, driven by favorable economic recovery and successful project execution. In an upside scenario in which redevelopment and infill projects come online closer to the initial forecast by project managers than they are in the current plan, power revenues would be \$37.5 million higher than forecasted, allowing for lower rate increases.

Appendices

Appendix A: Water Enterprise 10-Year Financial Plan

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Beginning Fund Balance (\$M)	\$ 148.4	\$ 137.1	\$ 137.3	\$ 146.6	\$ 165.1	\$ 170.3	\$ 175.9	\$ 184.1	\$ 187.6	\$ 188.4
Sources (\$M)										
Retail Water Sales	345.3	367.9	385.8	404.9	420.8	437.8	455.7	469.9	485.2	500.9
Wholesale Water Sales	350.9	378.7	401.4	435.1	449.7	461.7	465.8	468.6	487.7	507.1
Other Miscellaneous Income	68.4	68.3	68.2	68.2	67.6	67.5	67.4	67.1	66.7	66.3
Total Sources	\$ 764.6	\$ 815.0	\$ 855.5	\$ 908.1	\$ 938.1	\$ 967.0	\$ 988.9	\$ 1,005.6	\$ 1,039.6	\$ 1,074.3
Uses (\$M)										
Operations & Maintenance	293.2	294.7	303.1	312.0	321.3	330.7	340.4	350.5	360.5	371.4
Hetchy Transfer	39.5	40.8	41.9	43.1	44.5	45.9	47.5	49.0	50.7	52.4
Debt Service	339.7	366.2	383.2	430.3	464.8	485.2	516.7	531.4	556.0	579.6
Revenue-Funded Projects	103.4	113.1	117.9	104.3	102.3	99.6	76.1	71.2	71.5	64.7
Total Uses	\$ 775.9	\$ 814.8	\$ 846.2	\$ 889.6	\$ 932.9	\$ 961.4	\$ 980.6	\$ 1,002.1	\$ 1,038.8	\$ 1,068.1
Net Revenues (\$M)	\$ (11.3)	\$ 0.2	\$ 9.3	\$ 18.5	\$ 5.2	\$ 5.6	\$ 8.3	\$ 3.5	\$ 0.8	\$ 6.2
Ending Fund Balance (\$M)	\$ 137.1	\$ 137.3	\$ 146.6	\$ 165.1	\$ 170.3	\$ 175.9	\$ 184.1	\$ 187.6	\$ 188.4	\$ 194.6
Rate Increase - Retail	5.0%	5.0%	5.0%	5.0%	4.0%	4.0%	4.0%	3.0%	3.0%	3.0%
Rate Increase - Wholesale	7.7%	4.5%	2.6%	8.2%	3.1%	2.1%	0.3%	0.0%	3.5%	3.4%
Fund Balance as % of Op. Expenses	41.2%	40.9%	42.5%	46.5%	46.6%	46.7%	47.5%	47.0%	45.8%	45.9%
Debt Service Coverage (Current)	1.31	1.32	1.34	1.29	1.23	1.22	1.16	1.14	1.13	1.12
Debt Service Coverage (Indenture)	1.71	1.71	1.74	1.69	1.62	1.60	1.53	1.50	1.48	1.47
Revenue-Funded % of Capital	27%									
Single Family Monthly Water & Sewer Bill	\$ 154	\$ 169	\$ 186	\$ 203	\$ 222	\$ 241	\$ 259	\$ 278	\$ 292	\$ 308
Avg. Monthly Bill as % of 40th Percentile	1.8%	1.9%	2.0%	2.1%	2.3%	2.4%	2.5%	2.6%	2.6%	2.7%
Avg. Monthly Bill as % of 20th Percentile	4.3%	4.6%	4.9%	5.2%	5.5%	5.7%	6.0%	6.3%	6.4%	6.5%
Disc. Monthly Bill as % of 20th Percentile	2.6%	2.7%	2.9%	3.1%	3.3%	3.4%	3.6%	3.8%	3.8%	3.9%

Appendix B: Wastewater Enterprise 10-Year Financial Plan

	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Beginning Fund Balance (\$M)	\$ 168.5	\$ 159.1	\$ 147.1	\$ 132.4	\$ 117.8	\$ 95.9	\$ 88.8	\$ 89.8	\$ 86.4	\$ 89.1
Sources (\$M)										
Sewer Charges	434.0	478.8	535.3	598.9	664.3	730.4	803.8	885.0	948.6	1016.7
Non-Rate Revenue	19.9	20.1	19.9	20.7	20.8	20.7	20.9	21.3	21.7	22.2
Federal Bond Interest Subsidy	3.2	3.1	3.0	2.8	2.7	2.5	2.3	2.2	2.0	1.8
Total Sources	\$ 457.2	\$ 501.9	\$ 558.2	\$ 622.5	\$ 687.8	\$ 753.6	\$ 827.1	\$ 908.4	\$ 972.2	\$ 1040.6
Uses (\$M)										
Operations & Maintenance	231.7	231.9	238.6	245.8	253.2	260.7	268.4	276.5	284.6	293.2
Debt Service	122.5	148.2	237.6	312.3	390.5	421.2	462.2	531.7	552.7	596.3
Revenue-Funded Projects	112.4	133.9	96.7	79.0	66.0	78.9	95.4	103.7	132.2	140.6
Total Uses	\$ 466.6	\$ 513.9	\$ 572.9	\$ 637.1	\$ 709.7	\$ 760.8	\$ 826.0	\$ 911.8	\$ 969.5	\$ 1030.1
Net Revenues (\$M)	\$ (9.4)	\$ (12.0)	\$ (14.7)	\$ (14.6)	\$ (21.9)	\$ (7.2)	\$ 1.1	\$ (3.4)	\$ 2.7	\$ 10.5
Ending Fund Balance (\$M)	\$ 159.1	\$ 147.1	\$ 132.4	\$ 117.8	\$ 95.9	\$ 88.8	\$ 89.8	\$ 86.4	\$ 89.1	\$ 99.7
Retail Rate Increase	9.0%	9.0%	12.0%	12.0%	11.0%	10.0%	10.0%	10.0%	7.0%	7.0%
Fund Balance as % of Op. Expenses	68.7%	63.4%	55.5%	47.9%	37.9%	34.1%	33.5%	31.3%	31.3%	34.0%
Debt Service Coverage (Current)	1.96	1.94	1.42	1.26	1.18	1.19	1.21	1.20	1.25	1.26
Debt Service Coverage (Indenture)	3.21	2.87	1.92	1.60	1.37	1.39	1.41	1.36	1.41	1.43
Revenue-Funded % of Capital	18%									
Single Family Monthly Water & Sewer Bill	\$ 154	\$ 169	\$ 186	\$ 203	\$ 222	\$ 241	\$ 259	\$ 278	\$ 292	\$ 308
Avg. Monthly Bill as % of 40th Percentile	1.8%	1.9%	2.0%	2.1%	2.3%	2.4%	2.5%	2.6%	2.6%	2.7%
Avg. Monthly Bill as % of 20th Percentile	4.3%	4.6%	4.9%	5.2%	5.5%	5.7%	6.0%	6.3%	6.4%	6.5%
Disc. Monthly Bill as % of 20th Percentile	2.6%	2.7%	2.9%	3.1%	3.3%	3.4%	3.6%	3.8%	3.8%	3.9%

Appendix C: Hetch Hetchy Water and Power Enterprise 10-Year Financial Plan

(\$M)	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Beginning Fund Balance	\$ 175.9	\$ 144.7	\$ 127.3	\$ 118.0	\$ 110.0	\$ 119.3	\$ 120.4	\$ 123.8	\$ 129.1	\$ 141.7
Sources										
Power Sales - Retail	202.5	239.7	289.6	339.9	373.1	400.5	433.4	464.6	493.2	508.9
Power Sales - Wholesale	18.9	20.1	17.5	15.1	16.4	16.5	17.4	16.6	16.1	16.2
Gas & Steam Sales	23.7	28.3	31.4	34.5	35.9	37.0	38.1	39.2	40.4	41.6
Water Sales	2.8	3.1	3.3	3.5	3.7	3.9	4.0	4.2	4.4	4.5
Hetchy Transfer	39.5	40.8	41.9	43.1	44.5	45.9	47.5	49.0	50.7	52.4
Other Misc Income	17.0	22.5	18.0	17.7	14.1	12.7	18.0	19.4	15.9	17.1
Total Sources	\$ 304.5	\$ 354.6	\$ 401.7	\$ 453.7	\$ 487.7	\$ 516.4	\$ 558.4	\$ 593.0	\$ 620.7	\$ 640.7
Uses										
Power Supply & Delivery Charges	138.3	148.7	171.5	181.0	196.7	206.1	218.5	234.5	249.2	255.0
Other Operations & Maintenance	171.0	177.1	181.6	187.6	193.7	200.1	206.7	213.6	220.7	228.1
Debt Service	10.5	13.6	17.7	25.9	38.1	47.1	60.4	68.8	81.2	91.0
Revenue-Funded Projects	15.9	32.6	40.2	67.2	50.0	62.0	69.5	70.8	57.0	62.5
Total Uses	\$ 335.7	\$ 372.0	\$ 411.0	\$ 461.7	\$ 478.4	\$ 515.3	\$ 555.0	\$ 587.7	\$ 608.0	\$ 636.6
Net Revenues	\$ (31.2)	\$ (17.4)	\$ (9.2)	\$ (8.0)	\$ 9.2	\$ 1.1	\$ 3.4	\$ 5.3	\$ 12.6	\$ 4.1
Ending Fund Balance	\$ 144.7	\$ 127.3	\$ 118.0	\$ 110.0	\$ 119.3	\$ 120.4	\$ 123.8	\$ 129.1	\$ 141.7	\$ 145.8
Retail Rate Change	14.0%	10.0%	9.0%	9.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%
Fund Balance as % of Power Op. Expenses	55%	45%	39%	34%	35%	34%	33%	33%	34%	34%
Debt Service Coverage (Current)	2.22	2.77	3.03	3.30	2.45	2.30	2.09	1.99	1.81	1.68
Debt Service Coverage (Indenture)	14.35	11.65	9.66	7.39	5.62	4.87	4.15	3.88	3.56	3.28
Revenue-Funded % of Capital	20%									
Single Family Res. Monthly Bill	\$ 93	\$ 103	\$ 112	\$ 122	\$ 128	\$ 133	\$ 139	\$ 143	\$ 147	\$ 151
Avg. Monthly Bill as % of 40th Percentile	1.1%	1.1%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Avg. Monthly Bill as % of 20th Percentile	2.6%	2.8%	2.9%	3.1%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Disc. Monthly Bill as % of 20th Percentile	1.8%	1.9%	2.1%	2.2%	2.2%	2.2%	2.3%	2.3%	2.3%	2.3%

Appendix D: CleanPowerSF 10-Year Financial Plan

(\$M)	FYE 2025	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 2032	FYE 2033	FYE 2034
Beginning Fund Balance	\$ 125.3	\$ 163.1	\$ 196.6	\$ 226.1	\$ 255.2	\$ 282.5	\$ 312.1	\$ 326.1	\$ 322.0	\$ 327.0
Sources										
Retail Power Sales	448.8	458.9	463.9	469.4	473.1	479.5	486.1	493.3	498.2	505.6
Wholesale Sales	11.1	0.0	0.0	0.7	1.1	0.4	0.0	0.0	0.0	0.0
Other Miscellaneous Income	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7
Total Sources	\$ 462.7	\$ 461.8	\$ 466.9	\$ 473.2	\$ 477.4	\$ 483.2	\$ 489.5	\$ 496.8	\$ 501.7	\$ 509.3
Uses										
Power Supply	385.0	386.2	394.2	399.4	403.8	400.4	411.4	427.3	445.1	466.5
Operations	39.4	41.5	42.8	44.2	45.6	47.0	48.5	50.0	51.6	53.3
Revenue-Funded Projects	0.6	0.5	0.4	0.5	0.7	6.2	15.5	23.6	0.1	0.5
Total Uses	\$ 425.0	\$ 428.3	\$ 437.5	\$ 444.1	\$ 450.1	\$ 453.6	\$ 475.4	\$ 500.9	\$ 496.8	\$ 520.2
Net Revenues	\$ 37.8	\$ 33.5	\$ 29.4	\$ 29.1	\$ 27.3	\$ 29.6	\$ 14.1	\$ (4.1)	\$ 5.0	\$ (10.9)
Ending Fund Balance	\$ 163.1	\$ 196.6	\$ 226.1	\$ 255.2	\$ 282.5	\$ 312.1	\$ 326.1	\$ 322.0	\$ 327.0	\$ 316.1
Generation Rate Change	12.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Days Cash On Hand	151	183	209	232	254	281	286	272	265	245
Fund Balance as % of Op. Expenses	38%	46%	52%	58%	63%	70%	71%	67%	66%	61%
Single Family Res. Monthly Bill	\$ 125	\$ 127	\$ 128	\$ 128	\$ 129	\$ 130	\$ 131	\$ 132	\$ 133	\$ 134
Avg. Monthly Bill as % of 40th Percentile	1.3%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%
Avg. Monthly Bill as % of 20th Percentile	3.0%	3.0%	2.9%	2.8%	2.7%	2.7%	2.6%	2.5%	2.4%	2.4%