

GREEN BOND REPORT 2022-23



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Note: Unlike our Water and Wastewater Enterprises which have issued CBI certified bonds, to date the Power Enterprise has issued only self-certified bonds in 2015 and 2021 and obtained a verification of reallocated proceeds from Sustainalytics. All Green Bond Verification Reports are available at <https://sfpuc.org/about-us/reports/debt-management-and-disclosure-reports>



Moccasin Powerhouse Generator Step-Up Transformer

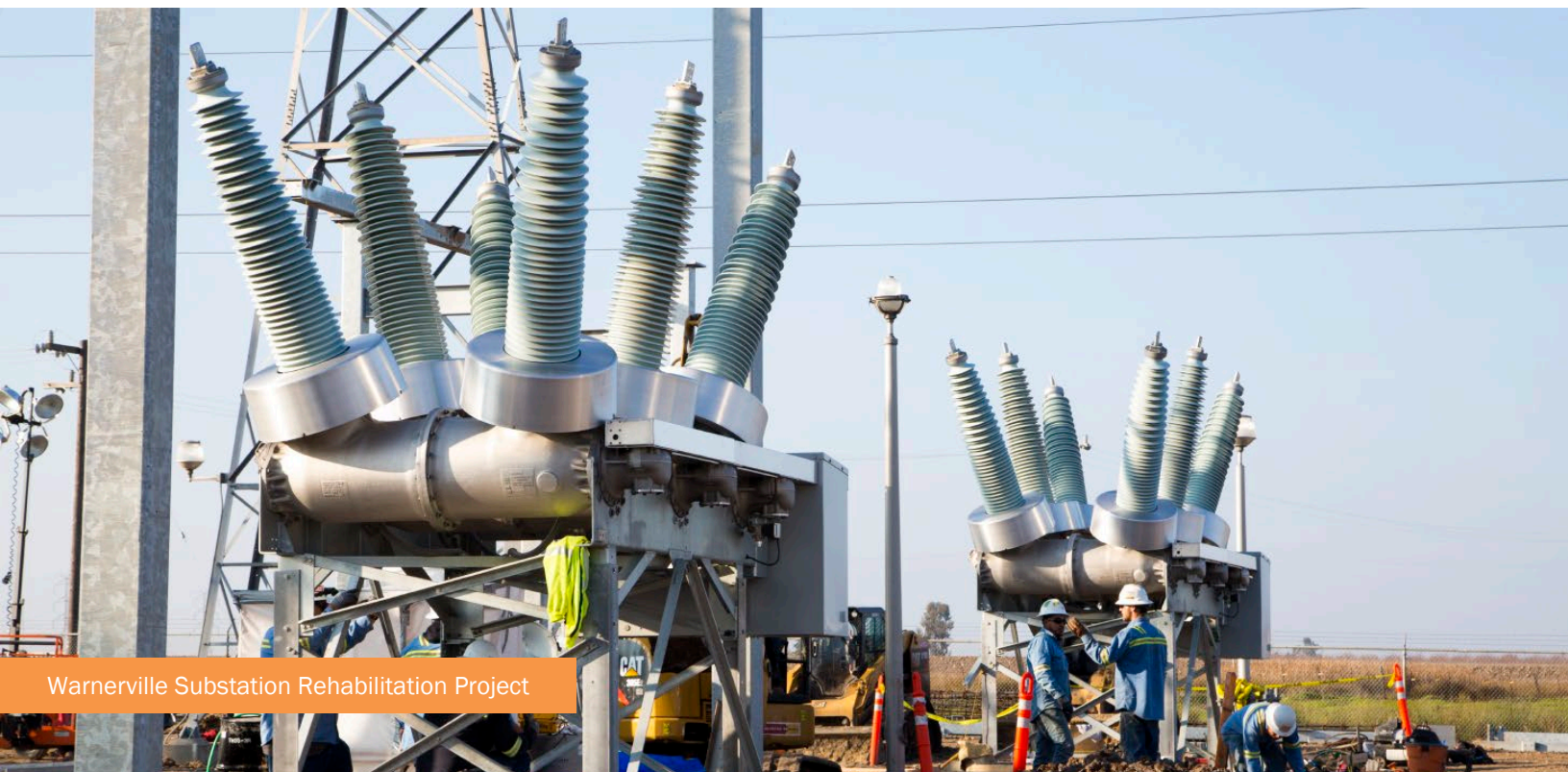
Introduction

The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco (City). Since the release of its first Climate Action Plan in 2004, San Francisco has been leading the way on local climate action, environmental justice, and developing and implementing innovative programs and outreach campaigns to engage with all San Franciscans.

These Climate Action Plans impact all San Francisco departments, including the SFPUC, and influence operating and capital investment activities. The SFPUC provides top quality drinking water and wastewater services to the City of San Francisco, wholesale water to three Bay Area counties, and clean, reliable energy to San Francisco residents, businesses, and municipal departments. Located in the State of California (State), the SFPUC is governed by State and local laws and regulations, as well as policies and programs within the SFPUC, created to achieve additional climate and social inclusion goals (Please see to Appendix A for additional details). Our agency was the first utility in the nation to pass Environmental Justice and Community Benefits policies that ensure we proactively provide diverse communities with opportunities in workforce and economic development, the arts, urban agriculture, and education.

The SFPUC views green bonds as an important tool to help meet these goals and finance low-carbon, climate-resilient infrastructure. Since issuing its first series of green bonds in Fiscal Year 2015 through Fiscal Year 2023, the SFPUC has sold more than \$3.7 billion in certified green bonds from its Water and Wastewater enterprises and more than \$100 million in self-certified green bonds from its Power enterprise. Impacts from the projects financed by green bonds issued by our three enterprises range from increased water storage, application of green infrastructure to manage stormwater, upgrades to renewable energy generation facilities, and the construction of green infrastructure to divert stormwater from treatment plants.

In addition to providing project impact information, this report seeks to highlight associated project co-benefits and describe the context in which climate and social inclusion informs the SFPUC's capital planning decisions. This report reflects activities through June 30, 2023.



Warnerville Substation Rehabilitation Project

This report speaks only as of its date. The SFPUC has not undertaken, and does not undertake, to provide any updates to this report in the future. The publication of this report does not constitute or imply any representation (i) that the information in the report is material to investors, (ii) regarding any other material financial, operating or other information about the SFPUC or its outstanding bonds or other indebtedness or (iii) that no other material circumstances or material events have occurred or that no other material information exists concerning the SFPUC or its outstanding bonds or other indebtedness. This report is not a recommendation to buy, sell or hold any bonds or obligations of the SFPUC.

GREEN BOND DESIGNATION AND CERTIFICATION

The SFPUC designates certain of its Revenue Bonds as “Green Bonds” where proceeds are used to finance or refinance environmentally beneficial projects. Such designations are based upon criteria applied by the SFPUC. Investors’ criteria for determining whether Bonds are financing or refinancing environmentally beneficial projects and/or are appropriately designated as “Green Bonds” may differ from the criteria applied by the SFPUC.

Power Enterprise Green Bond Impact Report

On May 20, 2015, the SFPUC issued its Power Revenue Bonds, Series 2015 A (Green Bonds) which generated \$30,200,000 in project fund proceeds. This was SFPUC first Green Bonds issuance. On December 21, 2021, the SFPUC issued its Power Revenue Bonds, Series 2021 A, which generated \$82,709,608 in project fund proceeds. The purpose of designating the bonds as Green Bonds was to allow investors to invest directly in bonds which finance environmentally beneficial projects. Proceeds from the Green Bonds funded Hetch Hetchy Project hydroelectric generation facilities.

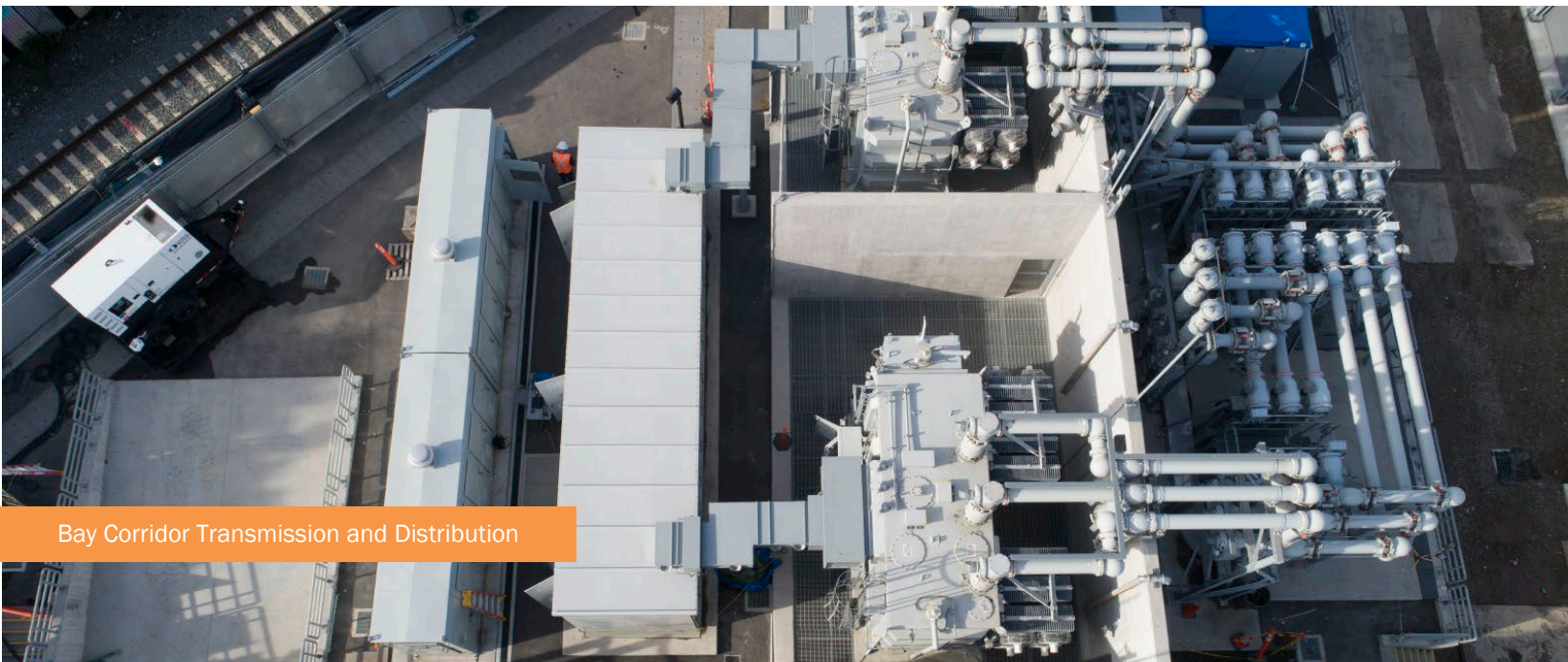
The reconstruction or replacement projects funded by the Power Revenue Green Bonds are all generation and other projects that support hydroelectric facilities of the Hetch Hetchy Project, which produces electricity without generating greenhouse gas. The largest project funded by these green bonds is the Bay Corridor Transmission and Distribution Project, which is the construction of an SFPUC substation taking transmission level voltage from PG&E at the Potrero substation and transforming that voltage to distribution level voltage and the construction of a distribution system to provide power to Power Enterprise customers. The SFPUC engaged Sustainalytics to review a partial reallocation of green bond proceeds to include additional eligible projects.

Green Bond Spending Details

The proceeds from the green bond issuances are separately tracked and allocated to designated eligible projects. In the indentures pursuant to which Bonds have been issued, the SFPUC has reserved the right to reallocate the use of the proceeds of Bonds among various projects. A reduction in the allocation of Green Bond proceeds to a particular project does not necessarily mean that such project will not proceed or that the scope of such project has been reduced. Further, the amount of Green Bond proceeds allocated to a particular project does not necessarily reflect the total cost of such project. Estimated use represents total projected spending for the bonds by project at the time of issuance.

Spending by bond and eligible project is detailed below.

- Power Revenue Bonds, 2015 Series A (Green Bonds)
- Power Revenue Bonds, 2021 Series A (Green Bonds)



Bay Corridor Transmission and Distribution

Green Bond Proceeds

Power Revenue Bonds, 2015 Series A As of June 30, 2023

Project	Estimated Use	Prior Year Spending	FY 22-23 Spending	Total Expended
Other Powerhouse Projects	\$32,414	\$12,928,747	\$-	12,928,747
Oil Containment Project	2,667,250	812,147	-	812,147
Kirkwood Penstock	2,465,798	2,578,974	(19,206)	2,559,768
Moccasin Powerhouse & Generator Step-Up Rehabilitation	11,332,750	997,241	-	997,241
Moccasin Penstock Rehabilitation	812,147	2,241,444	(114,331)	2,241,444
Mountain Tunnel Hydroelectric Conveyance	13,394,890	11,194,357	(533,704)	10,660,653
Total	30,200,000	\$30,869,241	\$(669,241)	\$30,200,000







*Total Expenditures in excess of Green Bond proceeds come from other funding sources

**Negative amounts reflect accounting reallocations.

Power Revenue Bonds, 2021 Series A
As of June 30, 2023





Project Description	Estimated Use	Prior Year Spending	FY 22-23 Spending	Total Expended
Other Powerhouse Projects	\$4,113,147	\$4,112,006	\$-	\$4,112,006
Moccasin Powerhouse & Generator Step-Up Rehabilitation	5,658,704	5,461,024	-	5,461,024
Warnerville Substation Rehabilitation	15,404,702	15,404,702	-	15,404,702
O'shaughnessy Dam Outlet Works	706,234	706,236	-	706,236
Moccasin Facilities New Construction	7,419,679	7,419,679	-	7,419,679
Cherry Dam Outlet Works Rehabilitation	1,436,222	1,436,222	-	1,436,222
Bay Corridor Project	43,406,285	43,406,285	-	43,406,285
O'Shaughnessy Dam Access & Drainage	531,902	527,205	-	527,205
O'Shaughnessy Dam Outlet Works Phase 1	542,982	541,121	-	541,121
2018 Moccasin Storm - Power Project	1,122,017	1,121,806	-	1,121,806
SFO Airport Substation	578,597	578,597	-	578,597
Renewal and Replacement Powerhouses	699,324	697,285	-	697,285
Renewal and Replacement Priest Reservoir Landslide	269,155	268,179	-	268,179
Total	\$81,888,950	\$81,680,346	\$-	\$81,680,346

Project Environmental Impacts Aligned with United Nations Sustainable Development Goals¹

Project Name	Project Number	United Nations Sustainable Development Goals	Environmental Impact Description	California Environmental Quality Act (CEQA)
Moccasin Powerhouse and Generator Step-Up Rehabilitation	10014086	  	<p>This project will improve the reliability and efficiency of a 110 megawatt hydroelectric plant which provides about 430 gigawatt hours of energy per year. This project will overhaul a two-unit hydroelectric plant, upgrading the electrical motors, and the supporting components and auxiliary systems of the hydroelectric plant with new technology. The expected annual generation following the project is 460 gigawatt hours of energy per year, an increase of about 30 gigawatt hours or 7 percent. Water that flows through this hydroelectric plant serves 2.7 million water customers in the Bay Area.</p>	<p>Categorical Exemption</p>
Kirkwood Penstock Rehabilitation	10014085	  	<p>Kirkwood Penstock is a water conveyance system that provides a dual purpose; water conveyance for a 123 megawatt hydroelectric plant, and a water supply conveyance for 2.7 million customers in the Bay Area. This project will improve the reliability of the water conveyance system by monitoring natural ground movement and provide for replacement parts to reduce return-to-service times in the event of failure.</p>	<p>Categorical Exemption</p>

Determinations that project impacts align with certain United Nations Sustainable Development Goals (SDGs) are based on criteria the SFPUC has deemed to be appropriate and may differ from criteria applied by investors.

¹ Developed in consultation with SFPUC senior management and [ICMA Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals](#). SDG impacts have not been verified by a third-party.

Project Name	Project Number	United Nations Sustainable Development Goals	Environmental Impact Description	California Environmental Quality Act (CEQA)
Moccasin Penstock Rehabilitation	10014088		<p>Moccasin Penstock is a water conveyance system that provides a dual purpose; water conveyance for a 110 megawatt hydroelectric plant, and a watersupply conveyance for 2.7 million customers in the Bay Area. This project will improve the reliability of a nearly 100 year old pipe, replacing sections of pipe that are likely to fail.</p>	<p>Categorical Exemption</p>
Mountain Tunnel Hydroelectric Conveyance	10014113 10014114		<p>Mountain Tunnel is a water conveyance system that provides a dual purpose; water conveyance for a 110 megawatt hydroelectric plant, and a watersupply conveyance for 2.7 million customers in the Bay Area. This project will improve the reliability of the tunnel. The hydroelectric plant fed by Mountain Tunnel produces about 430 gigawatt hours of energy per year.</p>	<p>Mitigated Negative Declaration</p>
Oil Containment Upgrades for Holm & Kirkwood Hydroelectric Facilities	10014078		<p>This project will upgrade the water treatment system at two hydroelectric plants to ensure storm water and process water releases are in compliance with the California State Water Quality Standards.</p>	<p>Categorical Exemption</p>
Other Powerhouse Projects - Holm Unit 2	10014075		<p>This project will improve the reliability and efficiency of a 93 megawatt hydroelectric unit which provides about 360 gigawatt hours of energy per year. This project replaces supporting components and auxiliary systems of the hydroelectric plant with new, more efficient technology. The expected annual generation following the project is 370 gigawatt hours of energy per year, an increase of about 10 gigawatt hours or 3 percent.</p>	<p>Categorical Exemption</p>

Case Study: Moccasin Powerhouse and Generator Step-up Transformer Rehabilitation

Overview

Moccasin Powerhouse is situated at the base of the Sierra Nevada Foothills in Tuolumne County. It is a vital resource of the City and County of San Francisco's Regional Water and Power System - 85% of the water supply for 2.7 million water system customers flows through the powerhouse. Moccasin Powerhouse is one of three hydroelectric power plants operated by the San Francisco Public Utilities Commission. It generates a combined maximum output of 110 megawatts of clean electricity that helps power critical municipal services in San Francisco, such as Muni trains and streetlights.

Both generator units and transformers have exceeded their life expectancy and need repair to continue operating reliably.

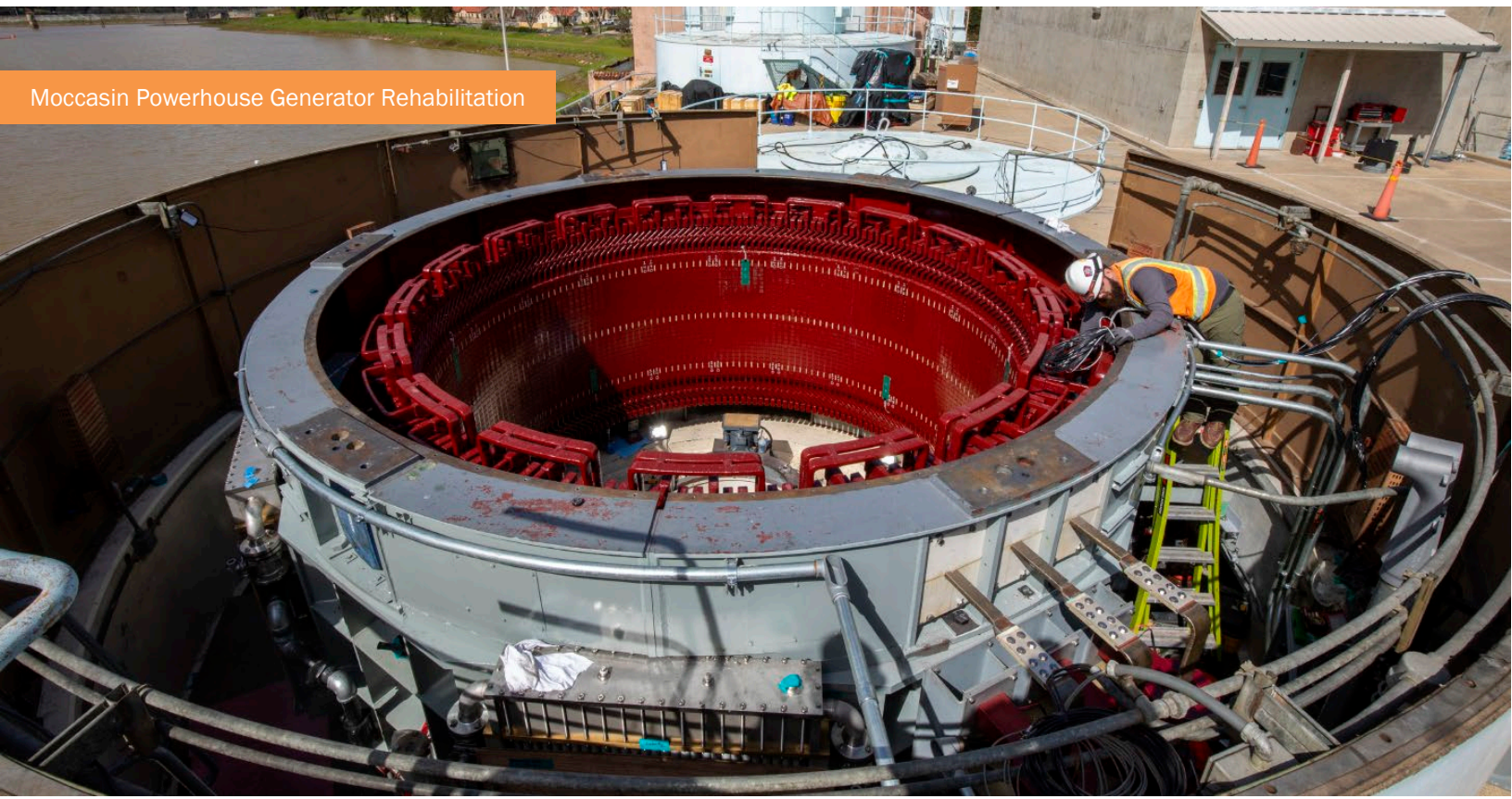
Project Description:

This project consists of three components:

- Generator rehabilitation, which consists of replacing the entire generator and associated equipment;
- Generator step-up replacement, which consists of replacing two of the three existing generator step-up transformers, new foundations and oil containment, and relay upgrades; and
- Power plant systems upgrades, which consists of replacing the 480 voltage switchgear, 13.8 kilovolt switchgear, motor control centers, main control boards, protective relays, cooling water piping, and improving oil containment systems.

The generator step-up replacement project was completed in 2023. The generator rehabilitation project is expected to be completed in 2025, and the power plant systems upgrades is expected to be completed in 2028.

Moccasin Powerhouse Generator Rehabilitation



Appendix A: State, City and SFPUC Legal, Regulatory, Policies and Programs

State of California

The State of California has enacted legislation, regulations and executive orders that put the State on course to achieve significant greenhouse gas reductions while also addressing the impacts of climate change. Described below are selected policies and programs related to the SFPUC's capital planning:

- Assembly Bill 32 (Nunez, 2006) and Senate Bill 32 (Pavley, 2016)
 - Landmark legislation requiring California to reduce its overall greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2030, and appointing the California Air Resources Board to develop policies to achieve this goal.
- Assembly Bill 1482 (Gordon, 2015), Senate Bill 246 (Wiechowski, 2015), Senate Bill 379 (Jackson, 2015), Assembly Bill 2800 (Quirk, 2016), Senate Bill 1035 (Jackson, 2018); Senate Bill 30 (Lara, 2018)
 - State laws calling for preparation of state climate adaptation strategy, establishing the Office of Planning and Research's Integrated Climate Adaptation and Resiliency Program, requiring local governments to include adaptation and resiliency strategies in general plans, requiring state agencies to account for climate change when planning new infrastructure, and establishing a risk transfer/insurance working group.
- Climate Change Scoping Plan
 - California's comprehensive plan outlining the state's approach to achieving its greenhouse gas emission reduction targets, including SB 32's goal of reducing emissions 40% below 1990 levels by 2030

In August 2018, then-California State Treasurer John Chiang signed the [Green Bond Pledge](#), making California the first state to pledge to use 'green' financing to combat climate change.

City and County of San Francisco

San Francisco has long been a leader in the fight against climate change. Between 1990 and 2019, San Francisco's carbon footprint was reduced by 41% while population increased 22% and the GDP increased 199%.

The San Francisco Climate Action Plan was first released in 2004 and San Francisco has been leading the way on local climate action and environmental justice, and launching innovative community programs and outreach campaigns for residents and businesses. Since then, the Climate Action Plan has been updated to put racial equity, environmental justice, resilience, public health, economic recovery, and a just transition to a fossil fuel-free jobs at the core of its climate action solutions. The latest [2021 San Francisco Climate Action Plan](#) (Plan) is the result of a multi-year process developed by the San Francisco Department of the Environment with support and collaboration from many individuals and institutions, including the SFPUC. The Plan charts a pathway to achieve net-zero greenhouse gas emissions and works toward addressing racial and social equity, public health, economic recovery, resilience and providing safe and affordable housing to all. The Plan aligns to San Francisco's Climate Action Framework:

SAN FRANCISCO'S CLIMATE ACTION FRAMEWORK

Net-Zero Emissions Citywide By 2040
Racial, Social & Economic Equity

SECTORS



San Francisco's leadership further strengthened the City's commitment to climate action in 2019 when the Board of Supervisors unanimously approved the Climate Emergency Resolution 160-19, aligning the San Francisco's climate goals with the Paris Agreement by limiting global warming to 1.5 °C above pre-industrial levels.

In 2023, the San Francisco Department of the Environment collaborated with the San Francisco Public Utilities Commission to issue a [Water Supply Addendum](#) to the Climate Action Plan to introduce a new Water Supply chapter that will focus on how San Francisco plans to address and secure water supplies that are being impacted by multiple challenges, including climate change. Specifically, the new chapter encompasses three key strategies and 15 supporting actions for water resilience against the threat of a warming climate:

- Invest and implement demand management programs.
 - Continue to implement current conservation measure noted in the SFPUC's [2020 Retail Water Conservation Plan](#), and on our website at www.sfpuc.org/savewater.
 - Continue to implement current conservation measures and upcoming new measures noted in the SFPUC's 2020 Retail Water Conservation Plan.
 - Prepare updated 2025 Retail Water Conservation Plan and implement current conservation assistance measures noted in the plan.
 - Continue to implement conservation assistance measures outlined in 2025 and future-year Water Conservation Plans.
- Invest and implement innovative programs to reduce water use and develop new water supplies.
 - Continue to implement the pilot atmospheric water generation project to test the viability of the technology to produce water for irrigation in a community garden setting.
 - Continue to encourage breweries to reuse process water onsite via SFPUC's Onsite Water Reuse Grant Program.
 - Continue to encourage the integration of heat recovery in onsite water reuse systems. Explore opportunities for other pilot atmospheric water generation projects.
 - Continue to implement the Innovations Program.
 - Implement demonstration facilities for purified water.
- Invest and implement supply augmentation programs.
 - Continue to implement the San Francisco Groundwater Supply Project, which allows the SFPUC to supplement drinking water sources by blending a small amount of groundwater with water from the San Francisco Regional Water System.
 - Continue to implement San Francisco's Onsite Water Reuse Program, which requires new development projects of 100,000 gross square feet or more to install and operate an onsite water reuse system.
 - Continue planning, evaluation of technical viability, energy efficiency, and future climate scenarios.
 - Implement demonstration facilities for purified water.
 - Design and construction of alternative water supply projects.
 - Continue to operate and monitor groundwater projects for maximum benefit and sustainability.

In addition to the activities described above, the Mayor and Board of Supervisors have led the initiatives described below that require SFPUC capital planning to include climate and social inclusion:

- [Local Hire Ordinance](#) was adopted in December of 2010 by the San Francisco Board of Supervisors. The ordinance requires that local residents perform a minimum 30 of trade hours and 50% for apprenticeship hours and is one of the strongest pieces of legislation in the country to promote the employment of local residents on locally sponsored projects.
- [Guidance for Incorporating Sea Level Rise into Capital Planning](#) also now takes place as part of the City's Capital Planning Review process. City projects now undergo a sea-level vulnerability assessment and must respond to anticipated consequences through redesign or relocation. SFPUC staff actively participated in the Mayor's Sea Level Rise Coordinating Committee and Working Group to develop the Sea Level Rise Guidance. The objective is to work with other City agencies towards a more holistic, integrated and coordinated response to climate change.

San Francisco Public Utilities Commission

Overview

The SFPUC is a department of the City and County of San Francisco responsible for the maintenance, operation and development of three utility enterprises:

- **The Water Enterprise** serves more than 2.7 million people and is responsible for managing the transmission, treatment, storage, and distribution of potable water to San Francisco and 27 wholesale customer entities in San Mateo, Santa Clara and Alameda counties.
- **The Wastewater Enterprise** operates and maintains a combined sewer system and provides sewage and stormwater collection, treatment and disposal services to customers in San Francisco and three municipal sewer service providers in northern San Mateo County.
- **The Power Enterprise** provides hydroelectric, solar and other power to municipal customers in San Francisco and other public agencies and retail customers. The Power Enterprise also operates CleanPowerSF, a Community Choice Aggregation program that gives electricity consumers in San Francisco a choice of having their electricity supplied from clean renewable sources, such as solar, wind, and geothermal, at competitive rates.

Headquartered in San Francisco, the SFPUC has approximately 2,300 employees and a combined annual operating and capital budget of over \$2 billion.

Financial Policies

The San Francisco City Charter requires the SFPUC to exercise prudent financial stewardship of SFPUC assets by establishing "rates, fees and charges at levels sufficient to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities of each enterprise under its jurisdiction, meet requirements and covenants under all bond resolutions and indentures, and provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair of each enterprise, consistent with good utility practice."

To serve the financial objectives and parameters established by the Commission, the SFPUC has established a [10-Year Financial Plan](#) as well as [Debt Management Policies and Procedures](#) for debt financing associated with the Water, Wastewater and Power Enterprises. In addition, the SFPUC maintains a [Fund Balance Reserve Policy](#), a [Debt Service Coverage Policy](#), and a [Capital Financing Policy](#). Last, the [Debt Policy of The City and County of San Francisco](#), established by the Controller's Office of Public Finance, summarizes the City's existing debt policies and formally establishes them for all future debt.²

² For information about SFPUC's Investor Relations and Financial Reports, see: <https://sfpuc.org/about-us/reports/debt-management-and-disclosure-reports>

Environmental, Social, and Governance Policies and Programs

With the useful life of capital assets typically extending 30 years or more, climate mitigation and adaptation criteria are included in the SFPUC's capital planning and project selection process. Described below are SFPUC-level policies and programs that contribute to capital planning decisions informed by climate adaptation and/or mitigation and social inclusion.

The activities below have been organized into three categories: environmental, social, and governance (ESG):

Environmental

- [CleanPowerSF](#): The SFPUC began serving customers through CleanPowerSF, a Community Choice Aggregation program, in 2016. CleanPowerSF gives residential and commercial electricity consumers in San Francisco a choice of having their electricity supplied from clean renewable sources, such as solar, wind, and geothermal, at competitive rates. CleanPowerSF is currently the largest supplier of electricity in San Francisco, serving over 380,000 accounts, approximately 58% of the total load within San Francisco.
- [GoSolarSF](#): GoSolarSF is operated by the SFPUC Power Enterprise and provides rebates to help CleanPowerSF and Hetch Hetchy residential and business electric customers install solar panel systems. Together, these systems produce 23.5 megawatts of renewable solar electric power. Today, GoSolarSF continues to serve low-income customers through the [Disadvantaged Communities – Single-family Solar Homes \(DAC-SASH\) program](#).
- [Water Enterprise Stewardship Policy](#): The purpose of the Water Enterprise Environmental Stewardship Policy is to establish a long-term management policy for natural resources associated with the operation of the water system within the Tuolumne River, Alameda Creek, and Peninsula watersheds.
- [Green Infrastructure](#): Green infrastructure projects divert stormwater from the sewer system while beautifying San Francisco's neighborhoods, providing ecological function and urban habitat, and contributing to bike and pedestrian friendly design. Green infrastructure technologies include rain gardens, permeable pavement, and rainwater harvesting systems. The SFPUC has completed 272 green infrastructure projects which collectively contribute to diverting an estimated 63 million gallons of stormwater from the sewer system annually.
- [OneWaterSF](#): The objective of OneWaterSF is to optimize the use of finite water and energy resources with community and ecosystem needs, creating a more resilient and reliable future for the SFPUC.

Social

- [Community Benefits](#): The SFPUC's Community Benefits Program focuses on Workforce Development, Education, Art, Environmental Justice/Land Use, Neighborhood Partnerships, and Small Business Opportunities. The SFPUC was the first utility in the nation to adopt a [Community Benefits Policy](#) and an [Environmental Justice Policy](#) that ensure the SFPUC proactively provides diverse communities with opportunities in workforce and economic development, the arts, urban agriculture and education.

- [Environmental Justice Policy](#): The SFPUC affirms and commits to the goals of environmental justice to prevent, mitigate, and lessen disproportionate environmental impacts of its activities on communities in all SFPUC service areas and to ensure that public benefits are shared across all communities. The SFPUC defines environmental justice as the fair treatment of people of all races, cultures, and incomes and believes that no group of people should bear a disproportionate share of negative environmental consequences resulting from the operations, programs, and/or policies of the SFPUC.
- [Social Impact Partnership Program](#): The SFPUC is the first public utility in the country to implement a social impact program that advances corporate social responsibility as a part of its competitive bidding process. For certain SFPUC contracts, firms responding to Request for Proposals (RFP) are able to voluntarily pledge Social Impact Partnership commitments to local impacted communities. If selected for the given contract, the firm will be responsible for delivering the Social Impact Partnership commitments that they proposed in their response to the RFP. To date, these commitments have supported scholarships for college students, mentorship for middle-school students, internships for youth and young adults, childcare for working parents, mentorship for small businesses, urban greening, and access to healthy food.

Governance

- [SFPUC Commission](#): The SFPUC Commission consists of five members, nominated by the Mayor and approved by the Board of Supervisors. Their responsibility is to provide operational oversight in areas such as rates and charges for services, approval of contracts, and organizational policy. Seat 1 of the commission is reserved for a member with experience in environmental justice policy and an understanding of environmental justice issues.
- [Boards, Commissions, and Committees](#): The SFPUC is proud to collaborate with various groups of community members to serve ratepayer needs in a way that is efficient, fair, affordable, and in harmony with the environment. These bodies include:
 - [Citizens' Advisory Committee](#)
 - [Rate Fairness Board](#)
 - [Revenue Bond Oversight Committee](#)
 - [Southeast Community Facility Commission](#)
 - [Small Firm Advisory Committee](#)
 - [Residential Users Appeal Board](#)
- [2020 Strategic Plan](#): In August 2016, the SFPUC Strategic Planning Steering Committee identified Environmental Stewardship as one of six goals to guide its work through the year 2020. Within Environmental Stewardship, the 2020 Strategic Plan specifies the goal to sustainably manage the resources entrusted to its care to ensure environmental and community health. This includes the following objectives:
 - Sustainably manage natural resources and physical systems to protect impacted people, water, land, and ecosystems.
 - Develop, coordinate, and communicate a comprehensive and consistent approach to mitigate and adapt to climate change.
 - Be resource efficient in all business operations.
 - Investigate the feasibility of implementing an environmental management system.

United Nations Sustainable Development Goals

Impacts from SFPUC projects financed by Green Bonds are also aligned with several United Nations Sustainable Development Goals (SDGs). To determine project impact, the SFPUC relies on the International Capital Market Association (ICMA) "Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals" (June 2020).



Appendix B: SFPUC Green Bonds Program

Since 2015 through Fiscal Year 2023, the SFPUC has issued more than \$3.7 billion in certified green bonds to finance Water and Wastewater capital projects and \$100 million in self-certified green bonds to finance Power capital projects that advance climate change mitigation or adaptation, making the SFPUC one of the largest municipal issuers of green bonds in the United States³. In 2017, the SFPUC was recognized by the Climate Bonds Initiative for being the first issuer worldwide to sell bonds under CBI's water criteria. In 2018, the SFPUC became among the first signatories of the Green Bond Pledge. In 2019, the combined green bond programs of the City and County of San Francisco and the SFPUC were recognized as a global leader in the C40 report [Cities100](#). Finally, the SFPUC was awarded the 2021 US Municipal Green Bond of the Year by *Environmental Finance*.





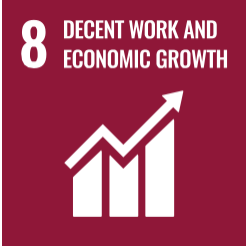


The SFPUC adheres to the International Capital Market Association's Green Bond Principles that consist of four core components:






- **Use of Proceeds:** The SFPUC issues Green Bonds to finance projects with clear environmental benefits. Project categories include sustainable water and wastewater management, climate change adaptation and renewable energy.
- **Process for Project Evaluation and Selection:** San Francisco's numerous policies and programs described herein ensure sustainable capital planning and project selection. Further, the SFPUC engaged third-party verifiers to validate selected projects for the Water System Improvement Program (WSIP) and the Sewer System Improvement Program (SSIP) meet the required criteria. As part of the certification process, the SFPUC engaged Sustainalytics to provide third-party verification that the bonds are aligned with the Climate Bonds Initiative.
- **Management of Proceeds:** The SFPUC records Green Bond proceeds in separate capital project funds available only to eligible projects. Non-eligible projects cannot access proceeds generated from green bonds.
- **Reporting:** The SFPUC publishes annually Green Bond Reports for the Water, Wastewater, and Power Enterprises that include project spending and management of proceeds report for each green bond issued throughout project construction. Beginning with the Fiscal Year 2018-19 Green Bond Reports, in addition to project spending, the reports also include project impacts as well as additional information in connection with the climate and sustainability activities of the SFPUC.

³ Source: S&P Global Ratings "Sustainability Insights | Research: U.S. Muni Sustainable Bonds: Moderate Growth In 2024" [Sustainability Insights Research \(spglobal.com\)](https://www.spglobal.com/sustainability/insights-research)

Appendix C: SFPUC Climate and Social Inclusion Impacts Aligned to the United Nations Sustainable Development Goals (UN SDGs)

United Nations Sustainable Development Goal	SFPUC Program Impact
 <p>4 QUALITY EDUCATION</p>	<p><u>Education</u>: The SFPUC is committed to preparing the next generation of environmental stewards and continuing to engage with existing generations to prevent pollution and sustain our natural resources. The SFPUC believes that everyone has a role to play in maintaining the environment and is proud to empower its service area communities with the resources needed to do it.</p>
 <p>5 GENDER EQUALITY</p>	<p><u>Small Business Opportunities</u>: The SFPUC is dedicated to increasing the number of women working in the construction trades. The SFPUC partners with the National Association of Women in Construction and the Women's Business National Council to host the Annual Women in Construction Exposition. The SFPUC is also proud to be a member of the Tuolumne Community Collaborative, a group of more than 25 entities including education institutions, local contractors, professional services firms, and government agencies that support a pipeline of local workers in the construction industry. The Collaborative features a Pre-Apprenticeship Construction Training Program, and it recently celebrated an inaugural all-female class. Through the program, participants study construction industry best practices, experience hands-on training, learn construction safety, and receive project-specific worker certifications.</p>
 <p>6 CLEAN WATER AND SANITATION</p>  <p>14 LIFE BELOW WATER</p>	<p><u>The Water System Improvement Program</u>: The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven counties from the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is February 2027.</p> <p><u>The Sewer System Improvement Program</u>: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade our aging sewer infrastructure to ensure a reliable, sustainable, and seismically safe sewer system now and for generations to come.</p>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p><u>Power</u>: For 100 years, the SFPUC has been generating greenhouse gas-free hydropower as Our City's full-service, publicly owned electric utility. This clean Hetch Hetchy Power energizes our schools, MUNI, streetlights, City Hall, SFO Airport, the Zoo, and other civic institutions and private facilities. In 2016, Our City launched CleanPowerSF, a community choice aggregation program, to introduce even more renewable energy from sources like wind and solar to the electric grid. Today, CleanPowerSF powers more than 380,000 San Francisco residents and businesses.</p>

<p>United Nations Sustainable Development Goals</p>	<p>SFPUC Program Impact</p>
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>Workforce Development: As one of the City's largest employers, the SFPUC is fostering a skilled and diverse local workforce that manages water, power and sewer operations and is connected to the communities we all call home. SFPUC's workforce development programs connect local youth and adults with learning, apprenticeship, job training, employment, and business opportunities. These programs support a strong, inclusive, local economy and a skilled, diverse, local workforce for today and tomorrow.</p> <p>Social Impact Partnership Program: The SFPUC views its capital projects as investments – in the future of its facilities, services, and its communities. As the SFPUC upgrades its systems and operations, private sector partners join the SFPUC in being a good neighbor to the communities affected by the operation and improvement of water, wastewater, and power services. By including community benefits criteria in our Requests for Proposals (RFP) with anticipated contracts of \$5 million or more, SFPUC provides its contracting community with an opportunity to earn extra points during the bidding process for their demonstrated commitment to community benefits and environmental justice. Social Impact Partners— professional services and construction firms in fields such as engineering, architecture, resource management and technology— provide resources and opportunities in the communities where SFPUC operates and provides services. These commitments include direct financial contributions, volunteer, and in-kind donations to local schools and nonprofits.</p>
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>The Water System Improvement Program: The Water System Improvement Program (WSIP) is a \$4.8 billion dollar, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven counties from the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is February 2027.</p> <p>The Sewer System Improvement Program: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade our aging sewer infrastructure to ensure a reliable, sustainable, and seismically safe sewer system now and for generations to come.</p>
 <p>10 REDUCED INEQUALITIES</p>	<p>Environmental Justice and Land Use: The SFPUC works hard every day to provide fundamental environmental benefits through water, power and sewer services. The SFPUC recognizes there are challenges to providing these services as some parts of our community face a greater burden than others due to the location of facilities in their neighborhoods. SFPUC works with these communities to understand their needs and lessen the effects caused by operations. The SFPUC is proud to be the first public utility in the nation to develop an Environmental Justice Policy which guides efforts to support environmentally healthy and safe communities where we live, work, learn and play. As part of its mission, the SFPUC also maintains and preserves more than 590,000 acres of land to protect our natural resources and critical infrastructure. The SFPUC often has the opportunity to use land for more than one purpose and when possible, the SFPUC partners with local leaders to support innovative uses which benefit the environment and enhance the quality of life for the SFPUC's service area residents.</p>

United Nations Sustainable Development Goals	SFPUC Program Impact
 <p>10 REDUCED INEQUALITIES</p>	<p>Grants: From Tuolumne County, to San Francisco, to the Peninsula, the SFPUC is especially committed to providing opportunities in the neighborhoods most impacted by its water, power and sewer operations. As SFPUC upgrades its facilities and executes the Agency's capital projects, it ensures these efforts support public health, jobs, learning and education opportunities in these communities. SFPUC is proud of leveraging the work done every day to create spaces and programs that help to make these neighborhoods a better place to live, work and play.</p>
 <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>  <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>  <p>13 CLIMATE ACTION</p>  <p>15 LIFE ON LAND</p>	<p>Power: For 100 years, the San Francisco Public Utilities Commission (SFPUC) has been generating greenhouse gas-free hydropower as Our City's full-service, publicly owned electric utility. This clean Hetch Hetchy Power energizes our schools, MUNI, streetlights, City Hall, SFO Airport, the Zoo, and other civic institutions and private facilities. In 2016, Our City launched CleanPowerSF, a community choice aggregation program, to introduce even more renewable energy from sources like wind and solar to the electric grid. Today, CleanPowerSF powers more than 380,000 San Francisco residents and businesses.</p> <p>The Water System Improvement Program: The Water System Improvement Program (WSIP) is a \$4.8 billion, multi-year capital program to upgrade the SFPUC's regional and local water systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner to 2.7 million people in the greater Bay Area. The program consists of 87 projects - 35 local projects located within San Francisco and 52 regional projects, spread over seven counties from the Sierra foothills to San Francisco. The San Francisco portion is 100% complete as of June 2020. The Regional portion is approximately 99% complete. The forecasted completion date for overall program completion is February 2027.</p> <p>The Sewer System Improvement Program: The Sewer System Improvement Program (SSIP) is a citywide investment to upgrade our aging sewer infrastructure to ensure a reliable, sustainable and seismically safe sewer system now and for generations to come.</p>