UPGRADE FOR SAVINGS

Customized Energy Efficiency Program

Custom Energy Efficiency PROGRAM HANDBOOK 2025-2026

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Contents

1. Program Overview

1.1. Introduction

The Upgrade for Savings Program is a San Francisco Public Utilities Commission (SFPUC) energy efficiency program providing customized incentives to Hetch Hetchy Power customers. The Upgrade for Savings Program supports customers in reducing electricity use in their existing buildings and facilities. Upgrades to energy-efficient equipment, systems, and operations practices are eligible.

The Program offers Financial Incentives for electricity savings, and technical support to help calculate energy savings for your custom retrofit project. When appropriate, the Program offers assistance identifying potential energy efficiency improvements in your building.

The Upgrade for Savings Program is available to customer projects that meet all the following criteria:

- Facility is on qualifying Commercial, Industrial, and Municipal Enterprise electric rates. In addition, multifamily buildings with five units or more qualify. (Municipal Schedule–M2, and CleanPowerSF rates are not eligible. See definition of Qualifying Electric Rates.)

- Projects incorporate energy efficiency equipment, retrofit and operations upgrades that meet or exceed California Building Energy Efficiency Standards (Title 24, Part 6.)
- Projected electricity savings would qualify for at least a $5,000 incentive. Given the Program's incentive rate of $0.15 per annual kWh of electricity savings, Projects must save at least 33,333 kWh/yr.

Minimum Project Savings	Program Incentive Rate	Minimum Incentive Payment
33,333 kWh/yr	X $.15 per kWh/yr	= $5,000

See complete eligibility details in Section 2.

Program forms and instructions are available through your Hetch Hetchy electric service representative or by contacting an Upgrade for Savings Program representative at 415-551-4623 or SaveEnergy@sfwater.org, or at sfpuc.org/SaveEnergy.

1.2. Benefits of Participation

Customer benefits that come with participation in the Upgrade for Savings Program include receiving Financial Incentives for energy savings, the energy bill savings from implementing projects, and accessing technical support services, as outlined in this Program Handbook.

The Financial Incentive benefits help reduce the cost of implementing the energy efficiency measures. Financial Incentives are calculated based on $/kWh/yr of electricity savings, are paid after completion of the energy efficiency upgrades, and are conditioned on final verification and approval of the efficiency upgrades. The Financial Incentive is a single award in an amount up to:

- $250,000 per Project
- $250,000 per Program Year per Customer Account
  (or $750,000 per year for Customer Accounts using more than 200 million kWh/yr.), or

- 50% of the Project Cost, including materials and labor.[1]

All participants receive a Calculation Review, a useful independent check of energy savings calculations for the customer-specified energy efficiency measure or Project. Energy savings calculations are a requirement for receipt of Upgrade for Savings Financial Incentives. Also, the Program offers technical support services to participants., Customers may be eligible for Calculation Assistance to help develop acceptable energy savings calculations, as well as for Project Identification Assistance.

Beyond the value of the Financial Incentives and technical support services, participating customers will benefit from the reduced utility bills from their energy upgrades for years to come. Upgrades supported by the Program may provide Customers with many other benefits as well, including:

- Reduced maintenance and operations costs.
- Enhanced understanding of energy usage and better performance over system life.
- Conservation of natural resources including conserving SFPUC's clean Hetch Hetchy hydroelectric and renewable resources.
- Greater comfort, health, and productivity for occupants.

1.3. Definitions

Application & Incentive Agreement (Incentive Agreement)	The Program form provided by enrolled participants providing the EE Project description and detailed calculation documents. A signed Incentive Agreement (with attachments) constitutes the Customer's formal request for a Financial Incentive under the Program. The executed Incentive Agreement between the Customer and the SFPUC documents the estimated electric savings and the estimated incentive amount for the Project.
Application Documents	Enrollment Agreement, Application & Incentive Agreement forms submitted by the Customer to the Upgrade for Savings Program including all exhibits, schedules, appendices, and attachments thereto.
Authorized Customer Agent	Any third party designated in writing by the Customer to act on their behalf. Only the Customer and Authorized Customer Agent may submit applications to the Program.
Baseline Energy Use	The benchmark from which energy savings are determined. For the purpose of the Upgrade for Savings Program, existing conditions baselines may be used for estimating energy efficiency savings. The Program reserves the right to use a Title 24 code, Title 20, federal standards, or current practice approaches to determine an estimated baseline for instances where equipment is not operational. The Program will use an experienced utility engineer to review and approve the appropriate baseline to be applied to such a building project and/or process.
Calculation Assistance	Technical services offered by the Program to work in collaboration with the Customer to improve or enhance Customer-provided energy savings calculations.
Calculation Review	Technical services provided by the Program to review and give independent feedback to the Customer regarding Customer- provided energy savings calculations.

[1] Cost of materials plus labor for work directly related to the energy savings. See Section 4.3.

Code Baseline	As defined by the California Municipal Utility Associations Reporting Guidelines. code baseline is an estimate of energy use as defined by applicable code or standard.[2] This includes state building energy codes, state appliance efficiency standards, federal code of regulations, or any other applicable state code requiring equipment modification or replacement in order to meet health, safety, or environmental regulations. Although some codes, such as safety, may not define an efficiency standard, they may require equipment modification or replacement that impacts equipment/system efficiency, which may impact the estimate of future operating conditions and baseline energy use. Customers may propose a code baseline in their energy savings calculations or seek technical assistance from the program to establish an appropriate baseline for equipment that is not operational.
Current Practice Baseline	Current practice baseline is an estimate of energy use as defined by industry standard practice, equipment availability, or other market conditions that define or limit customer options. Customers may propose a current practice baseline in their energy savings calculations or seek technical assistance from the program to establish an appropriate baseline for equipment that is not operational and does not have a Title 24, Title 20, state or federal minimum requirement. In this case, refer to the California Municipal Utility Associations Reporting Guidelines. [3]
Customer	The Customer is SFPUC's customer of record who is participating in the Upgrade for Savings Program. The Customer must: (1) have the legal right to develop and implement the Project, and (2) be the electricity customer of record for the Project. A tenant may be considered a "Customer" for the purposes of the Upgrade for Savings Program, if the tenant: (1) is the electricity customer of record for the Project; (2) has a lease or rental agreement of 5 years or longer, and (3) has all necessary rights to construct the Project. For municipal upgrade projects, the Customer shall be the municipal department head or their designee.
Customer Account	A Hetch Hetchy Power customer of record at a specific service site address. A Customer Account may be served by more than one electric meter. More than one Customer Account may exist at a site address if there are multiple customers of record at the site.
DEER	The California Public Utility Commission's (CPUC) legacy Database for Energy Efficiency Resources. CPUC Resolution E-5152 adopted a revised calculation standard for demand reduction (kW) to create a uniform standard across the state on page A-12 commonly referred to as the "DEER Peak method" or "the California peak demand definition" defined by the California Municipal Utility Association Technical Reference Manual.[4,5]
Deviation Report Document	A Deviation Report Document lists all EEMs in the Incentive Agreement that were not constructed as planned and provides a description of the deviation(s) from the Incentive Agreement.
Electric Service Agreement	For the Purposes of this Upgrade for Savings Program "Electric Service Agreement" shall mean the agreement establishing the Customer facility as a permanent electric customer of the SFPUC.

[2] https://www.cmua.org/files/CA%20POU%20Energy%20Efficiency%20Reporting%20Guidelines_12%2029%202017.pdf
[3] https://www.cmua.org/files/CA%20POU%20Energy%20Efficiency%20Reporting%20Guidelines_12%2029%202017.pdf
[4] Resolution_E-5152_complete.pdf
[5] https://www.cmua.org//Files/TRM/POU%20TRM%20PDF%20-%202025-04-28.pdf

Energy Efficiency Measure (EEM)	Any type of project conducted, or technology implemented, to reduce the consumption of electricity in a building.
Energy Upgrade	See EEM.
Estimated Incentive Amount	The estimated Customer Incentive payment based on the Program's calculation using Table 1 and included in the Notice of Reservation.
Existing Conditions Baseline	Existing conditions baseline is based on the energy use associated with the operation of the preexisting equipment prior to its replacement. (See CMUA guidelines) [4] Since savings are the difference between baseline and post-EEM-installation energy use, it is necessary to adjust the preexisting baseline energy use to account for post-installation (energy efficient) operating conditions. This adjusted baseline is the default baseline for the Upgrade for Savings Program unless the existing equipment is not operational.[6]
Incentive	A one-time Financial Incentive available to the Customer for Project implementation under the Upgrade for Savings Program.
Incentive Agreement	See Application & Incentive Agreement.
kWh/yr.	Kilowatt hours per year.
Major Account	A Program enrollment option for very large Customers (1 million kWh/yr.) who are assumed to have large energy efficiency potential.
Minimum Qualifying Incentive	To be eligible for a Program Financial Incentive, Customers must propose an EE Project with an estimated incentive level of at least the Minimum Qualifying Incentive of $5,000, as stated in Table 1 of this Handbook.
Mixed Use EE Project	An EE Project that benefits sites with multiple uses, e.g., a building with residential and commercial tenants. The portion of the EE Project that benefits non-qualifying uses are not eligible for this Program.
Notice of Reservation	A notice provided to the Customer indicating that Upgrade for Savings Program funds have been reserved for the specific Project.
Notice of Project Completion (NPC)	The form submitted by a Customer indicating the Project is complete and all the requirements for receipt of the Upgrade for Savings Incentive Payment have been satisfied and requesting that the payment be made.
Program Documents	(1) the Upgrade for Savings Program Handbook; (2) the Application Documents, and (3) the Notice of Reservation.
Program Representative	SFPUC program manager, supporting staff, or SFPUC technical consultants assigned to support the Upgrade for Savings program.
Program Year	The Program Year for annual funding begins July 1 and ends June 30 the following calendar year, consistent with SFPUC's fiscal year.
Project (also "EE Project")	The Energy Efficiency Measures described in the project summary calculations in the Program Application Documents.

[6] https://www.cmua.org/files/CA%20POU%20Energy%20Efficiency%20Reporting%20Guidelines_12%2029%202017.pdf

Project Cost	Cost of materials plus labor for work directly related to the associated energy savings. Costs for non-energy savings work cannot be included in this Project Cost without pre-approval by a Program Representative.
Project Identificatio n Assistance	Technical services offered by the Upgrade for Savings Program aimed at finding or refining energy efficiency opportunities at the Customer's facility. Such services are intended to result in Energy Upgrade projects that meet the criteria for Program participation.
Qualifying Electric Rate	Qualifying Electric Rates are those that apply to SFPUC electric customers on Commercial, Industrial, and Municipal Enterprise rate schedules only. Schedule M2 - Municipal Electric Service "GUSE" and CleanPowerSF rates are not Qualifying Electric Rates for this Program.
Reservation Date	The date specified in the Notice of Reservation.
SFPUC	The San Francisco Public Utilities Commission, Power Enterprise.
Title 24	California Code of Regulations title relating to building design and construction. Title 24 Part 6 is the Energy Efficiency Standards for Buildings.
Upgrade for Savings Program Representative	SFPUC staff person or their agent who is responsible for Program administration.
Whole Building Approach	A comprehensive analysis that includes energy modeling and financial analysis to quantify the benefits associated with multiple energy efficiency options and strategies. If appropriate, a site level Normalized Metered Energy Consumption (NMEC) method may be used to measure savings when it is determined there is not an appropriate energy modeling tool. Consult the program to discuss if this option is appropriate for your project.

2. Program Requirements

2.1. General Requirements

Projects that meet the following criteria are eligible for Upgrade for Savings Program participation, subject to Program approval and based on available Program resources:

- The Customer is a current SFPUC Hetch Hetchy Power customer, or the Customer has submitted an application for permanent Hetch Hetchy Power electric service at the site under a Qualifying Electric Rate. The Customer must have a fully executed Electric Service Agreement with the SFPUC for the location of the energy efficiency Project (EE Project) no later than 90 days following the Reservation Date and prior to the payment of any Financial Incentives.
- The EE Project is for equipment at a Customer Account that is on a Qualifying Commercial and Industrial Electric Rate. For Mixed Use EE Projects, only the qualifying portion may participate in the Upgrade for Savings Program. The qualifying portion of the EE Project must meet all eligibility requirements.
- Project must have an electricity savings potential that corresponds to an incentive amount of $5,000 or more (i.e., 33,333 kWh/yr).

Minimum Project Savings	Program Incentive Rate	Minimum Incentive Payment
33,333 kWh/yr.	X $.15 per kWh/year	= $5,000

- EE Project measures' savings calculations must demonstrate reduced electricity use at the utility meter. Energy savings used for the incentive calculation are based on annualized electricity savings and must be based on energy efficiency improvements influenced by participation in the Program compared to existing conditions before participation in the Program.
- Installed EE Project measures must meet or exceed Title 24 Code requirements and applicable federal and state standards. Also see Section 6, Calculation Guidelines.
- The EE Project must be reasonably capable of completion within 18 months of the Application Date or must have received a "time extension" waiver during application processing.
- The EE Project is not eligible if it is already under construction before the application is approved by the Upgrade for Savings Program. All equipment installed must be new, not rebuilt, remanufactured, or used equipment. Existing equipment required to establish the Project baseline must be available for inspection. See Section 3, "Measure Eligibility".
- The EE Project savings use transparent and reviewable energy savings calculations, such as whole building energy models, engineering calculations, and other industry standard practice engineering methods generally accepted by California utilities. Calculations must conform to methods described in Section 6, Calculation Guidelines.
- The Customer may not receive any other electricity incentive offered by local or state entities or utilities for measures or services covered by the Upgrade for Savings Program.

2.2. Upgrade for Savings Application Process

The Upgrade for Savings Program is designed to meet the needs of customers with many different types of large energy efficiency projects. The common steps for all projects are:

- Enrolling in the Program
- Optional technical support
- Incentive Agreement and Reservation
- Implementation of the Upgrade (by Customer)
- Post-Inspection and Incentive Payment

Step 1: Initial Contact/Enrollment

1. Before enrolling in the Upgrade for Savings Program the SFPUC welcomes all potential participants to consult with a Program Representative about the Program. Program Representatives can answer any questions to help customers enroll in the Program. Call 415-551-4623 or email SaveEnergy@sfwater.org.
2. The Customer submits a completed Enrollment Agreement indicating interest in the Program.
3. An Upgrade for Savings Program Representative reviews the Customer's eligibility to enroll in the Program, including the potential to qualify for technical assistance or to apply for a Financial Incentive equal to or greater than $5,000.
    a. Customers normally enroll in the Upgrade for Savings Program by demonstrating that an identified Project has the potential to qualify for at least the Minimum Qualifying Incentive. If available, Customer should include a good

faith estimate of electricity savings with their enrollment forms indicating the Project would yield sufficient savings to qualify for the Minimum Qualifying Incentive. The Program's independent technical team will provide feedback on the energy savings calculations. In addition to being a required Program procedure, this peer review for calculated savings can provide valuable input to the Customer's investment analysis. Acceptance that the Project meets this minimum savings/ incentive level is up to the sole discretion of the SFPUC.

b. If the Customer has reason to believe the Project would meet the Minimum Qualifying Incentive but lacks detailed engineering calculations, they should contact the Upgrade for Savings Program. The Program may be able to help Customers establish that a Project would meet the Minimum Qualifying Incentive depending on availability of resources. The Program's technical services consist of Calculation Assistance for customers who cannot provide suitable project calculations on their own and Project Identification Services for qualifying customers. The Program uses a screening process to quickly assess the savings potential and technical needs for each Project based on site attributes, energy usage, and customer information. Based on this assessment, the Program may offer the Customer technical support appropriate for the Project, subject to availability of Program resources at the time of the application. See Section 4, Program Components, for more information.
c. If the SFPUC determines that additional technical support services can be offered, the Program Representative will work with the Customer as described in Section 4. The Customer is not required to accept or implement any technical support.

4. After enrolling eligible applicants in the Upgrade for Savings Program, a Program Representative contacts the Customer to discuss next steps for completing the application process.

Step 2: Application & Incentive Agreement (Incentive Agreement)

1. The Customer completes the Application and Incentive Agreement with attachments including a final list of energy efficiency measures, energy savings and incentive calculations, and all required supporting documentation.
2. The SFPUC performs a final technical review of the Customer Application for completeness and conformance with Program rules. The final review includes verifying savings estimates and the incentive calculation. SFPUC will notify the Customer if Project-specific verification trend data are required.
3. The Program may choose to perform a Pre-Implementation Inspection. If an Inspection is required, then the technical support team will contact the Customer to schedule a site visit to inspect the existing equipment and to collect the information necessary to complete or verify information in the Application.
4. If the SFPUC, as a result of the review process, uncovers a deficiency or an issue that requires a change to the Incentive Agreement package, it will be returned to the Customer with a summary of the technical review findings and required changes. The Customer may choose to correct the deficiency and re- submit the relevant Application for further consideration. If the Customer fails to resubmit the Customer Application within 90 days of the notice of deficiency by the SFPUC, the Incentive Agreement will be automatically void and have of no effect.
5. Once the Incentive Agreement is complete and final, the Customer signs and submits the Incentive Agreement form.

Step 3: Incentive Agreement Approval for Notice of Reservation

1. When the SFPUC approves the Incentive Agreement and energy savings estimates it will

issue to the Customer a Notice of Reservation indicating the Reservation Date, the Estimated Incentive Amount and that upgrade work may begin.

a. The Estimated Incentive Amount is reserved for 18 months from the initial Reservation Date unless the Program grants a time extension waiver as part of the Incentive Agreement. Time extension waiver requests, e.g., for long-lead-time items or capital funding cycles, may be granted at SFPUC's discretion.
b. Energy savings and incentive amounts are estimates based on existing conditions and planned upgrades and modifications. The Upgrade for Savings Program reserves the right to modify the energy savings and/or incentive amounts if the scope of the Project changes during implementation or if there is a significant change to existing conditions. (See below.)

Step 4: Project Implementation

1. The Customer starts the upgrade work per the scope laid out in the Incentive Agreement. If the Project is completed with an adjusted scope, the final incentive may be less than the Reservation amount. Under no circumstances shall the Incentive payment exceed the Estimated Incentive Amount specified in the Notice of Reservation.
2. The Customer completes the upgrade Project. Project construction is complete when all Invoices have been paid, and when all hardware and software has been installed and the measures are functioning as specified in the Incentive Agreement.
3. Within 30 days from completion of the EE Project, the Customer submits to the SFPUC a Notice of Project Completion (NPC) form, invoices documenting Project labor and materials costs, and all of the required Project completion documentation as listed in Section 6 of this Handbook. Failure to comply with the deadline for Notice of Project Completion may result in the cancellation of the Incentive Agreement and loss of eligibility for the Incentive payment.
4. The Customer summarizes changes to the Project from the Incentive Agreement in a Deviation Report. (See Section 6.3.)

Step 5: Final Project Approval and Incentive Payment

1. Upon receipt of a Notice of Project Completion (NPC) form and all Project completion documentation listed in Section 6 of this Handbook, an Upgrade for Savings Program Representative verifies the installation of the Project. Verification includes review of the submitted documentation and may include an on-site verification (e.g., visual inspection) or video call (remote inspection), if deemed necessary by the Program Representative to confirm that measures are installed and operating correctly.
2. If the Project is completed as set forth in the Incentive Agreement and the Project meets all Program requirements, the Upgrade for Savings Incentive will be issued. Payments are by check mailed to the address indicated on submitted IRS W-9 forms or transferred through a journal entry to a city department.
3. If the completed Project differs in any material respect from the Incentive Agreement, the Customer provides a Deviation Report summarizing the changes. SFPUC may, in its sole discretion and judgment, adjust the amount of the Customer incentive payment to reflect the revised estimated energy performance. The final energy savings and incentive amounts will be recalculated based on the Project changes as well as on the operations and performance verified during the Post-Implementation Inspection if those conditions differ from the calculation assumptions. The Customer agrees to accept the SFPUC's decision as to the final amount of the Upgrade for Savings Incentive.

3. Measure Eligibility

3.1. Eligible Energy Efficiency Measures

- The Upgrade for Savings Program provides Incentives for lighting, HVAC, and other improvements, subject to Program approval.
- The Program is flexible enough that it allows for a wide range of custom calculated energy efficiency measures. The primary criterion for measure eligibility is that the installed energy efficient upgrade measure(s) must meet or exceed Title 24 Code requirements and applicable federal and state standards.
- For an EE measure to be eligible, it must be possible to reasonably estimate the energy savings from its use. Calculations shall be submitted per Section 6 of this Handbook.
- If the equipment is operational, an Existing Conditions Baseline should be used for energy calculations. If the equipment is not operational, the Code Baseline should be used for energy calculations. If the equipment is not operational and no Code exists, the Current Practice should be used for the energy calculations.
- The Energy Efficiency Equipment Retrofit Measures must be designed to operate for at least five years. Incentive payments are issued at the time of measure installation based on the expectation of reduced energy use over the life of the measure. Refer to terms and conditions in the Incentive Agreement.
- Existing equipment must be decommissioned and removed from the premises. Subject to SFPUC's discretion, exceptions may be made where the replaced equipment is kept on site and rendered permanently inoperable.
- Retro commissioning (RCx) measures are permissible in the program but must be supported by energy savings calculations and a plan to maintain associated savings for 3 years.

3.2. Ineligible Energy Efficiency Measures

- An EE measure is ineligible for incentives if it is already under construction before the Incentive Agreement is approved by the Upgrade for Savings Program.
- No incentives are provided for generation, including renewable generation. Renewable generation will not be considered to be electricity savings during evaluation of kWh/yr and kW reduction. See also Section 6.2, Calculation Guidelines.
- No incentives are provided for natural gas or other whole-building non-electric energy source savings. The Upgrade for Savings Program encourages participants to contact their natural gas provider for incentives and services when considering natural gas-saving opportunities.

- Electric savings from fuel switching are excluded from savings calculations. Separately, certain electrification measures may qualify for rebates. Please reference the building electrification catalog for more information.

- Installation of used, rebuilt, or remanufactured equipment is not eligible for an incentive.
- Measures which are behavioral, non-permanent, and retrocommissioning measures without fixed and verifiable controls are not eligible for inclusion in the Upgrade for Savings Program; however, the SFPUC will consider exceptions on a case-by-case basis.

- Measures with unjustified baselines are ineligible. For example, a baseline built on the assertion that existing equipment is very inefficient or operates 24 hours per day, without supporting evidence, would be deemed unjustified.
- Equipment Retrofit Measures that will not sustain 100% of the related energy savings for at least five (5) years from receipt of the Incentive are ineligible. However, the SFPUC may consider limited exceptions to accept a measure with less than five years of operation at the SFPUC's sole discretion.
- No incentives are provided for technologies that the Program deems to be ineligible for reasons of persistence, quality, or obsolescence. A partial list of ineligible EE measures appears in the appendix. Updates to the list may be found at sfpuc.org/SaveEnergy or by contacting the Program at 415-551-4623 or SaveEnergy@sfwater.org. The Program will update this list in order to stay current with technological trends in the industry.

4. Program Components

4.1. Calculation Review

Calculation Review is required for all Program participants. All Projects receive an independent check of their energy savings calculations, with feedback to the Customer. Calculation Review is performed by an energy efficiency specialist on the Program's technical team.

Energy savings are calculated as the difference between the higher energy use of an existing piece of equipment, system, or whole building (the "Baseline"), compared to the lower energy use after the upgrade is performed. A wide range of industry standard calculation tools or methods may be used.

In cases where energy efficiency measures can be evaluated with little to no additional research or investigation required, the Program may not offer technical support. If more in-depth investigation is required, then the Program may recommend technical support in the form of Calculation Assistance.

4.2. Technical Support

Technical support may be available to assist customers prepare acceptable energy savings analyses and calculations, and to identify or analyze potential energy projects. Subject to the sole discretion and determination of the SFPUC, technical support is offered when determined to be appropriate for the project, and as available Program funding allows.

If the SFPUC determines that additional technical support can be offered to the Project, the process will be as follows:

4.2.1. Technical Support Procedure

1. An Upgrade for Savings Program representative meets with the Customer and recommends a technical support pathway. The representative collaborates with the

Customer to determine the best path forward for the Customer and the Project. The discussion includes potential Customer roles, such as sharing site data and providing site access. The Customer is not required to accept or implement any technical support.

2. Technical support may include, but is not limited to, the following:
    a. Calculation Assistance (for customers whose calculations are found to need supplemental analysis).
    b. Project Identification Assistance
3. If the Customer agrees to accept the recommended technical support a technical support team may be assigned by the SFPUC. The technical support team typically includes an SFPUC consultant partner -- professional engineers and energy efficiency experts with extensive experience providing technical assistance.
4. The technical support team contacts the Customer and requests the information necessary to complete the level of service required, with the objective of enabling the Customer to complete a Project Application.
5. In some cases, the technical support team may arrange one or more site investigations with the Customer. The purpose of the site investigations is to collect enough information so that the technical support team can complete energy savings calculations or energy models at a level of accuracy required by the Upgrade for Savings Program.

4.2.2. Calculation Assistance

Calculation Assistance is a form of technical support that the program may offer to assist the Customer whose calculations are found to need supplemental analysis, and especially for applicants from facilities with high energy savings potential. Using expertise from the Program's technical team, Customers can be offered targeted assistance to improve or enhance a Project's savings calculations. Technical support may include applying sound engineering, industry research, and, if needed, a site investigation.

Energy savings are calculated as described in Section 4.1 above.

4.2.3. Project Identification Assistance

Project Identification Assistance is technical support that the Program may offer to Customers subject to available Program resources. The support is aimed at helping the Customer identify a viable energy upgrade Project that would qualify for the Program's Financial Incentives. Project Identification Assistance is geared to the Customer's needs, savings potential, and site characteristics. Technical support typically could include collecting and analyzing energy and building data and targeted site visits. If warranted by specific site conditions, support could include detailed review of building operations and system performance by collecting trend data from the site's Energy Management Control system or by installing data loggers. Project Identification Assistance results in a list of energy upgrade recommendations, i.e., Energy Efficiency Measures (EEMs). The Customer is under no obligation to install any of the recommended EEMS resulting from the Project Identification Assistance in order to participate in the Program, and the installation or implementation of any EEM is at the sole discretion, and is the sole responsibility, of the Customer. The SFPUC disclaims any and all express or implied warranties or merchantability or fitness for a particular purpose.

Energy savings are calculated as described in Section 4.1 above.

Note: Any energy savings calculations or Project Identification Assistance provided by the Upgrade for Savings Program as part of "technical support" are engineering estimates based on engineering principles and professional judgment, but do not guarantee energy savings or a reduction in utility bills. In addition to standard variation in engineering assumptions, there also are many factors outside of the control of the Program that can influence the actual energy savings, or costs, which result from a Project. Any acceptance of technical support services is at the Customer's sole choice and discretion and savings estimates provided by the Program do not represent a savings guarantee by the SFPUC or by its technical service providers.

4.3. Financial Incentives

The Upgrade for Savings Program offers a one-time Financial Incentive to promote energy efficient upgrades in existing buildings. Funding is limited and available on a first-come, first-served basis. (See Section 4.3.3)

Financial Incentives are based on the energy savings achieved by the efficiency measure relative to the Baseline energy performance, which include existing conditions baselines, state-mandated codes, federal-mandated codes, industry-accepted performance standards (e.g., Energy Star), or other baseline energy performance standards as determined by the Program.

Program Incentives are based on annualized electricity savings, as determined by SFPUC in its sole discretion. The Estimated Incentive Amount is calculated based on the Project's estimated annual electricity savings (kWh/yr.) and on the Incentive Rates shown in Table 1 of this Handbook at the time the Incentive Agreement is approved by the SFPUC, as well as on the following methodologies.

- Estimated annual electric energy savings (kWh/yr.) must be calculated using transparent, verifiable, and repeatable engineering calculations, whole building computer modeling, and/or measured meter-based savings that comply with the requirements described in Section 6.2.
- The financial incentives offered are based only on electric energy savings (i.e., kWh/yr.) with no separate demand (kW) reduction incentive. Although there are no explicit demand reduction incentives (i.e., $/kW), peak demand savings is encouraged, and the calculated demand impact must be included in the Project's Calculation Documentation.
- Natural gas savings and savings from fuel switching are excluded from the energy savings calculations. However, equipment rebates are available in the building electrification catalog.

- Before any work begins on an upgrade Project, the Customer must sign an Incentive Agreement and then receive the Notice of Reservation from the program.

- Under no circumstances will an incentive be paid before all of the following are completed:
    - the Incentive Agreement is signed by the Customer and approved by the SFPUC.
    - if applicable, the Customer has executed an energy service agreement with the SFPUC.
    - the Notice of Reservation is approved and delivered to the Customer.

- the Notice of Project Completion is received by the SFPUC; and
- the final verification is complete, and the upgrade is performing as agreed per the Incentive Agreement to the satisfaction of the Upgrade for Savings Program.

- Incentives are capped at the lowest of:
  - 50% of the total Project Cost.
  - $250,000 per Project.
  - $250,000 per Customer Account per year (or $750,000 per year for Customer Accounts using more than 200 million kWh/yr.); or
  - The Notice of Reservation's Estimated Incentive Amount.
- The total Project Cost includes all documented costs for materials and labor associated with the work directly resulting in the energy savings associated with the Project. Labor costs may include soft costs, such as design and consulting fees. Costs related to the cap amount may not include any costs associated with work that is not related to the energy savings associated with the incentive amount, unless a Program Representative grants an exception by pre-approval. Costs will be reviewed for reasonableness as compared to RS Means or other benchmarks. Only reasonable costs will be allowed. The value of any technical support provided by the Program does not count toward the total Project Cost or the Incentive cap.

4.3.1. Incentive Rates

Table 1: Incentive Rates

Incentive Type	Incentive Rate [1]	Cost Cap per Project [2]	Maximum Incentive per Project [3]	Maximum Annual Incentive per Customer Account [4]
Custom	$0.15/kWh	50%	$250,000	$250,000/$750,000

1. The Upgrade for Savings Program calculates incentives by multiplying the Incentive Rate by the Project's total estimated first year electricity (kWh/yr) savings.

2. The Minimum Qualifying Incentive for a Project to be eligible for Program Financial Incentives is $5,000.

3. The total Project Cost includes all documented costs for materials and labor to complete the upgrade Project. Labor costs may include soft costs, such as design and consulting fees. Costs related to the cap amount may not include any costs associated with work that is not related to the energy savings associated with the incentive amount.

4. A Customer Account's combined maximum incentive reservations in any Program Year from the Upgrade for Savings Program is limited to $250,000, or, where the Customer Account uses more than 200 million kWh per year, is limited to $750,000.

In no event shall the total incentive payment to the Customer exceed the Notice of Reservation's Estimated Incentive Amount.

4.3.2. Incentives Adjustments based on Verified Installation

The estimated Incentive amount listed on the Incentive Agreement is subject to final verification and approval after the Notice of Completion form is submitted by the Customer. If the Program verifies that the Project has been installed and is operating per the terms of the Incentive Agreement, then the Incentive amount will be paid with no change. If there were any changes to the Project during the implementation phase, then the Incentive amount may be lowered at the SFPUC's discretion as necessary to match the installed and operating characteristics of the system(s).

The SFPUC will review the change(s) and determine if there will be any reduction to the energy savings and Incentive amount as a result of the scope change. Under no circumstances shall the Incentive payment exceed the Estimated Incentive Amount specified in the Notice of Reservation even if the change in scope results in higher energy savings.

Common reasons for Incentive adjustments include, but are not limited to, the following:

- Scope changes during implementation per Section 2.
- Final Project costs are less than anticipated during the Incentive Agreement phase and the difference is enough to affect the Cost Cap per Section 4, Table 1.
- The Customer finds after implementation that they are not able to operate the system as efficiently as anticipated. For example, they may find that for operational reasons they have to operate a new lighting system at minimum dimmed level of 50%, instead of a minimum dimmed level of 25% as originally anticipated, which decreases the energy savings.

4.3.3. Incentives Reservations/ Funding Availability

A signed Incentive Agreement constitutes the Customer's formal request for a Financial Incentive from the Program. Signed Incentive Agreements will be evaluated in the order in which they were received, and incentive funding will be reserved for Projects based upon the date of approval of the Incentive Agreement by the SFPUC, subject to available Program funds and resources. In the event a submitted Incentive Agreement is not complete or acceptable, it will be returned to the Customer with an explanation for the rejection. The Customer may re-apply and the resubmitted Incentive Agreement will be placed in order for review based upon the date the updated agreement was received.

Acceptance of Incentive Agreements are subject to limitations based on available program resources within each Program Year of funding. If approved Incentive Agreements reach the maximum funding available for Upgrade for Savings Program incentives for the Program Year, all pending Incentive Agreements will be returned to the applicants. Customers are encouraged to resubmit applications for Financial Incentives when additional Incentive funding is available.

Applicants are strongly encouraged to consult with their Upgrade for Savings representative prior to submitting their Incentive Agreement to ensure that the Program is currently open for enrollment and to check that the Incentive Agreement to be submitted is complete and acceptable.

5. Special Conditions

5.1. Transfer Applicants from Other Custom Utility Programs

Projects that previously applied to participate in the programs offered by other California utilities shall be eligible to participate in the Upgrade for Savings Program if:

- The Customer has submitted an Electric Service Agreement to the SFPUC.
- The Project meets Upgrade for Savings Program eligibility rules and Program standards.
- The Customer has not received, and is no longer eligible to receive, any electric incentives from the other utility for the same Project.
- Applicant may be eligible for Upgrade for Savings Calculation Assistance and technical support at the discretion of the SFPUC.

5.2. Special Circumstances

Under special or unique circumstances, the SFPUC, at its sole discretion, may waive certain eligibility and other Program rules. Any such waiver must be in writing.

5.3. Record-keeping and Audits

The Customer shall establish and maintain accurate files and records of all aspects of the Project and the matters funded in whole or in part with the Upgrade for Savings Incentive, in a readily accessible location and condition for a period of not less than five (5) years after payment of the Upgrade for Savings Incentive or until any final audit has been fully completed, whichever is later.

The Customer shall make available to City, its employees, and authorized representatives, during regular business hours, or during such other times as the parties may mutually agree, all the files, records, books, invoices, documents, and other data related to the Project and participation in the Upgrade for Savings Program. The Customer shall permit City, its employees, and authorized representatives to inspect, audit, examine and make excerpts from any of the foregoing. The rights of City pursuant to this paragraph shall remain in effect so long as the Customer remains obligated to maintain such files, records, books, invoices, documents, payrolls, and other data under this Upgrade for Savings Program.

5.4. Electricity Service

Customer Incentives are subject to refund to the SFPUC, if through no fault of the SFPUC, the electric account associated with the Project switches to another electric provider within five years after Project completion.

6. Documentation Requirements

6.1. Format Requirements

All document submissions must be in electronic digital format, prepared and organized as follows:

- All documents should be in PDF format, with the exception of necessary working files for models, and for calculations.
- Any supporting narrative documents shall contain titles, version control, and page numbers.
- Documents shall follow applicable industry practice and standards.
- Any information deemed confidential by the Customer must be so marked prior to submission to the Program. However, all information submitted to the Program is subject to disclosure if the information meets the requirements for disclosure pursuant to the California Public Records Act or the San Francisco Sunshine Ordinance regardless of whether the information is marked confidential.

6.2. Calculation Guidelines

6.2.1. Calculation Documents

Calculations (all files) must be submitted meeting the following requirements:

- All calculations must be fully transparent to and verifiable by Program Staff and technical reviewers.
- All calculations shall follow applicable industry practice and professional engineering standards as laid out by American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), International Performance Measurement and Verification Protocol (IPMVP), United States Green Building Council Leadership in Energy Environmental Design (LEED), or similar peer-reviewed standards.
- Live working files such as models, simulation files, calculations, and spreadsheets must be transferable and reviewable by the SFPUC and its representatives.
- All assumptions shall be clearly documented, either in notes embedded in the calculations or by submitting a supporting narrative explaining the calculation approach, assumptions, and known limitations to accuracy.

6.2.2. Energy Savings Calculations: Baseline and Methods

Calculations shall establish and substantiate the Project's baseline and proposed energy performance and shall clearly document the energy savings estimate.

The Baseline conditions should be clearly stated, and how the Baseline assumptions are applied should be understandable to any technical reviewer or Program Representative. Energy savings calculation Baseline shall be: 1) existing conditions, or 2)Code, or 3) Current Practice in that order of precedence.

- In cases where equipment is not operational, Code baseline shall be used. The version of Title 24 effective at the time of the Project shall be the applicable baseline in these cases.
- In cases where equipment is not operational and there is no applicable code, Current Practice baselines may be used, upon prior approval by a Program Representative. Current Practice baselines shall be guided by the rationale of using the "least cost replacement equipment" and shall be based on case studies, work papers or other technical documentation approved by the Program.

- Energy savings calculation approaches may include, but are not limited to, the following:
  - Single Measure Calculations
  - Multiple Measure Calculations
  - Whole Building Energy Modeling
- The Whole Building Approach analysis requires the development of a M&V plan for site level NMEC modeling consistent with IPMVP's Option C. Please consult the Program Representative if considering this approach.
- Savings for all measures shall include any interactive effects the measures may have upon other energy efficiency measures or electricity-consuming systems.
- If the Project site is served by non-Hetch Hetchy Power supply, such as customer generation or deliveries from another commodity supplier, incentives are paid based only on the savings of Hetch Hetchy Power-supplied electricity, as solely determined by SFPUC. The upper limit on the annual savings estimate used in the incentive calculation shall be the Customer Account's annual Hetch Hetchy Power electricity use for the previous year.

6.2.3. Peak Demand Reduction Calculations

The Program requires that Customers calculate demand savings per the requirements below and submit them for approval as part of the Incentive Agreement package. Because most customers pay a demand charge as part of their rate tariff, demand reductions estimates are necessary to estimate the impact of the Project on customer utility costs. Also, the SFPUC tracks and reports demand impacts for the Program.

Peak demand reduction must be evaluated using the Database for Energy Efficiency Resources (DEER) peak approach as defined in the CPUC Resolution E-5152.[7] The DEER peak method is defined as "an estimated average grid level impact for a measure between 4 p.m. and 9 p.m. during a 'heat wave' defined by three consecutive weekdays for weather conditions that are expected to produce a regional grid peak event."

The DEER Peak periods are further defined by individual climate zones. Because the definition is based on average grid-level impacts it has been determined that all measures must use the predefined "heat wave" periods specific to each climate zone. San Francisco is located in Climate Zone 3 (CZ03), and the demand period is defined per the following table:

Climate Zone	Start Date	End Date
3	8-Jul	10-Jul

Using the DEER peak approach to estimate demand and demand savings data includes accounting for interactive effects upon other energy measures and systems.

For help with the peak savings calculation methodology, please contact your Upgrade for Savings Program Representative or assigned Upgrade for Savings Program technical team.

[7] Resolution_E-5152_complete.pdf

6.3. Documentation Requirements by Project Phase

6.3.1. Enrollment Phase

i) Enrollment Agreement indicating interest in the Program, completed, and signed.
ii) Supporting Documentation consisting of the following:
   (1) Narratives and definitions for the proposed Project and Baseline. Attach drawings and manufacturer specifications as appropriate.
   (2) Methodology and calculations used for energy savings, if available.
   (3) Electricity Savings calculation demonstrating that the Project will meet the Program's Minimum Qualifying Incentive amount, if available.
   (4) Estimated Project costs, if available.
   (5) Other documents if requested by the Program.

6.3.2. Application & Incentive Agreement Phase

i) Application & Incentive Agreement, completed, signed, and scanned.
ii) Supporting Documentation consisting of the following:
   (1) Documents from the Enrollment Phase if modified from the original submission.
   (2) Final energy savings calculations and estimated project cost.
   (3) Other documents if requested by the Program.
   (4) Project verification provisions (as drafted by Program staff and provided to Customer).

6.3.3. Project Completion

i) Notice of Project Completion (NPC) Form
ii) Invoices, receipts, and labor reports that document the total Project cost[3] (and proof of payment if requested)
iii) Signed W-9 form for the Payee. For municipal enterprise departments, payments will be by arrangement with the SFPUC.
iv) Project Acceptance Documentation provided by the contractor to the Customer indicating the Measures are installed and operating correctly.
v) Complete set of Project Plans or technical documentation.

If the final Project deviates from the Incentive Agreement, include:
vi) Deviation Report Document: listing all measures in the Incentive Agreement that were not constructed as planned, with a description of the deviation(s) from the Incentive Agreement.

Customers may reach out to an Upgrade for Savings Program Representative at any time during implementation to seek assistance with preparing any of the above documents, and they will be happy to support the process.

[3] This is the basis for the Cost Cap and therefore it is important that the invoices are included and accurate or the final incentive may be reduced.

Appendix: Ineligible Measures

Partial List of Ineligible Technologies and Measures

The Upgrade for Savings Program provides Incentives for EE measures, subject to Program approval. No incentives are provided for technologies that the Program deems to be ineligible for reasons of persistence, quality, or obsolescence. Provided below is a partial list of ineligible energy efficiency measures to help guide customer applications to the Program. This is not intended to be a comprehensive list of ineligible measures.

General

- Measures installed prior to application approval.
- Measures that are not permanently installed and can be easily replaced.
    - Examples: Refrigeration additives, high performance hydraulic fluid
- Power factor correction and power conditions equipment
- Duty cyclers
- Server virtualization
- Network desktop power management software.

Lighting

- T12 or T8 linear fluorescent lamps and ballasts
- LED technologies not listed on either the DLC Qualified Product List or EnergyStar including fixtures, lamps, and retrofit kits.
- Lamp style retrofit kits with an internal driver (DLC UL Type B) that operate offline voltage.
- Screw-in CFLs
- HID fixtures not equipped with pulse start metal halide or ceramic metal halide lamps and electronic ballasts.
- Incandescent lighting used for general illumination - including halogen incandescent and halogen infrared.
- LED Exit signs

Operations and Maintenance/ Retrocommissioning*

- Non-automated operational changes
- Manual control of equipment
- Routine maintenance
    - Examples: Burned out lamps, HVAC coil cleaning, HVAC filter changes, consumables

*The intent is to encourage measures that result in sustained and efficient system performance.