Berkeley Law | Center for Law, Energy, & the Environment

Funding SAN FRANCISCO *Climate Action*

Strategies for Revenue, Implementation, & Equity

NOVEMBER 2022

EXECUTIVE SUMMARY

CLIMATE & ENERGY

WATER

OCEANS

LAND USE

EXECUTIVE SUMMARY

In 2021, San Francisco took two groundbreaking steps toward a carbon neutral future. In September 2021, the Mayor sponsored, and the Board of Supervisors adopted, a set of aggressive emissions reduction targets for the coming decades: achieve net-zero greenhouse gas emissions generated in the city by 2040 and reduce emissions associated with consumption of all goods and services in the city (regardless of where emissions originate) 80 percent by 2050.

In December 2021, the Mayor released the City's Climate Action Plan (CAP) detailing the actions needed to accomplish these ambitious targets, developed through a multi-agency and stakeholder process led by the San Francisco Department of the Environment.[a]

San Francisco's Department of the Environment contracted UC Berkeley's Center for Law, Energy & the Environment (CLEE) to assess options for funding the equitable implementation of San Francisco's CAP. To develop the recommendations in this report, CLEE conducted over 50 expert interviews with community leaders, City departments, municipal finance and environmental policy experts, and other stakeholders; facilitated two expert and stakeholder workshops to discuss revenue generation options; and convened a Technical Advisory Committee that provided guidance on opportunities and barriers to each potential strategy.

Based on these engagements, and with ongoing guidance from the Department of the Environment and feedback from interviewees and participants, CLEE developed a set of principles to inform revenue generation and investment processes (page 6); and recommendations on the most promising revenue generation mechanisms to fund and implement the CAP, including top-priority recommendations (page 9). This report prioritizes near-term revenue strategies to initiate high-priority CAP actions, reflecting CLEE's analysis and input from

a The City's 2021 Hazards and Climate Resilience Plan details strategies for resilience to climate impacts, which are distinct from but in many cases overlap with CAP emissions reduction strategies. For more information see Appendix D.

a range of stakeholders, coupled with sets of strategies focused on implementation and on equity.

In all cases, it will be vital that the burdens and benefits of these revenue programs be implemented with an equity lens, aligning with the CAP's vision for equitable climate action that helps to mitigate unjust impacts and advance economic prosperity. Because the approach to and implementation of a funding or financing strategy matters as much as the strategy itself, the report also includes implementation and equity recommendations that should be adopted alongside the revenue generation strategies.

To recognize the importance of each set of recommendations, this report organizes principles and recommended actions into three categories: revenue, implementation, and equity.

REVENUE	Tools for raising revenue and accessing funds to implement CAP actions.
IMPLEMENTATION	Processes and capacity expansions to support implementation of revenue strategies and CAP actions efficiently and effectively.
EQUITY	Measures to integrate equity considerations throughout the funding, financing, and implementation processes.

The recommendations in this report will support decarbonization efforts in San Francisco, including continuing efforts that are already in development. The priority recommendations will allow City leaders to rapidly raise significant, flexible funds for early implementation. The report also includes recommendations for medium- and long-term funding strategies that will require additional partnership development, stakeholder engagement, or other work to develop and implement. San Francisco, like all cities, faces a range of investment needs that may complement or compete with CAP priorities, and success will require substantial funding support and policy action at the state and federal levels. Finally, it is important to keep in mind that while some of the proposed CAP measures will incur significant costs, which is the focus of this report, many will also drive long-term savings through reduced fuel costs, improved air quality and public health, and resilience.

CAP NAMING CONVENTIONS

This report adopts the CAP's convention for designating sectors, strategies, and supporting actions. The six sectoral abbreviations are ES (Energy Supply), BO (Building Operations), TLU (Transportation and Land Use), H (Housing), RCP (Responsible Production and Consumption), and HE (Healthy Ecosystems). The 31 overarching strategies are designated by sector and number, i.e., BO.1 ("Eliminate fossil fuel use in new construction"). The 159 individual actions are designated by a second number, i.e., BO.1-1 ("By 2021, require newly constructed buildings to be efficient and all-electric with no on-site carbon emissions"). See Appendix B for a complete list of CAP strategies and supporting actions

A. THIS REPORT AND THE CAP PROCESS

The recommendations included in this report are one step in an iterative process of CAP development and implementation. They are preceded by the significant analysis and stakeholder outreach conducted by the Department of the Environment in preparing the CAP and will be followed by community and stakeholder outreach processes to identify immediate next steps. This engagement will occur alongside actions by City leaders, agencies, and stakeholders and will set a roadmap to 2040 and 2050.

B. ABOUT SAN FRANCISCO'S CAP

The San Francisco CAP is an ambitious and comprehensive roadmap of goals, strategies, and actions to achieve emission reductions across six sectors: Energy supply, building operations, transportation and land use, housing, responsible production and consumption, and healthy ecosystems. Key strategies include, but are not limited to, provision of 100 percent carbon-free energy, decarbonization of buildings, and increases in the public transit, active transportation, and vehicle electrification networks. See Section II for an overview of the CAP's emissions reduction actions. The San Francisco Department of the Environment led the development of the CAP in coordination with 18 other City departments including the San Francisco Planning Department, San Francisco Public Utilities Commission, Department of Public Health, Municipal Transportation Agency, County Transportation Authority, Recreation and Parks Department, Office of Resilience and Capital Planning, and San Francisco International Airport.

The CAP estimates the cost of each of its 31 strategies in cost ranges from up to $1 million ($) to $500+ million ($$$$$) but does not include specific cost estimates for each of the 159 individual actions within these strategies. However, independent analyses provide information on the significant scale of investment required to realize CAP goals. For example:

- In April 2021, the San Francisco Budget and Legislative Analyst's Office prepared an analysis estimating the cost of **full electrification of the existing residential building stock** (strategy BO.2) at approximately **$3.5-$5.9 billion**.
- San Francisco Municipal Transportation Agency's (SFMTA's) 2021 20-Year Capital Plan estimates that approximately **$10 billion** is needed for **planned transit system expansion** and **$5 billion** is needed for each of **facility, fleet, and street improvements** (strategies TLU.1/2/5/6/7).
- In September 2019, the City made an initial offer of **$2.5 billion** to **acquire PG&E's distribution grid assets** (action ES.1-3).

STAKEHOLDER FEEDBACK

This report reflects the most salient input and feedback received from reviewers, interviewees and convening participants. Due to limitations in scope and time, not all feedback was incorporated. The Department of the Environment will review comments that could not be addressed in this report as part of its ongoing engagement processes. Some topics for further inquiry and engagement include the equity implications of pricing strategies; the appropriateness and structure of tax measures in the context of the ongoing business recovery from COVID-19; and optimal structures for additional staffing and interagency coordination. A range of City leaders and stakeholders will engage in the process of connecting revenue and implementation strategies to specific decarbonization investments.

These analyses make it possible to prepare a rough estimate of CAP costs based on an assumption that the highest-cost strategies have an average high cost of $5 billion. (This assumption is purely for scoping purposes and costs could be much higher in the most capital-intensive sectors, like public transit.) Table 1 below provides an overview of anticipated cost ranges, based on the CAP's estimates:

BY SECTOR

	NO.*	TOTAL COST (LOW)	TOTAL COST (HIGH)
Energy Supply (ES)	5	$1.012 Billion	$10.12 Billion
Building Operations (BO)	4	$503 Million	$5.03 Billion†
Transportation/Land Use (TLU)	7	$513 Million	$5.132 Billion
Housing (H)	4	$210 Million	$1.101 Billion
Production/Consumption (RPC)	4	$2 Million	$20 Million
Healthy Ecosystems (HE)	7	$51 Million	$511 Million
Total	**31**	**$2.291 Billion**	**$21.914 Billion**

* Number of CAP strategies within each sector

† Includes residential buildings only, for scoping purposes

BY COST GROUP

	NO.*	STRATEGIES	TOTAL COST (LOW)	TOTAL COST (HIGH)
$$$$$: $500+ million	4	ES.1, ES.3, BO.2, TLU.1	$2 Billion	$20 Billion
$$$$: $100-500 million	2	H.2, H.4	$200 Million	$1 Billion
$$$: $10-100 million	8	ES.2, TLU.2, H.1, HE.3, HE.4, HE.5, HE.6, HE.7	$80 Million	$800 Million
$$: $1-10 million	11	ES.4, ES.5, BO.1, BO.3, BO.4, TLU.5, TLU.6, TLU.7, RPC.2, RPC.3, HE.2	$11 Million	$110 Million
$: ≤ $1 million	4	TLU.3, TLU.4, H.3, HE.1	$0	$4 Million
N/A	2	RPC.1, RPC.4		
Total	**31**		**$2.291 Billion**	**$21.914 Billion**

* Number of CAP strategies within each cost group

Table 1: *CAP strategies by estimated cost. Source: San Francisco CAP. Cost estimates are based on estimates stated in CAP, with an assumption of $5 billion average high cost for items listed in the CAP at $500+ million ("$$$$$") with no upper bound (assumption is authors' own, for scoping purposes only).*

CAP implementation will require a diverse mix of revenue streams across decades to support significant capital investment as well as agency staff, outreach, and supporting programs. In many cases, these build on existing revenue strategies in use by the City–such as general obligation bonds that fund transportation investments, utility ratepayer funds that support electrical grid investments, and refuse collection fees that pay for recycling programs–to drive specific emissions-reducing actions. In other cases, CAP implementation will require development of new revenue-generation mechanisms, drawing on the resources of residents and businesses, federal and state governments, and private and philanthropic partners. In addition, the CAP includes a number of policy, regulatory, and planning actions that are key enabling actions but will impose little or no cost to the City; these actions are not a focus of this report, but remain high priorities for aggressive emissions reduction.

C. PRIORITIES AND PRINCIPLES FOR CAP INVESTMENT

Participants and interviewees identified 1) building decarbonization and 2) transportation and land use as the highest priorities for initial investment and emphasized a need to focus on lower-income and disadvantaged communities including Bayview-Hunters Point, Chinatown, Excelsior, the Tenderloin, and other areas identified through San Francisco's Environmental Justice Communities Map (while also acknowledging that lower-income residents reside in communities throughout the city). See Figure 4 to view the EJ Communities Map. Key factors in this prioritization, which aligns with the CAP's own analysis, included:

- The potential for immediate, tangible quality-of-life and public health benefits in high-priority communities, including air quality improvements and transportation cost reductions
- The high proportion of greenhouse gas emissions from the transportation and buildings sectors in San Francisco (47 percent and 41 percent, respectively)
- The link between transportation system connectivity and community economic development
- The enabling relationship between building electrification and transportation electrification

However, top priorities for investment–within the scope and structure of the strategies and actions developed in the CAP process–ultimately must be determined by City leaders working directly with community members through multiple engagement and decision-making processes as officials refine revenue proposals.

In addition to identifying priorities for investment, interviewees and convening participants also developed a set of principles to guide revenue generation and investment. These are organized into the three framework categories.

PRINCIPLES TO GUIDE CAP INVESTMENT

REVENUE

- **Utilize all available and appropriate City revenue sources** to focus on priority building and transportation electrification investments, including but not limited to:
  - General fund
  - General obligation bonds
  - Revenue bonds
  - Property, sales, hotel, and special taxes
  - Utility fees and on-bill financing strategies
  - Development and mitigation fees
  - Financing districts
- **Incorporate all available federal, state, and regional revenue sources** for capital and programmatic investments
- **Leverage all available private capital** for private infrastructure investments
- **Develop pricing strategies** that raise revenue while encouraging low-carbon activity
- **Maximize and monetize co-benefits and ecosystem services** where possible
- **Authorize local tax** options including congestion pricing, carbon, and income taxes
- **Build flexibility in revenue sources** to meet multi-decade investment needs and maximize multi-benefit projects
- **Prioritize progressive taxation structures** and ensure equity guardrails in pricing strategies

IMPLEMENTATION

- **Ensure City budget is written to achieve timely fulfillment** of CAP priorities
- **Dedicate ongoing funding for Climate Action Plan implementation**, stakeholder and expert consultation, and agency coordination
- **Establish interagency processes** to coordinate across all relevant City investment and implementation capacities and to strategically align revenue generation strategies
- **Expand existing stakeholder processes** to gather spending prioritization input from community, labor, climate, environmental justice, and business groups, and invest in capacity-building to help frontline communities engage meaningfully in those processes
- **Cultivate philanthropic and corporate support** for community and voter engagement efforts related to CAP revenue generation and implementation

EQUITY

- **Continue to take a "root causes" approach to center equity** in all CAP decision-making
- **Prioritize lower-income, disadvantaged, and overburdened communities and communities of color** through:
  - Targeted investments with the potential for immediate, high-quality climate benefits
  - Meaningful investment decision-making authority for communities
  - Neighborhood-based approaches to emission reduction
  - Consistency with federal and state minimum investment requirements for environmental justice/disadvantaged communities as a floor
  - Strong, culturally competent messaging on climate, economic, and labor opportunities
- **Build local employment infrastructure** through workforce development components and labor standards in all CAP investments, including targeted hiring for high-priority communities
- **Support small businesses, social enterprises, and community-based organizations** to carry out CAP investment
- **Avoid cost-of-living increases** that result in net out-migration from San Francisco to more carbon-intensive jurisdictions through:
  - Anti-gentrification and anti-eviction policies
  - Homelessness services
  - Affordable clean technology
  - Generational equity strategies to grow the populations of young and African American San Franciscans
- **Evaluate outcomes of investments** (including City and community input) to ensure positive equity and climate benefits and adjust as necessary

The recommendations on the following pages identify specific top-priority revenue, implementation and equity actions for City leaders to take in alignment with these principles.

Given the anticipated cost and timeline of the CAP–likely tens of billions of dollars over multiple decades (see Table 1 for more detail)–no single funding and implementation strategy will achieve all of the City's goals. At the same time, City agencies and stakeholders will need to grow their own capacity to take advantage of new revenue. As a result, City leaders should prioritize an initial group of mechanisms that can rapidly raise significant, flexible funds for early implementation. Many measures will require repeat action–in particular, general obligation bond measures to fund major capital investments–as part of long-term City capital planning processes, while tax and other measures will require iteration and calibration. Given the scale and complexity of the decarbonization challenge, strategies to support implementation and equity will be vital components alongside new revenue sources, and all City departments and agencies will need to support the effort.

The tables on the following pages describe top-priority recommendations for revenue, implementation, and equity. The revenue generation proposals focus on measures within City control; strategies to attract outside funds such as state and federal grants, which will be vital complementary efforts to achieve CAP targets, are not the focus of this analysis but are described later in the report. See Section III.B.5 of the full report for a summary of potential CAP funding opportunities from the federal Infrastructure Investment and Jobs Act and Inflation Reduction Act and the 2022-2023 California State Budget, the latter two of which were finalized during the preparation of this report, and each of which includes significant opportunities for City leaders to fund the CAP. For a complete list of potential strategies, see Section III and Appendix A of the full report.

D. REVENUE ACTIONS

Revenue measures are divided between near-term (1-3 year timeframe from fall 2022) and medium-term (4-7 year timeframe from fall 2022). CAP implementation will occur over decades, and a number of additional strategies will be required for long-term funding. These initial recommendations focus on the highest-priority strategies for City leaders to take direct action at the outset of implementation; the remainder of the report identifies other revenue strategies that can support long-term action and potential federal, state, and other outside sources of funds. The revenue measures proposed in this section should be read together with the implementation and equity strategies proposed in Sections E and F below.

Revenue measures include an estimate of the amount of revenue generated, whether it would be one-time or recurring, and its level of volatility (i.e., responsiveness to changes in economic conditions); along with context and justification for the proposed measure, implementation steps, and examples for revenue generation and investment. Within the near- and medium-term categories, proposed measures are not proposed in a particular chronological order.

NEAR-TERM MEASURES (1-3 YEARS)

PROPOSE AND PASS CAP-FOCUSED GENERAL OBLIGATION (GO) BONDS, coupled with an increase in the City's GO bond limit[b] to allow property tax increases exclusively to fund new bonds for CAP investments, including:

- A **building decarbonization GO bond** to fund efficiency and electrification retrofits for existing residential buildings[1]
- **Increase the size of the affordable housing GO bond** to fund the San Francisco Housing Accelerator Fund for CAP-aligned housing investment

BUILDING DECARBONIZATION GO BOND

REVENUE ESTIMATE

$300-$500 million | One-time | Low volatility

Based on the size of recent housing (2015: $310 million, 2019: $600 million) and public health (2016: $272 million, 2020: $60 million) GO bonds and estimated $3-5 billion cost of citywide residential building electrification.

CONTEXT AND JUSTIFICATION

Buildings are the second-highest source of emissions in San Francisco; efficiency improvements will result in immediate quality-of-life benefits for residents. The City is targeting complete building decarbonization by 2040; the CAP includes policy strategies to drive retrofits with a focus on lower-income residents (BO.2-2, 2-9/10/11/12), including requirements to electrify at various transfer or renovation points. A large-scale GO bond can both kick-start efficiency and electrification investment in high-priority communities and establish permanent programs that can marshal the billions of dollars of private capital required for CAP building decarbonization efforts.

b The City Charter and Office of Resilience and Capital Planning (ORCP) currently cap GO bond issuance in two ways: outstanding bond indebtedness may not exceed 3% of total assessed property values; and GO bond measures may not increase property tax rates above 2006 levels. Each of these caps–instituted by City leaders for reasons of fiscal prudence–could limit the City's ability to add new revenue for CAP investment, with the ORCP policy in particular posing a potential ceiling. Effective CAP implementation could call for climate action-specific exemptions. In general, the GO bond proposals in this section are intended to direct near-term CAP investment and are not intended to preclude future iterations of similar bonds in the City's long-term capital planning process. CAP investments, like other City capital investments, will require recurring GO bonds at regular intervals. **While this section presents three separate GO bond proposals, in practice, the nuances of the public approval process and benefits of simplicity could call instead for a single, comprehensive GO bond for building decarbonization, housing, and transportation investments.**

Rapidly decarbonizing existing buildings will require programs tailored to different socioeconomic groups: high-income residents can generally afford upfront costs or traditional financing, middle-income residents will need access to low-cost financing options, and lower-income residents will likely rely on direct grant and rebate programs. GO bond funds for CAP implementation should support the latter two groups, with direct grants for lower-income and affordable housing residents (expanding on state and utility programs such as the Low-Income Weatherization Program and TECH Clean California) and seed funding to attract private capital for upgrades in other buildings via a City Green Bank. A Green Bank could also win funding from the Inflation Reduction Act's Greenhouse Gas Reduction Fund for state and local decarbonization financing programs. Funds should prioritize multifamily properties to target residents most in need of financial support and to address landlord-tenant split incentives, cover upgrades to building electrical systems needed to support new installations, and include robust tenant protections to limit displacement.

IMPLEMENTATION

- Update ORCP policy (and amend charter if necessary) to allow GO bonds over the current limits for CAP-focused measures
- Propose and pass bond via ballot measure
- Commit 50-75% of funds to direct grants (managed by one or more nonprofit program administrators) for efficiency and electrification retrofits for lower-income residences with a focus on multifamily properties, including decarbonization workforce development through CityBuild program
- Commit 25-50% of funds to create SF Green Bank to attract private capital for decarbonization investments and incorporate additional seed funding from Inflation Reduction Act's Greenhouse Gas Reduction Fund
- Create SF Green Bank as a publicly chartered nonprofit, independent 501(c)(3), and/or collaboration among existing CDFIs

PRECEDENT/ EXAMPLES

Miami Forever Bond | NYCEEC | DC Green Bank | Montgomery Co. Green Bank | Connecticut Smart-E | Michigan Saves | CA Climate Catalyst Fund | CA GoGreen

HOUSING GO BOND

REVENUE ESTIMATE

$50-$100 million | One-time | Low volatility

Based on anticipated size of scheduled 2024 affordable housing GO bond (\$160 million), size of recent housing GO bonds (2015: \$310 million, 2019: \$600 million), and estimated Housing Accelerator Fund need to carry out 2+ direct acquisition projects resulting in hundreds of new units of affordable housing in CAP-aligned locations and structures.

CONTEXT AND JUSTIFICATION	Increasing the affordable housing supply is essential to making San Francisco more equitable and livable for all residents and for supporting transit-oriented residential density. City-led preservation and development is the most certain way to ensure investments result in permanently affordable units. The high cost of housing investment and the scale of the current housing crisis require hundreds of millions of dollars in readily available capital. The San Francisco Housing Accelerator Fund's (HAF) Housing to End Homelessness Program acquires land and buildings for original construction, redevelopment, and preservation of affordable and permanent supportive housing units at less than ⅔ of standard development costs. SF HAF can use direct funding for land acquisition and can integrate philanthropic and concessionary capital to fund development and operation of the site.
IMPLEMENTATION	· Update ORCP policy (and amend charter if necessary) to allow GO bonds over the current limits for CAP-focused measures (see fn. b) · Increase the total dollar amount of the scheduled November 2024 affordable housing bond from $160 million to $210-$260 million · Propose and pass bond via ballot measure · Direct the additional funds to the SF HAF exclusively for direct acquisition of sites located in areas with high transit access to support preservation or development of affordable or supportive units that meet CAP targets for building decarbonization.
PRECEDENT/ EXAMPLES	Miami Forever Bond | 2019 Proposition A | SF HAF's 833 Bryant Street Pilot Project

A SAN FRANCISCO GREEN BANK FOR BUILDING DECARBONIZATION

A green bank can take many forms, but the core structure commits public funds to one or more financing mechanisms–such as direct loans, revolving funds, or credit enhancement–to redue investment risk in order to attract private capital to clean energy technologies and upgrades. Green bank programs are a popular and effective strategy to leverage limited public funds to accelerate building decarbonization investment by private property owners, often taking the form of loloss reserve fund credit enhancement for financial institutions and credit unions. Programs like California's GoGreen, Connecticut's Green Bank Smart-E, and the Michigan Saves programs have leveraged over ten dollars in private capital for every dollar of public funds, facilitating tens of millions of dollars in home energy upgrades. New York City, Washington, DC, and Montgomery County, Maryland have piloted local equivalents. With sufficient capital, a city-scale credit enhancement program could support private building decarbonization investments through pre-approved lenders and contractors, helping to advance CAP-aligned policies requiring retrofits at appropriate property transfer and renovation points. Committing a significant portion of GO bond funds to create a building decarbonization green bank program could maximize the City's ability to draw private capital, which will be essential given the high cost of citywide building decarbonization, the private nature of most of the investments, and the need to commit most public funds to direct investment in lower-income communities. Including no-debt and tariffed on-bill financing options could be key to ensure access and consumer protections for lower-income residents. Over time, the bank could attract philanthropic and concessionary capital, integrate with state and federal financing efforts, and expand its portfolio to support other CAP-aligned investments.

IMPLEMENT AN ADDITIONAL GROSS RECEIPTS TAX ON THE HIGHEST-REVENUE BUSINESSES to fund workforce development initiatives, City staff to implement the CAP, and equity oversight bodies

REVENUE ESTIMATE

$25-$50 million | Annual/continuing | Medium volatility

Based on City analysis of 2018 Proposition C, which estimated $250-300 million per year for tax increases of 0.015%-0.04% on receipts over $50 million, and recent reporting that revenue dropped from $394 million in 2019-20 to $217 million in 2020-21. The new gross receipts tax increase could be limited to a smaller increment and a smaller subset of high-revenue businesses while still generating sufficient funds to support CAP implementation actions (but not capital investments).

CONTEXT AND JUSTIFICATION

Effective CAP implementation will require a dedicated, continuing source of revenue to support multiple new City staff positions (see Implementation below), provide funding for participation by community members and community-based organizations in long-term oversight and investment planning efforts, and introduce workforce development initiatives associated with building and transportation decarbonization actions. The revenue source should be distinct from those supporting major capital investment programs, which will likely reflect program-specific timelines and in many cases will rely on property taxation or one-off state and federal grants. Voters have demonstrated willingness to increase business taxes to support high-priority causes, and other leading cities have recently implemented climate action-oriented business taxes.

In 2020, San Franciscans approved Proposition F replacing the City's payroll tax with a gross receipts tax. The top bracket includes all businesses with over $25 million in gross receipts. In 2018, voters approved Proposition C imposing a gross receipts tax increase of 0.015%-0.04% on certain businesses with over $50 million in annual gross receipts in San Francisco, raising hundreds of millions of dollars in City revenue for homelessness initiatives.[2] In July 2022, a motion was submitted to the Board of Supervisors proposing a November 2023 ballot initiative to increase the gross receipts tax on business revenues over $25 million with proceeds directed equally to fund the Department of the Environment and CAP implementation; a guaranteed income program for low-income households in environmentally impacted areas; decarbonization workforce development; and public transit operational costs including subsidized Muni access.

Gross receipts tax revenue is inherently volatile, particularly following the COVID-19 pandemic and shifts in commuting and work-from-home patterns, which can substantially affect revenue. Limiting application of the tax to the few hundred businesses that exceed $100 million in local revenue would mitigate impacts to smaller businesses, but could also increase volatility; expanding application to businesses with at least $25-50 million in local revenue would broaden the base of the tax and reduce volatility, but could affect more local businesses. City leaders should be careful not to base expenditures on high-end revenue projections (or include measures to backfill any missing revenue with general fund dollars). As with any tax measure, City leaders should craft it to be efficient, administrable, sustainable, and equitable in implementation.

IMPLEMENTATION

- Propose and pass tax via ballot measure
- Direct funds to the Department of the Environment for CAP implementation and equity initiatives and to City College and CityBuild for workforce development initiatives.

PRECEDENT/ EXAMPLES	2018 Proposition C | 2020 Proposition F | Portland Clean Energy Surcharge | Denver Initiative 2A

IMPLEMENT A PARCEL TAX (based on square footage of property or impermeable surfaces) to fund parks, green infrastructure, and tree canopy investments

REVENUE ESTIMATE	**$12-25 million | Annual/continuing | Low volatility** *Based on total building square footage of residential and commercial properties in the city (approximately 500,000,000, based on data from DataSF Land Use portal, excluding vacant, open space, and other inapplicable property types) taxed at a rate of $.025-$.05 per year.*
CONTEXT AND JUSTIFICATION	Tree canopy and green space are well established as cost-effective strategies to combat the urban heat island effect, sequester carbon, retain rainfall, and support urban air quality. As warm weather days increase due to climate change, expanding green cover will be a key strategy to reduce harm to vulnerable populations facing significant physical health, mental health, and productivity impacts. Increasing green space and park access will also provide immediate, tangible quality of life improvements for all city residents, particularly those in communities with minimal green space. Effective CAP implementation will require a dedicated revenue stream to support CAP investments in parks and the urban forest (HE.3-HE.5) that will require tens of millions of dollars per year for decades. A parcel tax can accomplish this goal while ensuring the payment obligation is tied to property owners; a square footage basis can ensure a measure of equity in assessments compared to a flat rate per parcel, which places a higher burden on low-income property owners. The City's Urban Forestry Council and Friends of the Urban Forest have crafted an ambitious Urban Forest Plan to expand tree canopy and green space, and in 2016 voters shifted responsibility of street tree maintenance to the City. However, planting and maintenance efforts are underfunded, and today San Francisco has one of the lowest average tree canopies among all major US cities at 13.7%, compared to 21% for Los Angeles and 24% for New York. Per capita tree cover and green space are especially low in high-priority neighborhoods such as Bayview-Hunters Point and Chinatown, highlighting the need for equitable investment in new greening efforts and the potential equity benefits of new green spaces.
IMPLEMENTATION	· Propose and pass parcel tax measure · Direct funds to Planning, Public Works, and Recreation and Parks Departments for Urban Forest Plan implementation
PRECEDENT/ EXAMPLES	Los Angeles Measure A | Los Angeles Measure W

MEDIUM-TERM MEASURES (4-7 YEARS)

PROPOSE AND PASS A TRANSPORTATION GO BOND to fund public transit, active transportation, and electric vehicle charging infrastructure (following an increase in the City's GO bond limit to allow property tax increases exclusively to fund new bonds for CAP investments, as described in Near-term Measures

REVENUE ESTIMATE

$300-$500 million | One-time | Low volatility

Based on the size of recent transportation-related GO bond measures (2014: $500 million, 2022: $400 million) and high capital cost of transportation infrastructure investments (e.g., $4.8 billion SFMTA 10-year capital need for already-planned investments).

CONTEXT AND JUSTIFICATION

Transportation is the highest source of emissions in San Francisco; improving transit and active transportation access will increase connectivity and economic opportunity, and increasing electric vehicle (EV) use will improve air quality. A large-scale GO bond is needed to kick-start investment in high-priority, high-profile decarbonized transit projects while meeting the financial scale of major transportation capital infrastructure. The GO bond would supplement anticipated state and federal matching funds and other existing revenue streams.

SFMTA and other City leaders have developed comprehensive, multi-decade capital plans encompassing a range of investments in transportation infrastructure, outlining over $30 billion in capital needs through 2040. Many of these investments overlap with CAP's public transit, active transportation, and EV infrastructure investments, but only some have certain funding sources. City residents narrowly failed to approve a June 2022 bond measure that would have invested $400 million in Muni system repair, maintenance, and street safety investments.

IMPLEMENTATION

- Update ORCP policy (and amend charter if necessary) to allow GO bonds over the current limits for CAP-focused measures (see fn. a)
- Propose and pass ballot measure
- Direct funds to SFMTA for initial investment in CAP transportation projects, such as TLU.1 transit investments and TLU.7 electric vehicle infrastructure pilots, in high-priority communities

PRECEDENT/ EXAMPLES

Miami Forever Bond | 2014 Proposition A

IMPLEMENT VEHICLE PRICING STRATEGIES to incentivize reductions in driving and raise revenue for low-carbon transportation, with rebates, discounts, or exemptions for lower-income residents or in priority communities as applicable

- **Institute downtown vehicle congestion pricing** with revenue dedicated to public transit, active transportation, and/or electric vehicle charging infrastructure

- **Expand the residential parking permit system to encompass all curbside parking and private parking spaces and authorize SFMTA to operate it as a revenue-positive program**, with revenue dedicated to public transit, active transportation, and/or electric vehicle charging infrastructure

CONGESTION PRICING

REVENUE ESTIMATE

$50-100 million | Annual/continuing | Medium volatility (may decline over time)

Based on estimates gathered for the SF Mobility, Access, and Pricing study published in 2010, which estimated between $60 and $80 million in net operating revenue (in 2008 dollars) across different scenarios. Estimates adjusted to reflect changes in downtown travel patterns and pricing proposals since the 2010 study.

CONTEXT AND JUSTIFICATION

Transportation is the highest source of emissions in San Francisco; improving transit and active transportation access will increase connectivity and economic opportunity, and increasing EV use will improve air quality. A congestion price will discourage private vehicle use in the downtown area, improve air quality, and support use of transit options instead, while creating a recurring source of funds for investment in low-carbon transportation options throughout the city, but especially those that provide alternatives to car travel in the downtown core. Changes in commutes following the COVID-19 pandemic have altered downtown congestion and transit patterns, but pricing strategies still have potential to directly reduce emissions and raise sustainable revenue for transportation investment.

City transportation leaders began evaluating the strategy with the 2010 Downtown Congestion Pricing Study, which was part of an ongoing City process investigating several pricing and implementation options. Other global cities have implemented programs that reduce total trips and raise tens of millions of dollars per year. For example, Stockholm established a seven-month pilot congestion pricing program in 2006 and evaluated impacts from the pilot before initiating a permanent congestion price in 2007. London launched its congestion pricing system in 2003, and the program generated £1.7 billion in net revenue in its first 14 years (2003 to 2017). This revenue supports transportation connectivity and safety improvements and sustainable transportation alternatives.

Congestion pricing is a potential medium-term revenue source (4 to 7 years out) because of the coordination and time required to develop, establish, and execute such a program. The San Francisco County Transportation Authority estimates that it will take at least five years to institute a congestion pricing program. The program should include exemptions and discounts for lower-income and disabled individuals and zone residents as outlined by SFCTA's proposals. Where possible, the City should invest in improved low-carbon transportation options before or concurrently with initiating the congestion price so that drivers face fewer barriers in switching modes.

IMPLEMENTATION	· Complete the updated Downtown Congestion Pricing Study · Advocate for legal authorization at the state legislature · Pass congestion pricing ordinance including discounted rate structure to ensure equity · Direct funds to SFMTA for initial investment in CAP transportation projects–such as TLU.1 transit investments and TLU.7 electric vehicle infrastructure pilots–in high-priority communities, and/or discounted or free Muni service
PRECEDENT/ EXAMPLES	SF Downtown Congestion Pricing | London | Singapore | Stockholm

PARKING PRICING

REVENUE ESTIMATE	**$40-60 million | Annual/continuing | Low volatility** *Based on revenue from the existing permit system (approx. $12 million/year, which is fully committed to operational costs) extrapolated to coverage of the entire city (approx. 300% increase) and allowing rate flexibility outside simple revenue neutrality.*
CONTEXT AND JUSTIFICATION	Transportation is the highest source of emissions in San Francisco; improving transit and active transportation access will increase connectivity and economic opportunity, while increasing EV use will improve air quality. Instituting paid permits for curb use citywide and allowing SFMTA to operate the program to fund transportation investments would provide additional recurring revenue for transportation investment and would internalize the full cost of private vehicle use. Crucially, SFMTA could require annual paid permits to maintain private driveway curb cuts (i.e., charging a fee for the curb space held open for private driveway access) to ensure that cost burdens are shared equitably and not just paid by those who park on the street. Each individual width of curb cut could be assessed its own fee, so owners of two-car garages would pay increased fees accordingly. SFMTA currently implements a $165 residential parking permit system (RPP) in higher-density areas covering approximately one quarter of the city. Based on an interpretation of the state constitution regarding local government fees, SFMTA operates the program purely on a cost recovery basis, meaning it does not generate revenue for other investments. If deemed legal (or approved by teh voters), SFMTA could more than triple revenue; by shifting it to a revenue-generating program and setting rates above cost-recovery points.[c] As an example, Vancouver, Canada has considered a full-city overnight parking permit system as part of its climate action investment

c Under Article XIIIC of the California Constitution, a "charge imposed for entrance to or use of local government property" is not considered a "tax" for the purposes of Proposition 13/26/218 voter approval requirements. Curb space, whether used for vehicle parking or held open for driveway access, is City property and thus could be eligible for this exemption, although it has not been so treated in the past. Under Section 716 of the City Public Works Code, an "annual fee of $3.00 per square foot of occupancy of the sidewalk" and no less than $100 is required for curb cuts, but it is unclear if this assessment is regularly enforced or paid.

planning. When increasing rates to raise revenue, SFMTA leaders should take care to develop pricing structures that reflect ability to pay and do not overburden lower-income drivers. Instituting paid permits for all private curb cuts—a highly valuable reservation of the public right-of-way for exclusive private purposes—would be central.

IMPLEMENTATION

- Work with SFMTA, City Attorney, and Board of Supervisors to update RPP as a charge for use of public curb property to permit revenue-positive operation and application to driveway curb cuts
- Alternatively, authorize revenue-positive operation via ballot initiative
- Institute annual paid permit for curb cut maintenance and set rates above cost-recovery point
- Institute RPP in all neighborhoods and set rates above cost-recovery point
- Consider dynamic pricing (e.g., demand-based) strategies and/or income-based or neighborhood discounts to ensure equity
- Direct funds to SFMTA for initial investment in CAP transportation projects–such as TLU.1 transit investments and TLU.7 electric vehicle infrastructure pilots–in high-priority communities, and/or discounted or free Muni service

PRECEDENT/ EXAMPLES

SFMTA Residential Parking Permit program | SF Public Works Code § 716 | Vancouver Climate Emergency Parking Program | SFpark pilot program

IMPLEMENT A CARBON EMISSIONS TAX FOR LARGE COMMERCIAL BUILDINGS to fund building decarbonization and workforce development investments

REVENUE ESTIMATE

$20-$128 million | Annual/continuing | Low volatility (steady decline over time)

Based on San Francisco city data on building type, square footage, and energy usage. Estimated energy usage for commercial buildings with an area of 10,000 square feet or higher converts to approximately 200,000 tons of carbon emissions as a lower bound and 640,000 tons as an upper bound, based on 2019 emissions from commercial buildings. A revenue range is then calculated assuming two options for a tax: $100 per ton or $200 per ton of carbon emissions.

CONTEXT AND JUSTIFICATION

Buildings are the second highest source of emissions in San Francisco. Reducing building sector emissions will require targeted, widespread decarbonization efforts in all types of buildings, from residential (single- and multi-family) to commercial and industrial. Electrifying building systems, appliances, and HVAC and reducing building energy usage will decrease the building sector's greenhouse gas emissions while also generating public health benefits through improved indoor air quality. Building decarbonization efforts are central to achieving several CAP actions, including BO.2-2 and 2-9 through 2-12.

However, decarbonizing the city's buildings will be an expensive endeavor, and many residents will not be able to afford the required upgrades. To ensure that all residents are able to benefit from decarbonization efforts, San Francisco could implement a tax on large commercial buildings in the medium-term (4 to 7 years out), allowing time for

post-pandemic recovery before imposing additional burden on building owners. Taxing large commercial buildings would capture revenue from some of San Francisco's largest employers and building owners. Certain buildings could be exempt from the tax, such as hospitals, buildings owned by public pension funds, or buildings owned by non-profit entities. Revenue from this tax could be directed toward building decarbonization and workforce development investments, with emphasis on equity.

San Francisco already taxes commercial entities for their energy use through the Utility Users Tax. The tax covers natural gas, steam, and electricity along with non-energy utilities. Increasing the tax for emissions-intensive utilities could raise additional revenue for citywide building decarbonization efforts. The current tax rate is 7.5 percent for electricity and gas consumption. Increasing this amount to 10 percent or more could raise tens of millions of dollars in new revenue each year. New York City's Local Law 97 and Boston's Building Emissions Reduction and Disclosure Ordinance provide examples of locally implemented requirements for energy efficiency and greenhouse gas emissions from large commercial buildings, with per-ton fees of over $200 for emissions cap exceedances. CLEE's range presents a conservative estimate based on revenue projections from increases in the Commercial Utility Users Tax combined with projected revenue from a tax per ton of carbon emissions, while accounting for the COVID-19 pandemic's detrimental impacts on San Francisco's commercial building sector.

IMPLEMENTATION

- Implement emissions tax per unit of natural gas or steam consumed. A tax of between roughly $100 and $200 per ton may be appropriate depending on the source of energy consumed
- Clarify which buildings and building owners are subject to the tax
- In collaboration with City Attorney, Board of Supervisors, City staff, determine any limitations on uses for the revenue
- Direct funds to CAP building decarbonization measures, such as such as BO.2-2 and BO.2-9/10/11/12

PRECEDENT/ EXAMPLES

New York Local Law 97 | Boston Building Emissions Reduction and Disclosure Ordinance | SF Commercial Utility Users Tax

E. IMPLEMENTATION ACTIONS

- **Fund or reallocate City staff to accelerate CAP implementation including:**
    - One full-time senior staff member (i.e., direct report to department head) and supporting staff at the lead implementation department for each CAP sector (e.g., SFMTA, SFPUC, Recreation and Parks, etc.) dedicated to:
        - CAP-specific budget development, investment planning, and grant-seeking
        - CAP implementation coordination, working with existing CAP leadership at SF Environment
    - One full-time staff member each at SF Environment and the Office of Resilience and Capital Planning to coordinate cross-sectoral CAP grant-seeking (including opportunities under recent federal infrastructure and climate legislation) and multi-benefit project investment including projects that can achieve both CAP and Hazards and Climate Resilience Plan goals (see Appendix D)
    - Multiple full-time staff members to accelerate and streamline processing of permits required for building electrification, EV charging, housing, and other permit-reliant efforts, including at the Department of Building Inspection, Department of Public Works, and Planning Department. See Appendix E for a complete list of San Francisco City agencies with key CAP implementation roles.
- **Convene a formal cross-departmental committee of City employees** focused on coordinating CAP implementation efforts, such as by aligning grant seeking opportunities across departments and by developing revenue prioritization strategies to ensure successful implementation[d]
- **Fund nonprofits and community-based organizations to lead CAP implementation, technical assistance, and capacity building** in priority communities while requiring coordination with the City to ensure alignment with CAP goals
- **Establish a fund, administered by the Mayor's Office and SF Environment, for corporate and philanthropic partners to provide direct funding for community engagement and educational efforts**, workforce development programs such as CityBuild, and other initiatives to raise the profile of the CAP and build support (subject to the limitations on solicitation of behested payments detailed in City Campaign and Governmental Conduct Code § 3.620)

d An example of all-of-government climate action planning and implementation is the California Climate Action Team. The Climate Action Team is a multi-agency team that coordinates statewide climate efforts, tapping agency leaders to develop, evaluate, and implement climate change emission reduction strategies in accordance with the California Global Warming Solutions Act of 2006. For more information, see https://calepa.ca.gov/climate-action/#cat.

F. EQUITY ACTIONS

- **Create an independent community council to provide equity oversight** of CAP investment, implementation, and revenue generation mechanisms with representatives from City government and community, climate, environmental justice, labor, and small business groups
    - Focus council activities on individual CAP sectors for one- or two-year timeframes, beginning with Building Operations followed by Transportation and Land Use, with sector-specific leaders from City departments invited to participate as relevant
    - Vest the council with substantive decision-making authority by requiring council approval for a designated portion of investment decisions in major GO bonds
    - Compensate community participants for their participation time
- **Structure each of the large-scale GO bond programs to direct a portion of funds to investments through a community-scale competitive grant process** that reflects principles of equitable investment like those in the State's Transformative Climate Communities program
    - Initiate community-led processes to identify priority investments
    - Award funds to proposal(s) most likely to promote equitable, effective investment in CAP strategies
    - Establish preferential criteria for lower-income communities, state-identified Disadvantaged Communities, highest-scoring communities on the San Francisco Environmental Justice Communities Map, and MTC-identified Equity Priority Communities
    - Fund nonprofits and community-based organizations to provide technical assistance to support community application development
    - Include the community council in grant award decision-making
- **Structure large-scale GO bond programs and tax measures to direct a portion of funds to deliver capital improvements** through the CityBuild workforce development program including building retrofits and electrification, EV charger installation and repair, and housing construction
- **Work with priority communities, as identified in the Environmental Justice Communities Map, to identify high-priority projects** that address community needs and support CAP implementation
- **Require racial equity impact assessments for major revenue generation and investment initiatives**, based on the CAP's Racial and Social Equity Assessment Tool, with periodic review and adjustment of implementation strategies as needed to address any equity shortcomings

ABOUT THIS SUMMARY

The San Francisco Department of the Environment engaged the Center for Law, Energy & the Environment to develop this report as part of an initiative to build an equitable revenue generation and implementation strategy for San Francisco's 2021 Climate Action Plan. As part of this initiative, CLEE conducted over fifty expert interviews and two stakeholder convenings with leaders across climate and municipal finance, green infrastructure and resilience investment, environmental justice, community development, San Francisco City departments, and other groups key to equitable climate action in the city and throughout California. This report is the result of that outreach and CLEE's own research and analysis. The recommendations in this report–the first steps in a broader public engagement and refinement process–are intended to guide City leaders as they implement the Climate Action Plan.

To download the full report, visit law.berkeley.edu/funding-sf-cap.

ABOUT THE CENTER FOR LAW, ENERGY & THE ENVIRONMENT

The Center for Law, Energy & the Environment (CLEE) channels the expertise and creativity of the Berkeley Law community into pragmatic policy solutions to environmental and energy challenges. CLEE works with government, business, and the nonprofit sector to help solve urgent problems requiring innovative, often interdisciplinary approaches. Drawing on the combined expertise of faculty, staff, and students across the University of California, Berkeley, CLEE strives to translate empirical findings into smart public policy solutions to better environmental and energy governance systems.

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The Center for Law, Energy & the Environment (CLEE) at UC Berkeley School of Law was engaged by the San Francisco Department of Environment to develop this report for the purpose of identifying and refining viable strategies and tools for obtaining large-scale, long-term funding for San Francisco's Climate Action Plan. This final report documents the findings of CLEE's research, outreach, and engagement processes. It was informed by the many experts and stakeholders acknowledged on the following pages and CLEE's own analysis. It does not necessarily reflect the views of all individual convening participants, expert interviewees, reviewers, or City Departments.

To download the full report, visit law.berkeley.edu/funding-sf-cap.

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