ATTACHMENT 1
GFO APPLICATION FORM

This document provides the Energy Commission with basic information about the Applicant and its subcontractors. Each Applicant must complete, sign and include this attachment in its Application.

Applicant's Legal Name	**Federal ID Number**
Department of the Environment-City and County of San Francisco	94-6000417

Proposed Term	
Start Date	**End Date**
04/01/2021	3/31/2024

Funding			
Amount of Funds Requested	$2,392,473		
Match Funding	$ 1,013,198	**Source of Match:**	X Cash X In-Kind

Title of Project
Implementing San Francisco's Community EV Blueprint and Accelerating EV Adoption

Project Location	
Group 1: Bay Area (*City of Santa Clara, Contra Costa Transportation Authority, and San Francisco Department of the Environment*)	XX
Group 2: Central California (*Kern Council of Governments, Tierra Resource Consultants (Fresno), and City of Sacramento*)	☐
Group 3: Southern California (*City of Long Beach Harbor Department, County of Los Angeles, and Ventura County Regional Energy Alliance*)	☐

Project Description (brief paragraph, see instructions in Application Manual)

San Francisco's Community EV Blueprint Implementation builds upon the work performed and needs identified in Phase I. For Phase II, San Francisco has identified three Phase I strategies as having the greatest near term (4-year) potential to accelerate EV adoption and reduce congestion and greenhouse gas emissions—1) Public Awareness, 2) Charging Infrastructure, and 3) Fleet & Emerging Mobility Electrification. It will continue its public-private partnership with Google to enhance the EV Mapping Tool created in Phase I for use by the public and charging site developers. It will create a short-term (2 year) EV Ombudsperson position to work with relevant city departments to streamline and institutionalize EV charging site development, as well as provide outreach and education. It will work with EVgo to develop at least 3 charging plazas, one will be located in Bayview Hunters Point, a DAC that has identified access to EVs as a need. And, it will launch a pilot project to help app-based delivery workers transition from internal combustion engine vehicles to electric bikes (e-bikes) for deliveries.

California Environmental Quality Act (CEQA) Compliance

1. Would the proposed project be considered a "Project" under CEQA (PRC 21065 and 14 CCR 15378)?
   XX **Yes:** skip to question 2 ☐ No: Explain why proposed project is not considered a "Project" and complete the following:
   Proposed project will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because .
2. If proposed project is considered a "Project" under CEQA, has environmental review been completed?
   ☐ Yes (if so, provide documentation in application)
   XX **No**

Applicant's Project Manager (serves as point of contact for all communications)	
Name:	Lowell Chu, Energy Programs Manager,
Address:	SF Environment 1455 Market #12
City, State, Zip:	San Francsico, CA 94103
Phone/ Fax:	415-355-3700
E-Mail:	lowell.chu@sfgov.org

ATTACHMENT 1
GFO APPLICATION FORM

Applicant Is
☐ Private Company *(including non-profits)*
☐ CA State Agency *(including UC and CSU)*
☐ **Government Entity** *(i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)*

Is Applicant subcontracting any services?	☐ No XX **Yes**
Driver's Seat Cooperative	
Grid Alternatives	
EVgo	
SF Bike Coalition	
TBD – grant agreements with Community based organization(s) for outreach and engagement	

Certifications:

I hereby authorize the California Energy Commission to make any inquiries necessary to verify the information I have presented in my Application.

I hereby authorize the California Energy Commission to obtain business credit reports and make any inquiries necessary to verify and evaluate the financial condition of the applicant.

I hereby certify that this application does not contain any confidential or proprietary information.

I hereby certify to the best of my knowledge and belief that I have read, understand, and do hereby accept the terms and conditions contained in this solicitation, including the provisions of the Agreement Terms and Conditions and, further, I am willing to enter into an agreement with the Commission to conduct the proposed project according to the terms and conditions without negotiation.

I hereby certify any required licenses (such as copyrights or trademarks) applicable to the submitted application are in place.

I hereby certify to the best of my knowledge, and under penalty of perjury, that the information contained in this Application is correct and complete.

Signature of Authorized Representative		Date:	10/23/20

Attachment 2
Exhibit A
SCOPE OF WORK

SF Department of the Environment

TECHNICAL TASK LIST

Task #	Task Name
1	Administration
2	Add Additional Datasets and Functionalities to Mapping Tool
3	Establish the EV-Ombudsperson
4	Open 3 New Public Fast Charging Plazas
5	Electric Bike Program for App-Based Delivery Workers
6	Outreach and Dissemination

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1	Lowell Chu – SFE	-	-
2	Nicole Appenzeller – SFE	Nicole Lombardo – Google	Google & SFPUC
3	Lowell Chu – SFE		EVgo, SFPUC
4	Lowell Chu – SFE		EVgo. PG&E & SFPUC
5	Suzanne Loosen – SFE	Linda Khamoushian – GRID Hays Witt – Driver's Seat	LAFCO, SFMTA, SFPUC, GRID Alternatives, Driver's Seat Cooperative
6	Lowell Chu, Suzanne Loosen, Nicole Appenzeller -SFE	GRID Alternatives, LAFCo, Clean Cities, Community Based Organization	Google, SFPUC

GLOSSARY

Specific terms and acronyms used throughout this scope of work are defined as follows:

Term/ Acronym	Definition
App-based Delivery	A consumer can order food or goods delivered via an application hosted by a third-party company.

Term/ Acronym	Definition
API	Application Program Interface
Beta-testing	A field test of the beta version of a software by testers outside of the company developing it and conducted prior to commercial release.
BEV	Battery Electric Vehicle
Caltrans	California Department of Transportation
CAM	Commission Agreement Manager
CARB	California Air Resources Board
CBO	Community Based Organization
CCA	Community Choice Aggregator
CEQA	California Environmental Quality Act – In San Francisco, environmental impact documents, agendas, and notices are filed with the Office of the County Clerk and are posted for 30 calendar days.
CleanPowerSF	CleanPowerSF is San Francisco's community choice aggregator, and it is a program of the SFPUC.
Clean Transportation Program	Formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program
CPR	Critical Project Review
CPUC	California Public Utilities Commission
CVRP	Clean Vehicle Rebate Project promotes clean vehicle adoption in California by offering rebates of up to $7,000 for the purchase or lease of new, eligible zero-emission vehicles, including electric, plug-in hybrid electric and fuel cell vehicles.
DAC	Disadvantage Communities refers to the areas throughout California which most suffer from a combination of economic, health, and environmental burdens.
DPW	Department of Public Works – It is a public agency with many responsibilities include sidewalk and sidewalk vault maintenance and public street signage production and installation.
E-Bike	Battery-electric Bicycle
EIE	Environmental Insights Explorer
EV	Electric Vehicle

Term/ Acronym	Definition
FCEV	Fuel Cell Electric Vehicle - It is a type of EV that primarily uses high pressure hydrogen stored in a fuel cell, instead of fuel tank, to power the vehicle's electric motor. A fuel cell has higher bursting capacity than a fuel tank.
FTD	Fuels and Transportation Division
GO-Biz	California Governor's Office of Business and Economic Development
ICA	Integration Capacity Analysis is a digital map designed, maintained and updated by PG&E to assist contractors, developers and other stakeholders to find information on potential project sites for distributed energy resources, including EV-charging. The ICA map show hosting capacity, grid needs, and other information about PG&E's electric distribution grid.
ICCT	International Council on Clean Transportation is an independent nonprofit organization that provides technical and scientific analysis to environmental regulators and select local governments.
ICE	Internal Combustion Engine
LAFCO	Local Agency Formation Commission – It is an independent regulatory body that oversee changes to the boundaries of cities and special districts. In San Francisco, LAFCO's primary functions are to provide oversight and research on forming a community choice aggregator. and to conduct special studies regarding municipal services.
LD	Light Duty – LD vehicles include cars, vans, and trucks (classes 1 to 2a).
Mapping Tool	Blueprint Mapping Tool developed in Phase 1 of the EV-Ready Community Blueprint.
MHDEV	Medium- (classes 2b to 6) and Heavy-Duty (classes 7 and 8) Electric Vehicles
PG&E	Pacific Gas and Electric is San Francisco's investors-owned utility.
Recipient	An applicant awarded a grant under a California Energy Commission solicitation.
RCA	Root Cause Analysis – Methodology applied to treat and remedy the institutional problems delaying EV-charging projects.
SFCTA	San Francisco County Transportation Authority – It is a public agency, chartered by the State of California to provide sub-regional transportation planning and programming agency for San Francisco County. The agency primarily works to reduce congestion.

Term/ Acronym	Definition
SFDBI	San Francisco Department of Building Inspections – It is the public regulatory building safety agency responsible for overseeing the effective and efficient enforcement of building, electrical, plumbing, disability access and housing codes for the City and County of San Francisco.
SFMTA	San Francisco Municipal Transportation Authority – It is a public agency created by consolidation of the San Francisco Municipal Railway, the Department of Parking and Traffic, and the Taxicab Commission. The agency oversees public transport, taxis, bicycle infrastructure, pedestrian infrastructure, and paratransit for the City and County of San Francisco.
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission – It is a public agency of the City and County of San Francisco that provides water, wastewater, and electric power services to the city and an additional 1.9 million customers within three San Francisco Bay Area counties.
SFE	SF Environment - Also known as the San Francisco Department of the Environment, SFE is responsible for drafting the City's Climate Action Plan, including the strategies, objectives, and tactics, as well as for tracking emissions and ensuring environmental justice is served.
The City	City & County of San Francisco
TNC	Transportation Network Companies, typically known as Lyft and Uber, but there are others
UAT	User Acceptance Testing is the last phase of software testing to ensure that the software conforms to the engineering specifications, and prior to beta-testing.
Vehicle	A vehicle is a thing that transport people and goods from one location to another on land, such as a car, truck, motorcycle, scooter, motor-driven cycle, or bicycle.
Working Group	A committee or group appointed to study and report on a particular question and make recommendations based on its findings.
ZEV	A zero-emission vehicle is one that does not directly produce atmospheric pollutants. A ZEV can be powered by a number of fuels, include electricity, natural gas, and hybrids fuels.

Background

Assembly Bill (AB) 118 (Nùñez, Chapter 750, Statutes of 2007), created the Clean Transportation Program, formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change, clean air, and alternative energy policies. AB 8 (Perea, Chapter 401, Statutes of 2013) re-authorizes the Clean Transportation Program through January 1, 2024. The Clean Transportation Program has an annual budget of approximately $100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

Problem Statement:

As stated in the Phase 1 Community EV Blueprint, transportation electrification is primarily hindered by a lack of access to convenient public charging. Moreover, TNC vehicles are causing major congestion and increasing emissions in San Francisco.

The Public Fast Charging Problem - EV-adoption is hindered by a lack of access to convenient public charging infrastructure. The City is falling behind in expanding public charging infrastructure, particularly fast-chargers. ICCT published a report in September, 2020, that indicates the City needs 156 fast-chargers in order to meet its 2030 EV goal of 100% of new passenger vehicle registrations. To date, the City has 39 public fast-chargers, averaging three new charging installation per year. In high density cities, like San Francisco, private charging options are limited, and EV-drivers must rely on public charging.

- **INSTITUTIONAL** - The construction of public fast chargers is slowed by myriad institutional issues. Zoning and permitting add significant costs and time delay to proposed projects. Currently, charging providers do not have a single point of contact with the City, and must engage with multiple staff, across several agencies, many of whom are new the world of EVs.

- **GRID**- The construction of public fast chargers can be complicated by various grid-related issues. A developer may lack critical information about grid hosting capacity for potential charging sites and must rely on the utility technicians to determine available capacity. Where capacity is insufficient, upgrades may be necessary, increasing developer costs. The process for applying for utility interconnections can also be complicated by the fact that San Francisco's grid is managed by both PG&E and SFPUC, adding delays to a project schedule that result in mounting soft costs for developers. Finally, fast charger projects have a high-potential of unexpected issues, not only because of their power-demand, but also because the chargers and ancillary equipment require a large amount of space thereby impacting land-use.

- **ECONOMICS** - The construction of public fast chargers is expensive because of their upfront costs. Prospecting for land and/or site host is a tedious, time-consuming and expensive process. Once the site is identified, the charging provider is faced with a protracted process to evaluate electrical capacity and to identify interconnection issues such as moratorium on street excavation and right-of-way disputes. Until institutional challenges are addressed, public fast charging costs will remain prohibitively high, delaying implementation by businesses who would otherwise be interested in participating.

The Emerging Mobility Problem - The operation of TNC and food delivery vehicles is a major cause of congestion in San Francisco. In 2018, the SFCTA found that TNC vehicles accounted for approximately 50% of the rise in congestion in San Francisco between 2010 and 2016. TNCs also caused the greatest increases in congestion in the densest parts of the city - up to 73% in the downtown financial district - and along many of the city's busiest corridors.

Further, as the number of TNC and food delivery vehicles and their miles driven on City streets increase, emissions and the likelihood for traffic accidents will rise. Emissions from the transportation sector increased 1% from 2017 to 2018. Overall, this sector was responsible for nearly half of the City's 2018 emissions. Additionally, increased TNC and food delivery operations increase the potential for accidents. This is because the vehicle accident rate calculation is dependent on mileage driven for a given period of time plus the number of vehicles.

- **MARKET** - Few app-based delivery workers know about the benefits of e-bikes. E-bikes have many innovative and practical characteristics that benefit gig-workers: thoughtfully integrated batteries and drivetrain to supplement human motive power, avoidance of congestion and parking, and reduction in expenditure, including maintenance. According to a recent report by UC Santa Cruz, few app-based delivery drivers are aware of these benefits, however, once they learn more, are interested in the potential.

- **ECONOMICS** - E-bikes are too expensive for many app-based delivery workers. A report in 2019 found that a app-based delivery worker earned an average of $624 per month. This low wage forces many to work multiple gigs in order to maintain their livelihoods. With new e-bike prices ranging from $1,000 to $10,000, despite the interest, even at the low end of the price spectrum, e-bikes are cost-prohibitive to many app-based delivery workers.

Goals of the Agreement:

The goal of the Agreement is to successfully implement three strategies from Phase 1 of the EV Ready Community Blueprint—Increase Public Awareness, Expand Charging Infrastructure and accelerate Mode Shift. More specifically, San Francisco will to build three public fast-charging plazas (one in or adjacent to a DAC), find additional sites for more plazas and installations, get delivery-app workers out of cars and onto e-bikes to make app-deliveries and create processes to streamline development of infrastructure while increasing public awareness and participation.

Objectives of the Agreement:

The objectives of this Agreement are to:

A. Reduce time spent on siting public fast-charger installations and capacity analysis by 20% and their associated costs by 10%.

A. Reduce time spent on permitting, planning, and interconnection by 20%, and their associated costs by 10%.

B. Install 200 Level 2 and 50 DCFC across the City, with a focus on underutilized sites and underserved communities

C. Complete three public fast-charging plazas, with one located near or in a DAC.

D. Identify and recruit under-utilized or vacant lots and petroleum stations for more public fast-charging plazas and installations, prioritizing those near MUDs and DAC/DAC-adjacent and major thoroughfares.

E. Establish a pilot program to shift app-based workers, particularly those driving for TNCs, from vehicles to e-bikes for deliveries, to determine if e-bike operation improves efficiency, improves worker safety, reduces demand on the curb, reduces GHG emissions, VMT, and vehicle congestion, and creates workforce development opportunities.

F. Update the "EV-Ready Community Blueprint Playbook" with new best practices, findings, analysis, and Mapping Tool. The Playbook will instruct Bay Area jurisdictions and beyond, on how to replicate and scale the implementation of transportation electrification initiatives.

G. Disseminate information about the project to stakeholders, including other municipalities.

TASK 1 ADMINISTRATION

Task 1.1 Attend Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement. The CAM shall designate the date and location of this meeting and provide an agenda to the Recipient prior to the meeting.

The Recipient shall:

- Attend a "Kick-Off" meeting with the Commission Agreement Manager, the Grants Officer, and a representative of the Accounting Office. The Recipient shall bring its Project Manager, Agreement Administrator, Accounting Officer, and others designated by the Commission Agreement Manager to this meeting.
- Discuss the following administrative and technical aspects of this Agreement:
    - Agreement Terms and Conditions
    - Critical Project Review (Task 1.2)
    - Match fund documentation (Task 1.6) No reimbursable work may be done until this documentation is in place.
    - Permit documentation (Task 1.7)
    - Subcontracts needed to carry out project (Task 1.8)
    - The CAM's expectations for accomplishing tasks described in the Scope of Work
    - An updated Schedule of Products and Due Dates
    - Monthly Progress Reports (Task 1.4)

- Technical Products (Product Guidelines located in Section 5 of the Terms and Conditions)
- Final Report (Task 1.5)

Recipient Products:

- Updated Schedule of Products
- Updated List of Match Funds
- Updated List of Permits

Commission Agreement Manager Product:

- Kick-Off Meeting Agenda

Task 1.2 Critical Project Review (CPR) Meetings

CPRs provide the opportunity for frank discussions between the CEC and the Recipient. The goal of this task is to determine if the project should continue to receive CEC funding to complete this Agreement and to identify any needed modifications to the tasks, products, schedule or budget.

The Commission Agreement Manager may schedule CPR meetings as necessary, and meeting costs will be borne by the Recipient.

Meeting participants include the CAM and the Recipient and may include the Commission Grants Officer, the Fuels and Transportation Division (FTD) program lead, other CEC staff and Management as well as other individuals selected by the CAM to provide support to the CEC.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the CEC, but they may take place at another location.
- Send the Recipient the agenda and a list of expected participants in advance of each CPR. If applicable, the agenda shall include a discussion on both match funding and permits.
- Conduct and make a record of each CPR meeting. Prepare a schedule for providing the written determination described below.
- Determine whether to continue the project, and if continuing, whether or not modifications are needed to the tasks, schedule, products, and/or budget for the remainder of the Agreement. Modifications to the Agreement may require a formal amendment (please see section 8 of the Terms and Conditions). If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Lead Commissioner for Transportation for his or her concurrence.

- Provide the Recipient with a written determination in accordance with the schedule. The written response may include a requirement for the Recipient to revise one or more product(s) that were included in the CPR.

The Recipient shall:

- Prepare a CPR Report for each CPR that discusses the progress of the Agreement toward achieving its goals and objectives. This report shall include recommendations and conclusions regarding continued work of the projects. This report shall be submitted along with any other products identified in this scope of work. The Recipient shall submit these documents to the CAM and any other designated reviewers at least 15 working days in advance of each CPR meeting.
- Present the required information at each CPR meeting and participate in a discussion about the Agreement.

CAM Products:

- Agenda and a list of expected participants
- Schedule for written determination
- Written determination

Recipient Product:

- CPR Report(s)Task 1.3 Final Meeting

The goal of this task is to closeout this Agreement.

The Recipient shall:

- Meet with CEC staff to present the findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement.

  This meeting will be attended by, at a minimum, the Recipient, the Commission Grants Office Officer, and the Commission Agreement Manager. The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be two separate meetings at the discretion of the Commission Agreement Manager.

  The technical portion of the meeting shall present an assessment of the degree to which project and task goals and objectives were achieved, findings, conclusions, recommended next steps (if any) for the Agreement, and recommendations for improvements. The Commission Agreement Manager will determine the appropriate meeting participants.

  The administrative portion of the meeting shall be a discussion with the Commission Agreement Manager and the Grants Officer about the following Agreement closeout items:

  - What to do with any equipment purchased with CEC funds (Options)

  - CEC's request for specific "generated" data (not already provided in Agreement products)
  - Need to document Recipient's disclosure of "subject inventions" developed under the Agreement
  - "Surviving" Agreement provisions
  - Final invoicing and release of retention
- Prepare a schedule for completing the closeout activities for this Agreement.

Products:

- Written documentation of meeting agreements
- Schedule for completing closeout activities

Task 1.4 Monthly Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement on time and within budget.

The objectives of this task are to summarize activities performed during the reporting period, to identify activities planned for the next reporting period, to identify issues that may affect performance and expenditures, and to form the basis for determining whether invoices are consistent with work performed.

The Recipient shall:

- Prepare a Monthly Progress Report which summarizes all Agreement activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due to the Commission Agreement Manager within 10 days of the end of the reporting period. The recommended specifications for each progress report are contained in Section 6 of the Terms and Conditions of this Agreement.
- In the first Monthly Progress Report and first invoice, document and verify match expenditures and provide a synopsis of project progress, if match funds have been expended or if work funded with match share has occurred after the notice of proposed award but before execution of the grant agreement. If no match funds have been expended or if no work funded with match share has occurred before execution, then state this in the report. All pre-execution match expenditures must conform to the requirements in the Terms and Conditions of this Agreement.

Product:

- Monthly Progress Reports

Task 1.5 Final Report

The goal of the Final Report is to assess the project's success in achieving the Agreement's goals and objectives, advancing science and technology, and providing energy-related and other benefits to California.

The objectives of the Final Report are to clearly and completely describe the project's purpose, approach, activities performed, results, and advancements in science and technology; to present a public assessment of the success of the project as measured by the degree to which goals and objectives were achieved; to make insightful observations based on results obtained; to draw conclusions; and to make recommendations for further projects and improvements to the FTD project management processes.

The Final Report shall be a public document. If the Recipient has obtained confidential status from the CEC and will be preparing a confidential version of the Final Report as well, the Recipient shall perform the following activities for both the public and confidential versions of the Final Report.

The Recipient shall:

- Prepare an Outline of the Final Report, if requested by the CAM.
- Prepare a Final Report following the latest version of the Final Report guidelines which will be provided by the CAM. The CAM shall provide written comments on the Draft Final Report within fifteen (15) working days of receipt. The Final Report must be completed at least 60 days before the end of the Agreement Term.
- Submit one bound copy of the Final Report with the final invoice.

Products:

- Outline of the Final Report, if requested
- Draft Final Report
- Final Report

Task 1.6 Identify and Obtain Matching Funds

The goal of this task is to ensure that the match funds planned for this Agreement are obtained for and applied to this Agreement during the term of this Agreement.

The costs to obtain and document match fund commitments are not reimbursable through this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient may utilize match funds for this task. Match funds shall be spent concurrently or in advance of CEC funds for each task during the term of this Agreement. Match funds must be identified in writing and the associated commitments obtained before the Recipient can incur any costs for which the Recipient will request reimbursement.

The Recipient shall:

- Prepare a letter documenting the match funding committed to this Agreement and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If no match funds were part of the proposal that led to the CEC awarding this Agreement and none have been identified at the time this Agreement starts, then state such in the letter. If match funds were a part of the proposal that led to the CEC awarding this Agreement, then provide in the letter a list of the match funds that identifies the:
    - Amount of each cash match fund, its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied.
    - Amount of each in-kind contribution, a description, documented market or book value, and its source, including a contact name, address and telephone number and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
- Provide a copy of the letter of commitment from an authorized representative of each source of cash match funding or in-kind contributions that these funds or contributions have been secured. For match funds provided by a grant a copy of the executed grant shall be submitted in place of a letter of commitment.
- Discuss match funds and the implications to the Agreement if they are reduced or not obtained as committed, at the kick-off meeting. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
- Provide the appropriate information to the Commission Agreement Manager if during the course of the Agreement additional match funds are received.
- Notify the Commission Agreement Manager within 10 days if during the course of the Agreement existing match funds are reduced. Reduction in match funds must be approved through a formal amendment to the Agreement and may trigger an additional CPR meeting.

Products:

- A letter regarding match funds or stating that no match funds are provided
- Copy(ies) of each match fund commitment letter(s) (if applicable)
- Letter(s) for new match funds (if applicable)
- Letter that match funds were reduced (if applicable)

Task 1.7 Identify and Obtain Required Permits

The goal of this task is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track.

Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement. Although the CEC budget for this task will be zero dollars, the Recipient shall budget match funds for any expected expenditures associated with obtaining permits. Permits must be identified in writing and obtained before the Recipient can make any expenditure for which a permit is required.

The Recipient shall:

- Prepare a letter documenting the permits required to conduct this Agreement and submit it to the Commission Agreement Manager at least 2 working days prior to the kick-off meeting. If there are no permits required at the start of this Agreement, then state such in the letter. If it is known at the beginning of the Agreement that permits will be required during the course of the Agreement, provide in the letter:
    - A list of the permits that identifies the:
        - Type of permit
        - Name, address and telephone number of the permitting jurisdictions or lead agencies
    - The schedule the Recipient will follow in applying for and obtaining these permits.
- Discuss the list of permits and the schedule for obtaining them at the kick-off meeting and develop a timetable for submitting the updated list, schedule and the copies of the permits. The implications to the Agreement if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in the Progress Reports and will be a topic at CPR meetings.
- If during the course of the Agreement additional permits become necessary, provide the appropriate information on each permit and an updated schedule to the Commission Agreement Manager.
- As permits are obtained, send a copy of each approved permit to the Commission Agreement Manager.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the Commission Agreement Manager within 5 working days. Either of these events may trigger an additional CPR.

Products:

- Letter documenting the permits or stating that no permits are required
- A copy of each approved permit (if applicable)

- Updated list of permits as they change during the term of the Agreement (if applicable)
- Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)
- A copy of each final approved permit (if applicable)

Task 1.8 Obtain and Execute Subcontracts

The goal of this task is to ensure quality products and to procure subcontractors required to carry out the tasks under this Agreement consistent with the Agreement Terms and Conditions and the Recipient's own procurement policies and procedures. It will also provide the CEC an opportunity to review the subcontracts to ensure that the tasks are consistent with this Agreement, and that the budgeted expenditures are reasonable and consistent with applicable cost principles.

The Recipient shall:

- Manage and coordinate subcontractor activities.
- Submit a draft of each subcontract required to conduct the work under this Agreement to the Commission Agreement Manager for review.
- Submit a final copy of the executed subcontract.
- If Recipient decides to add new subcontractors, then the Recipient shall notify the CAM.

Products:

- Draft subcontracts
- Final subcontracts

TASK 2 – ADD ADDITIONAL DATASETS, FUNCTIONALITIES, AND FEATURES TO MAPPING TOOL

The goal of this task is to add new datasets and functionalities to the Blueprint Mapping Tool to inform Tasks 3 and 4.

The Recipient shall:

- Evaluate and scrub electrical grid, traffic, socio-economic and under-utilized/vacant lots datasets for integration into the mapping tool.
- Integrate clean datasets into the Blueprint Mapping Tool, and establish a process and intervals to refresh data.
- Develop and enable new functionalities:
    a. Enable public-users to nominate and upvote sites or locations for EV charging via uploading photographs, location description, or address.

b. Enable business and property owners to express interest in becoming a site-hosts for EV charging by uploading contact and locational information for follow-up.

- Establish open data-sourcing model to bridge connection with EV charging providers to direct inbound site-leads, from public and business/property owners to and establish a process for following up.
- Conduct UAT (testing performed by the end users to verify/accept the software system before moving to beta-tests) and then beta-tests with limited users from the public, the ombudsperson, the SFPUC, and EVgo.
- Move Blueprint Mapping Tool from prototype to production in Google's EIE Labs.
- Draft a workplan to bring the Blueprint Mapping Tool to the public.
- Move the Blueprint Mapping Tool from EIE Labs to the core EIE site and include functionality for select cities.

Products:

- Beta-version of prototype with Datasets and Enabled Functionalities
- Product-to-Market Plan
- Production-version of the Blueprint Mapping Tool

TASK 3 – ESTABLISH THE EV-OMBUDSPERSON

The goal of this task is to increase public awareness, eliminate institutional barriers to developing public fast-charger installation and identify new sites and hosts for additional fast-chargers so that up to 200 Level 2 and 50 DCFC are installed or in progress by the end of the grant.

The Recipient shall:

Recruit and fill a full-time ombudsperson position. Responsibilities include, but not limited to, the following:

1. Represent Public Interests – The ombudsperson shall manage the EV Help Desk by answering EV-related inquiries from the public. In this capacity, the ombudsperson also advocates for the installation of new charging infrastructure in DACs, low-income communities, and areas where constituents have upvoted via the Mapping Tool.
2. Represent Charging Providers Interests – The ombudsperson shall act as the City's single-point-of-contact for new charging projects, particularly focusing on large-scale deployment of Level 2 and fast-chargers. The ombudsperson shall assist the charging providers by

breaking down institutional barriers, resulting in expedited zoning and permitting times and reduced project costs. The ombudsperson will:

a. Work with DBI and Planning to establish best-in-class permit streamlining for all levels of EV charging stations (Level 1, Level 2, and DCFC)

b. Incorporate best practices from GO-Biz's Electric Vehicle Charging Station Permitting Guidebook including an updated website, standardized timelines, pre-application meetings, and concurrent reviews

c. Establish a baseline of challenges confronted by charging providers and compile them into a summary report.

d. Complete an Root Cause Analysis (RCA) Report for each challenge. Each RCA includes, but is not limited to, the following:

   i. Description of the Challenge

   ii. Impact Level (on project advancement)

   iii. Likely Root Cause and Responsible Party / Agency

   iv. Mitigation Strategies

   v. Potential Risks (caused by the strategies)

   vi. Recommendation and Responsible Party / Agency

   vii. Measure of Success

   viii. Implementation Schedule

e. Present recommendation(s) to the responsible party / agency, including PG&E, and develop a timeline for implementation / resolution.

f. Establish a system of communication, such as monthly check-ins, with the City's utility providers: PG&E and SFPUC.

g. Coordinate with DPW to ensure compliance with Caltrans EV-charging signage requirements.

3. Reduce the upfront cost of project development:

   a. Conduct user acceptance testing (UAT), beta-tests, and provide feedback.

   b. Collaborate with the SFPUC and EVgo, conduct beta-testing of the Mapping Tool by creating a Citywide Fast-charging Site Plan. The Site Plan includes, but not limited to, the following:

      i. Geo-location Data - address, parcel block and lot identifications

      ii. Electrical Capacity and Interconnection Accuracy

      iii. Hardware Upgrades Required

iv. Quantity of Charging Stations and Ports

v. Develop a process to follow-up with sites upvoted by the public and businesses and properties interested in becoming charging site-host

vi. Field validate the sample results from the Mapping Tool

c. Develop a system to track all public EV-charging installation projects. The tracking system includes, but is not limited to, the following:
   i. Geo-location – address, block and lot
   ii. Project Milestone to indicate the various phases of the project, from project development to completion
   iii. Quantity of Charging Stations and Ports
   iv. Project Lead and Team Members and Contact Information
   v. Issues Log and Follow-up Date(s)
   vi. Anticipated Completion Date
   vii. Estimated Initial and Final Project Costs, where available – installation labor, engineering, legal, admin, permitting, material (hardware), software, signage, and etc.

d. Implement feedback from charging station providers to improve process.

4. Provide as-needed technical assistance to charging-providers to facilitate CEQA-compliance and notices.

5. Identifying additional site hosts:

a. Provide as-needed support to SFO and the Port of San Francisco in an effort to initiate fast-charging projects at those locations

6. Liaise between the SFPUC, PG&E, EV charging providers and other stakeholders to explore a smart charging pilot program that informs tactics to balance the electrical grid.

7. Develop a dynamic guidebook for internal city stakeholders and “sunset” the ombudsperson position after two years.

8. Assist with the development and maintenance of a “one-stop shop” website to assist charging providers and the public with EV charging project development.

Products:

- Challenges Summary Report
- RCA Report
- One-stop Shop Website
- Guidebook for City Stakeholders

TASK 4 - OPEN 3 PUBLIC FAST-CHARGING PLAZAS
The goal of this task is to open three public fast-charging plazas, with one installed in or near a DAC.

The Recipient shall:

- Follow the "Public Engagement Plan" from Phase 1 and conduct three community meetings to engage stakeholders prior to project development phase to bring in community organizations, residents, and businesses potentially impacted by the plazas.
  - Part of this activities includes securing at least one community based organization to assist with outreach and engagement.
- Incorporate feedback into planning.
- Use product from Task 2 to expedite site identification and conduct field verification.
- Use processes and products from Task 3 to expedite permitting, zoning, interconnection processes.
- Develop a Summary Report demonstrating how products from Task 2 and 3 improved charging plaza development in cost and time reductions.

Products:

- Documentation of Community Meetings
- List and description of selected sites
- Summary Report documenting Charging Plaza Development.

TASK 5 – ELECTRIC BIKE PROGRAM FOR APP-BASED DELIVERY WORKERS

The Recipient shall:

Finalize program design and implementation plan with key partners to include:

- Coordinating committee schedule and communications plan
- Procurement and asset management program for e-bikes and participant safety equipment
- Participant recruitment plan and participation agreements
- Data collection and participant survey elements and schedule
- Recruitment of local bike shop to provide maintenance services
- Bike safety training plan and schedule

Program Launch

- Recruit Program participants: 50% e-bike and 50% car based
- Launch Cohort #1
    - Host kick off meeting for participants
    - Provide bike safety training and two week test period for participants
    - Administer pre-program survey
    - Data collection period using Driver's Seat app for cohort #1
    - Evaluate and adjust data collection
    - Administer participant survey #2
- Launch Cohort #2
    - Host kick off meeting for participants
    - Provide bike safety training and two week test period for participants
    - Administer pre-program survey
    - Data collection period using Driver's Seat app for cohort #2
    - Administer participant surveys at 6 and 12 months
- Transfer title of bikes to participants upon completion of surveys
- Complete final project report and case study:
    - Review, analyze, synthesize study results
    - Identify challenges and best practices
    - Recommend incentive levels for future programs

Products:

- Implementation Plan
- Documentation of Cohort Kick off Meeting (agenda, notes, attendees)
- Participant surveys
- Final Project Report

TASK 6 – OUTREACH AND DISSEMINATION

The Recipient shall:
Increase public awareness of EVs and mode shift and disseminate information about the project to a range of stakeholders

- Conduct outreach via SFCCC to promote EVs and mode shift, including coordinating EV 101 workshops.

- Promote the use of the Blueprint Mapping Tool's crowd-sourcing feature by the public through SF Environment's robust social media network, as well as through partners
- Work with Greenstacks, the collaboration between SF Environment and SF Public Libraries to promote the Mapping Tool and provide webinars and other activities to increase awareness of the accessibility of EVs to all residents of the City.
- Update San Francisco's EV Ready Playbook to include:
  - The updated Mapping Tool
  - Guidelines for implementing an Ombudsperson process to streamline charging station installations and promote EVs, focusing on replicating processes (since some municipalities may not have the resources or inclination to create a new position, we are focusing on how to replicate the process rather than the position).
  - Findings from research, reports, and studies conducted.
- Develop case study and presentation, to disseminate information about the project, and in particular ensure that other municipalities access the Mapping Tool.
- Develop case study and presentation on e-bike pilot results to help public- and private-sector actors improve and scale bike delivery programs.
- Organize at least three webinars to share case studies and results with California local governments and community choice aggregators, individually and through networks such as the Clean Cities Coalitions, Green Cities CA, Urban Sustainability Directors Network, C40, and California Community Choice Association.

Products:

- Case study and presentation for Blueprint Mapping Tool
- Case study and presentation for e-bike program
- Final, Updated EV Ready Playbook
- Documentation of Webinars

Schedule of Products and Due Dates

Task Number	Task Name	Product(s)	Due Date
1.1	**Attend Kick-off Meeting**		
		Updated Schedule of Products	2 days before the kick-off meeting
		Updated List of Match Funds	2 days before the kick-off meeting
		Updated List of Permits	2 days before the kick-off meeting
		Kick-Off Meeting Agenda (CEC)	2 days before the kick-off meeting
1.2	**Critical Project Review Meetings**		
	1st CPR Meeting	CPR Report	TBD Commission
		Written determination (CEC)	TBD Commission
1.3	**Final Meeting**		
		Written documentation of meeting agreements	
		Schedule for completing closeout activities	
1.4	**Monthly Progress Reports**		
		Monthly Progress Reports	The 10th calendar day of each month during the approved term of this Agreement
1.5	**Final Report**		
		Final Outline of the Final Report	1/30/2024
		Draft Final Report (no less than 60 days before the end term of the agreement)	**3/30/2024**
		Final Report	5/30/2024
1.6	**Identify and Obtain Match Funds**		
		A letter regarding match funds or stating that no match funds are provided	3/30/2021
		Copy(ies) of each match fund commitment letter(s) (if applicable)	3/30/2021
		Letter(s) for new match funds (if applicable)	Within 10 days of identifying new match funds
		Letter that match funds were reduced (if applicable)	Within 10 days of identifying reduced funds
1.7	**Identify and Obtain Required Permits**		
		Letter documenting the permits or stating that no permits are required	3/30/2021
		A copy of each approved permit (if applicable)	Within 10 days of receiving each permit
		Updated list of permits as they change during the term of the Agreement (if applicable)	Within 10 days of change in list of permits

	Updated schedule for acquiring permits as changes occur during the term of the Agreement (if applicable)	Within 10 days of change in schedule for obtaining permits
1.8	**Obtain and Execute Subcontracts**	
	Letter describing the subcontracts needed, or stating that no subcontracts are required	3/30/2021
	Draft subcontracts	15 days prior to the scheduled execution date
	Final subcontracts	to
2	**ADD ADDDITIONAL DATASETS AND FUNCTIONALITIES TO MAPPING TOOL**	
	Beta-version of prototype with Datasets and Enabled Functionalities	7/30/2021
	Product-to-Market Implementation Plan	**10/30/2021**
	Production-version of Mapping Tool	12/30/2021
3	**ESTABLISH THE EV OMBUDSPERSON**	
	Challenges Summary Report	7/30/2021
	RCA Report	9/30/2021
	One Stop Shop Website	12/30/2021
	Draft Guidebook for internal stakeholders	9/30/2022
4	**OPEN THREE NEW PUBLIC FAST CHARGING PLAZAS**	
	Documentation of Community Meetings	9/30/2021
	List and Description of Selected Sites	**1/30/2022**
	Summary Report Documenting Charging Plaza Development	**9/30/2023**
5	**ELECTRIC BIKE PROGRAM FOR APP-BASED DELIVERY WORKERS**	
	Final Implementation Plan	6/30/2021
	Cohort Kick Off Meeting agenda, notes, and list of attendees	8/30/2021
	Draft of participant surveys	**1/30/2022**
	Final Project Report	3/30/2023
6	**OUTREACH AND DISSEMINATION**	
	Documentation of EV 101 Workshops	12/30/2021
	Case Study and Presentation for Mapping Tool	6/30/2022
	Case Study and Presentation for Ebike Program	**4/30/2023**
	Final Updated EV Ready Playbook	**9/30/2023**
	Documentation of Dissemination Webinars	**3/30/2024**

Attachment 5

General Budget Worksheet Instructions

1. A separate set of complete budget forms, including the full set of worksheets, is required for the Contractor/Recipient and for each subcontract containing: 1) $100,000 or more of Energy Commission funds; or 2) 25% or more of the total Energy Commission funds requested.
2. For each worksheet, only identify the expenses to be incurred by the organization to which the budget forms pertain.
3. Only complete information for non-shaded cells; all other information will be automatically filled or calculated.
4. When more rows are required, copy an existing row and "insert the copied cells" between existing rows to keep template formulas accurate.
5. Budgeted Energy Commission funds and match share must be in whole dollars. Rates (labor, fringe, indirect or profit) and unit costs for materials/equipment must be in dollars and cents (two decimal places only).
6. Do not create new formulas in the tables as they may cause rounding discrepancies.
7. Each worksheet has specific instructions located below the form.
8. All rates (labor, fringe, indirect, and profit) included in these forms are caps, or the maximum amount allowed to be billed. The Energy Commission will only reimburse for actual expenses incurred, not to exceed the rates specified in these forms.
9. All costs (including indirect costs) must adhere to the Agreement Terms and Conditions, Generally Accepted Accounting Principles (GAAP) and the Office of Management and Budget (OMB) Circular or Federal Acquisition Regulations applicable to your organization.
10. Never delete Rows, Columns or Worksheets. Leave unused cells blank.

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Attachment 5

Category Budget
(see instructions)

Name of Organization	GRID Alternatives Bay Area

Cost Category	Energy Commission Reimbursable Share	Match Share	Total
Direct Labor	$ 198,283	$ -	$ 198,283
Fringe Benefits	$ 48,103	$ -	$ 48,103
Total Labor	**$ 246,386**	**$ -**	**$ 246,386**
Travel	$ 3,600	$ -	$ 3,600
Equipment	$ 70,000	$ -	$ 70,000
Materials/Miscellaneous	$ 10,000	$ -	$ 10,000
Subcontractors	$ 97,000	$ -	$ 97,000
Total Other Direct Costs	**$ 180,600**	**$ -**	**$ 180,600**
Indirect Costs	$ 42,699	$ -	$ 42,699
Profit (not allowed for grant recipients)	$ -	$ -	$ -
Total Indirect and Profit	**$ 42,699**	**$ -**	**$ 42,699**
Grand Totals	***$ 469,684***	***$ -***	**$ 469,684**

Category Budget Instructions

Attachment 5

1. Insert name of the organization (either Contractor/Recipient or Subcontractor). All subcontracts containing: a) $100,000 or more of Energy Commission funds; or b) 25% or more of the total Energy Commission funds awarded must complete a full set of budget forms.
2. Check appropriate box to identify whether the budget forms are for the Contractor/Recipient or a Subcontractor.
3. Check appropriate box(es) to identify whether entity is a small business, micro business, and/or Disabled Veteran Business Enterprise.
4. No other input is necessary on this page as other cells self-populate.

Attachment 5

Direct Labor (Unloaded)

(see instructions)

GRID Alternatives Bay Area

Hourly Rates

Employee Name	Job Classification / Title	Maximum Labor Rate ($ per hour)	# of Hours	Commission Funds	Match Share	Total
Arthur Bart-Williams	Executive Director	$ 57.69	250	$ 14,423	$ -	**$ 14,423**
Cynthia Ibarra	Clean Mobility Project Manager	$ 36.05	2,000	$ 72,100	$ -	**$ 72,100**
Vanessa Morelan	Clean Mobility Project Manager	$ 36.05	2,000	$ 72,100	$ -	**$ 72,100**
Linda Khamoushian	Director of Shared Mobility	$ 52.88	750	$ 39,660	$ -	**$ 39,660**
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
Hourly Direct Labor Totals				**$ 198,283**	**$ -**	**$ 198,283**

Monthly Salary Rates

Employee Name	Job Classification / Title	Maximum Labor Rate ($ per month)	# of Months	Commission Funds	Match Share	Total
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
		$ -		$ -	$ -	**$ -**
Monthly Direct Labor Totals				**$ -**	**$ -**	**$ -**

Attachment 5

	Energy Commission Funds	Match Share	Total
Direct Labor Grand Totals	**$ 198,283**	**$ -**	**$ 198,283**

Direct Labor (Unloaded) Instructions

1. Insert employee name(s) that will be charged as direct labor as either a reimbursed cost or match share. (optional, but recommended)
2. Insert employee(s) job classification/title. (required)
3. Insert the maximum hourly or monthly labor rate (unloaded) by employee job classification/title to be billed during the approved term of the agreement. This is the highest salary or wage rate that is actually paid to the employee before the application of fringe benefits, indirect costs or profit.
4. Complete the appropriate table based on your organization's standard accounting practices. If an employee is paid based on an hourly rate, use the hourly table. If an employee is paid based on a monthly salary, use the monthly table.
5. The rates in these forms are rate caps, or the maximum amount allowed to be billed for the entire term of the agreement. The Energy Commission will only reimburse for actual direct labor expenses incurred, not to exceed the rates specified in these forms. Rates must include dollars and cents (two decimal places only).
6. Insert the approximate number of hours or months to be worked by employee or job classification/title including for all "to be determined" (TBD) employees. The Energy Commission will only reimburse for actual time worked. The Contractor/Recipient or Subcontractor must maintain auditable documentation of actual time worked hourly, daily, weekly or monthly using standard accounting practices.
7. Insert the dollar amount by employee or job classification/title to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount by employee/classification to be charged as match share. ***Whole dollars only.***
9. Confirm totals across and down are accurate.
10. Totals on each line must be less than or equal to Maximum Labor Rate multiplied by the Number of Hours.

Attachment 5

Fringe Benefits
(see instructions)

GRID Alternatives Bay Area

Fringe Benefit Base Description (Employee or Job Classification/Title)	Max. Fringe Benefit Rate (%)	Direct Labor Costs ($)	Energy Commission Funds	Match Share	Total
Executive Director	24.26%	$ 14,423	$ 3,499	$ -	**$ 3,499**
Clean Mobility Project Manager	24.26%	$ 144,200.00	$ 34,983	$ -	**$ 34,983**
Director of Shared Mobility	24.26%	$ 39,660.00	$ 9,622	$ -	**$ 9,622**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
	0.00%	$ -	$ -	$ -	**$ -**
Fringe Benefit Totals		**$ 198,283**	**$ 48,103**	**$ -**	**$ 48,103**

Fringe Benefits Instructions

1. Insert the fringe benefit (FB) base description. The base is typically the direct labor costs that are multiplied by the fringe benefit rate to arrive at the fringe benefit cost (FB base multiplied by the FB rate = FB cost).
2. Organizations that charge the same fringe benefit rate for all classifications should insert "All Classifications" under the base description and complete the top line only. If more than one fringe benefit rate is utilized, use additional lines and adequately describe (by employee or classification) the base for each fringe benefit rate charged.
3. Insert the maximum fringe benefit rate to be charged during the approved term of the agreement. Round percentages **up** to the nearest hundreth (two decimal places). For example, manually enter 20.26% instead of 20.2511%
4. The fringe benefit rates in these forms are rate caps, or the maximum amount allowed to be billed. The Energy Commission will only reimburse for actual fringe benefit expenses incurred, not to exceed the rates specified in these forms.
5. Insert the direct labor costs allocable to each fringe benefit rate. These costs must be consistent with the costs identified on the Direct Labor worksheet. The total for the Direct Labor Costs column on this worksheet must match the Grand Total for all Direct Labor (Energy Commission Funds and Match Share) on the Direct Labor worksheet.
6. Insert the dollar amount of fringe benefit costs to be reimbursed with Energy Commission funds. ***Whole dollars only.***
7. Insert the dollar amount of fringe benefit costs to be charged as match share. ***Whole dollars only.***
8. Totals on each line must be less than or equal to Maximum Fringe Benefit Rate multiplied by Direct Labor Costs.
9. The Energy Commission expects to only reimburse fringe benefit costs which are allocable to the Fringe Benefit base costs reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the direct labor, the Energy Commission expects to only reimburse up to 45% of the fringe benefit costs.
10. Confirm all totals across and down are accurate.

Attachment 5

Travel
(see instructions)

GRID Alternatives Bay Area

Task No.	Traveler's Name and/or Classification	Departure and Destination	Trip Purpose	Energy Commission Funds	Match Share	Total
	Clean Mobility Project Manager	To Be Determined (TBD)	Travel to/from client visits and project implementation meetings	$ 3,600	$ -	**$ 3,600**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
			Total:	**$ 3,600**	**$ -**	**$ 3,600**

Travel Instructions

1. All travel costs are reimbursed at state rates except in agreements between the Energy Commission and a UC campus or the Federal Government. Current state travel rates can be found at http://www.energy.ca.gov/contracts/TRAVEL_PER_DIEM.PDF. Please see terms and conditions for more information.

2. Identify all travel costs to be incurred by the organization to which these budget forms pertain (e.g. subcontractor travel will be shown on the subcontractor travel sheet, not on the Contractor/Recipient travel sheet). All travel identified as "To Be Determined (TBD)" is not pre-approved and requires prior written approval from the Commission Agreement Manager and Commission Agreement Officer in accordance with the terms and conditions.
3. All travel not listed on agreement budget forms must obtain pre-approval from the Commission Agreement Manager and Commission Agreement Officer in accordance with the terms and conditions. All subcontractors under $100,000 or 25% of the Commission Funds, who do not have their own travel sheets, must get all travel pre-approved in writing as needed.
4. Insert the applicable Task No. from the Scope of Work that the trip supports.
5. Insert the traveler's name and/or classification.
6. Insert the departure and destination locations. For example, "From Sacramento to Los Angeles and Return." It is strongly recommended that all out of state or out of country travel be paid with match funding.
7. Insert a brief purpose of the trip.
8. Insert the dollar amount of each trip to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount of each trip to be charged as match share. ***Whole dollars only.***
10. Confirm all totals across and down are accurate.

Attachment 5

Equipment
(see instructions)

GRID Alternatives Bay Area

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
	Cargo Bikes & accessories	Vehicles for project	35	$ 2,000	$ 70,000	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				Total:	**$ 70,000**	**$ -**	**$ -**

Equipment Instructions

Attachment 5

1. Equipment is defined as items having a ***per unit*** cost of at least $5,000 and a useful life of at least 1 year. Equipment means any products, objects, machinery, apparatus, implements or tools purchased, used or constructed within the Project, including those products, objects, machinery, apparatus, implements or tools from which over thirty percent (30%) of the equipment is composed of Materials purchased for the Project. Items not meeting this definition should be included on the Materials & Miscellaneous worksheet.
2. Insert the applicable Task No. from the Scope of Work that the equipment supports. Multiple tasks may be identified.
3. Insert a description of the equipment. The description should be sufficient to allow the Energy Commission to easily tie the equipment to backup documentation provided with the invoice and the Scope of Work.
4. Insert a concise purpose of the equipment (i.e., why is the equipment needed for the project?).
5. Insert the number of units to be purchased.
6. Insert the ***per unit*** cost of the equipment.
7. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
9. Totals on each line ***must equal*** # of Units multiplied by the Per Unit Cost.
10. Confirm all totals across and down are accurate.

Attachment 5

Materials & Miscellaneous

(see instructions)

GRID Alternatives Bay Area

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
	Logistics expenses	Shipping and storage of cargo bikes, including tarriffs	35	$285.71	$9,999.85	$ -	$ 10,000
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				Total:	$ 10,000	$ -	$ 10,000

Materials & Miscellaneous Instructions

1. Materials are items under the agreement that do not meet the definition of Equipment. Miscellaneous are items of cost that do not fit in other cost categories contained in this workbook.

2. Insert the applicable Task No. from the Scope of Work that the material/miscellaneous expense supports.
3. Insert a description of the material/miscellaneous item. The description should be sufficient to allow the Energy Commission to easily tie the material/miscellaneous expense to backup documentation provided with the invoice and the Scope of Work.
4. Where appropriate and logical, materials and miscellenous items can be grouped together. Grouped items must be clearly and thoroughly described. Grouped items can use "varies" for the # of units and unit cost. (Examples may include various pipes and pipe fittings or various nuts and bolts, etc...)
5. Insert a concise purpose of the material/miscelleneous expense (i.e., why is the material/miscellaneous expense needed for the project?).
6. Insert the number of units to be purchased.
7. Insert the ***per unit*** cost of the material/miscelleneous item.
8. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
10. Totals on each line ***must equal*** # of Units multiplied by the Per Unit Cost.
11. Confirm all totals across and down are accurate.

Attachment 5

Subcontracts

(see instructions)

GRID Alternatives Bay Area

Task No.	Subcontractor Name	Purpose	CA Business Certifications DVBE/ SB/MB/None	Energy Commission Funds	Match Share	Total
5	Justin Dawe Enterprises LLC	Vehicle selection, procurement, vendor management, project design consultation	None	$ 35,000	$ -	**$ 35,000**
5	TBD: Collusion and Injury Insurance (for e-bikes and operators)	Insurers pilot participant for property damage and personal injuries while participating.		$60,000	$-	**$60,000**
5	TBD: E-bike Maintainenace & Repairs	Provide e-bike maintainence as recommended by the e-bike manufacturer, and other repairs.		$2,000	$-	**$2,000**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
			Total:	**$ 97,000**	**$ -**	**$ 97,000**

Attachment 5

Subcontracts Instructions

1. Each subcontract containing: 1) $100,000 or more of Energy Commission funds; or 2) 25% or more of the total Energy Commission funds requested requires completion of separate set of complete budget forms detailing the expected expenditures of the subcontractor.
2. Include all subcontractors that have a direct contractual relationship with the organization to which these budget forms pertain including those that must also complete their own set of budget forms.
3. Insert the applicable Task No. from the Scope of Work that the subcontract supports. Insert multiple task numbers if applicable.
4. Insert the name of the subcontractor, if known. If not known, insert "TBD."
5. Insert a concise purpose of the subcontract (i.e., why is the subcontract needed for the project?).
6. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
7. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
8. Totals on each line ***must equal*** total amount of subcontract.
9. Confirm all totals across and down are accurate.
10. Insert whether the subcontractor is a certified Disabled Veteran Business Enterprise (DVBE), Small Business (SB) or Micro Business (MB). Appropriate answers are "DVBE", "SB", "MB", "None", or "TBD". Certification status can be verified at the following website: http://www.bidsync.com/DPXBisCASB

Attachment 5

Indirect Costs and Profit

(see instructions)

GRID Alternatives Bay Area

Indirect Cost(s)

Name of Indirect Cost	Maximum Rate	Indirect Cost Base Description	Indirect Cost Base Amount	Energy Commission Funds	Match Share	Total
Indirect Overhead	10.00%	Base is Total Labor and Other Direct Costs	$ 42,699	$ 42,699	$ -	**$ 42,699**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
			Total:	**$ 42,699**	**$ -**	**$ 42,699**

Profit

(Profit is not allowed for Grant Recipients)

Profit Rate	Profit Base Description	Profit Base Amount	Energy Commission Funds	Match Share	Total
0.00%		$ -	$ -	$ -	**$ -**
		Total:	**$ -**	**$ -**	**$ -**

Indirect Costs Instructions

1. All indirect costs charged must be reasonable, allocable to the project, and fully supported by backup documentation. The Energy Commission reserves the right to request supporting documentation of all indirect costs reimbursed or charged as match share.

2. Indirect costs must adhere to the Agreement Terms and Conditions, Generally Accepted Accounting Principles (GAAP) and the OMB Circular or Federal Acquisition Regulations applicable to your organization.
3. Insert the name of the indirect cost.
4. Insert the maximum indirect cost rate to be charged during the approved term of the agreement.
5. The indirect cost rates on this form are caps, or the maximum amount allowed to be billed. The Contractor/Recipient/Subcontractor can only bill for actual indirect costs incurred, not to exceed the rates specified in these forms.
6. Describe the indirect cost base (categories or items of costs within the budget) on which the indirect cost rate is applied.
7. Insert the dollar amount of the indirect cost base. This is the sum of the budgeted costs described in the indirect cost base description.
8. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
10. The Energy Commission expects to only reimburse indirect costs which are allocable to the indirect base costs reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the costs included in the indirect cost base, the Energy Commission expects to only reimburse up to 45% of the indirect costs. Match share expenditures are allowed to cover higher percentages of indirect costs.
11. Totals on each line must be less than or equal to Maximum Indirect Cost Rate multiplied by the Indirect Cost Base Amount.
12. Confirm all totals across and down are accurate.

Profit Instructions

1. **For Grant Agreements Only:** Recipients CANNOT be reimbursed for more than their actual allowable expenses (i.e., cannot include profit, fees, or markups) under the agreement. Subcontractors (all tiers) are allowed to include up to a maximum total of 10% profit, fees or mark-ups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a subcontractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the subcontractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.

2. **For Contract Agreements Only:** Contractors and subcontractors can include up to a maximum total of 10% profit, fees or markups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a contractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the contractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.
3. **For All Agreement Types:** Forgone profit, fees, or markups are NOT eligible match share expenditures. Forgone profit, fees and markups are defined as profit, fees or markups that are not claimed or actually paid to a contractor, recipient or subcontractor. For example, if a contractor pays its own funds to a subcontractor (funds the contractor will not seek reimbursement from the Energy Commission) and the payment includes profit, fees or markups, the amount paid to the subcontractor including the profit, fees or markups can count as a match share expenditure since it was actually paid. However, if a contractor or subcontractor would normally include profit, fees or markups in its invoices and indicates it will forgo charging these costs, the forgone profit, fees, or markups cannot count as a match fund expenditure since it was not paid. This restriction does not apply to equipment or material discounts appropriately documented and provided to the project.
4. Insert the maximum profit rate to be charged during the approved term of the agreement. The profit rate in these forms are caps, or the maximum amount allowed to be billed.
5. Describe the profit base (categories or items of costs within the budget) on which the profit rate is applied.
6. Insert the dollar amount of the profit base. This is the sum of the budgeted costs described in the Profit Base Description.
7. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
9. The Energy Commission expects to only reimburse profit which is allocable to the profit base reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the profit base costs, the Energy Commission expects to only reimburse up to 45% of the profit. Match share expenditures are allowed to cover higher percentages of profit.
10. Totals on each line must be less than or equal to: Max. Profit Rate X Profit Base Amount.
11. Confirm all totals across and down are accurate.

Attachment 5

General Budget Worksheet Instructions

1. A separate set of complete budget forms, including the full set of worksheets, is required for the Contractor/Recipient and for each subcontract containing: 1) $100,000 or more of Energy Commission funds; or 2) 25% or more of the total Energy Commission funds requested.
2. For each worksheet, only identify the expenses to be incurred by the organization to which the budget forms pertain.
3. Only complete information for non-shaded cells; all other information will be automatically filled or calculated.
4. When more rows are required, copy an existing row and "insert the copied cells" between existing rows to keep template formulas accurate.
5. Budgeted Energy Commission funds and match share must be in whole dollars. Rates (labor, fringe, indirect or profit) and unit costs for materials/equipment must be in dollars and cents (two decimal places only).
6. Do not create new formulas in the tables as they may cause rounding discrepancies.
7. Each worksheet has specific instructions located below the form.
8. All rates (labor, fringe, indirect, and profit) included in these forms are caps, or the maximum amount allowed to be billed. The Energy Commission will only reimburse for actual expenses incurred, not to exceed the rates specified in these forms.
9. All costs (including indirect costs) must adhere to the Agreement Terms and Conditions, Generally Accepted Accounting Principles (GAAP) and the Office of Management and Budget (OMB) Circular or Federal Acquisition Regulations applicable to your organization.
10. Never delete Rows, Columns or Worksheets. Leave unused cells blank.

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Attachment 5

Category Budget
(see instructions)

Name of Organization	Organization Name

Cost Category	Energy Commission Reimbursable Share	Match Share	Total
Direct Labor	$ -	$ -	$ -
Fringe Benefits	$ -	$ -	$ -
Total Labor	**$ -**	**$ -**	**$ -**
Travel	$ -	$ -	$ -
Equipment	$ 526,141	$ 120,000	$ 646,141
Materials/Miscellaneous	$ -	$ 3,000	$ 3,000
Subcontractors	$ -	$ 651,390	$ 651,390
Total Other Direct Costs	**$ 526,141**	**$ 774,390**	**$ 1,300,531**
Indirect Costs	$ -	$ -	$ -
Profit (not allowed for grant recipients)	$ -	$ -	$ -
Total Indirect and Profit	**$ -**	**$ -**	**$ -**
Grand Totals	***$ 526,141***	***$ 774,390***	**$ 1,300,531**

Category Budget Instructions

Attachment 5

1. Insert name of the organization (either Contractor/Recipient or Subcontractor). All subcontracts containing: a) $100,000 or more of Energy Commission funds; or b) 25% or more of the total Energy Commission funds awarded must complete a full set of budget forms.
2. Check appropriate box to identify whether the budget forms are for the Contractor/Recipient or a Subcontractor.
3. Check appropriate box(es) to identify whether entity is a small business, micro business, and/or Disabled Veteran Business Enterprise.
4. No other input is necessary on this page as other cells self-populate.

Attachment 5

Direct Labor (Unloaded)

(see instructions)

Organization Name

Hourly Rates

Employee Name	Job Classification / Title	Maximum Labor Rate ($ per hour)	# of Hours	Commission Funds	Match Share	Total
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
Hourly Direct Labor Totals				**$ -**	**$ -**	**$ -**

Monthly Salary Rates

Employee Name	Job Classification / Title	Maximum Labor Rate ($ per month)	# of Months	Commission Funds	Match Share	Total
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
		$ -		$ -	$ -	$ -
Monthly Direct Labor Totals				**$ -**	**$ -**	**$ -**

Attachment 5

	Energy Commission Funds	Match Share	Total
Direct Labor Grand Totals	$ -	$ -	$ -

Direct Labor (Unloaded) Instructions

1. Insert employee name(s) that will be charged as direct labor as either a reimbursed cost or match share. (optional, but recommended)
2. Insert employee(s) job classification/title. (required)
3. Insert the maximum hourly or monthly labor rate (unloaded) by employee job classification/title to be billed during the approved term of the agreement. This is the highest salary or wage rate that is actually paid to the employee before the application of fringe benefits, indirect costs or profit.
4. Complete the appropriate table based on your organization's standard accounting practices. If an employee is paid based on an hourly rate, use the hourly table. If an employee is paid based on a monthly salary, use the monthly table.
5. The rates in these forms are rate caps, or the maximum amount allowed to be billed for the entire term of the agreement. The Energy Commission will only reimburse for actual direct labor expenses incurred, not to exceed the rates specified in these forms. Rates must include dollars and cents (two decimal places only).
6. Insert the approximate number of hours or months to be worked by employee or job classification/title including for all "to be determined" (TBD) employees. The Energy Commission will only reimburse for actual time worked. The Contractor/Recipient or Subcontractor must maintain auditable documentation of actual time worked hourly, daily, weekly or monthly using standard accounting practices.
7. Insert the dollar amount by employee or job classification/title to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount by employee/classification to be charged as match share. ***Whole dollars only.***
9. Confirm totals across and down are accurate.
10. Totals on each line must be less than or equal to Maximum Labor Rate multiplied by the Number of Hours.

Attachment 5

Fringe Benefits

(see instructions)

Organization Name

Fringe Benefit Base Description (Employee or Job Classification/Title)	Max. Fringe Benefit Rate (%)	Direct Labor Costs ($)	Energy Commission Funds	Match Share	Total
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
	0.00%	$ -	$ -	$ -	$ -
Fringe Benefit Totals		**$ -**	**$ -**	**$ -**	**$ -**

Fringe Benefits Instructions

1. Insert the fringe benefit (FB) base description. The base is typically the direct labor costs that are multiplied by the fringe benefit rate to arrive at the fringe benefit cost (FB base multiplied by the FB rate = FB cost).
2. Organizations that charge the same fringe benefit rate for all classifications should insert "All Classifications" under the base description and complete the top line only. If more than one fringe benefit rate is utilized, use additional lines and adequately describe (by employee or classification) the base for each fringe benefit rate charged.
3. Insert the maximum fringe benefit rate to be charged during the approved term of the agreement. Round percentages **up** to the nearest hundreth (two decimal places). For example, manually enter 20.26% instead of 20.2511%
4. The fringe benefit rates in these forms are rate caps, or the maximum amount allowed to be billed. The Energy Commission will only reimburse for actual fringe benefit expenses incurred, not to exceed the rates specified in these forms.
5. Insert the direct labor costs allocable to each fringe benefit rate. These costs must be consistent with the costs identified on the Direct Labor worksheet. The total for the Direct Labor Costs column on this worksheet must match the Grand Total for all Direct Labor (Energy Commission Funds and Match Share) on the Direct Labor worksheet.
6. Insert the dollar amount of fringe benefit costs to be reimbursed with Energy Commission funds. ***Whole dollars only.***
7. Insert the dollar amount of fringe benefit costs to be charged as match share. ***Whole dollars only.***
8. Totals on each line must be less than or equal to Maximum Fringe Benefit Rate multiplied by Direct Labor Costs.
9. The Energy Commission expects to only reimburse fringe benefit costs which are allocable to the Fringe Benefit base costs reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the direct labor, the Energy Commission expects to only reimburse up to 45% of the fringe benefit costs.
10. Confirm all totals across and down are accurate.

Attachment 5

Travel

(see instructions)

Organization Name

Task No.	Traveler's Name and/or Classification	Departure and Destination	Trip Purpose	Energy Commission Funds	Match Share	Total
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
				$ -	$ -	$ -
			Total:	$ -	$ -	$ -

Travel Instructions

Attachment 5

1. All travel costs are reimbursed at state rates except in agreements between the Energy Commission and a UC campus or the Federal Government. Current state travel rates can be found at http://www.energy.ca.gov/contracts/TRAVEL_PER_DIEM.PDF. Please see terms and conditions for more information.
2. Identify all travel costs to be incurred by the organization to which these budget forms pertain (e.g. subcontractor travel will be shown on the subcontractor travel sheet, not on the Contractor/Recipient travel sheet). All travel identified as "To Be Determined (TBD)" is not pre-approved and requires prior written approval from the Commission Agreement Manager and Commission Agreement Officer in accordance with the terms and conditions.
3. All travel not listed on agreement budget forms must obtain pre-approval from the Commission Agreement Manager and Commission Agreement Officer in accordance with the terms and conditions. All subcontractors under $100,000 or 25% of the Commission Funds, who do not have their own travel sheets, must get all travel pre-approved in writing as needed.
4. Insert the applicable Task No. from the Scope of Work that the trip supports.
5. Insert the traveler's name and/or classification.
6. Insert the departure and destination locations. For example, "From Sacramento to Los Angeles and Return." It is strongly recommended that all out of state or out of country travel be paid with match funding.
7. Insert a brief purpose of the trip.
8. Insert the dollar amount of each trip to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount of each trip to be charged as match share. ***Whole dollars only.***
10. Confirm all totals across and down are accurate.

Attachment 5

Equipment

(see instructions)

Organization Name

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
	Delta 100 kW City Charger	**EVCS**	2	$ 45,565	$ 91,131	$ -	**$ 91,131**
	Signet 500 Cabinet and Dispenser 350 kW	**EVCS**	6	$ 72,502	$ 435,011	$ -	**$ 435,011**
	Switchgear	**Electrical Switchgear**	1	$ 120,000	$ -	$ 120,000	**$ 120,000**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				Total:	**$ 526,141**	**$ 120,000**	**$ 646,141**

Attachment 5

Equipment Instructions

1. Equipment is defined as items having a ***per unit*** cost of at least $5,000 and a useful life of at least 1 year. Equipment means any products, objects, machinery, apparatus, implements or tools purchased, used or constructed within the Project, including those products, objects, machinery, apparatus, implements or tools from which over thirty percent (30%) of the equipment is composed of Materials purchased for the Project. Items not meeting this definition should be included on the Materials & Miscellaneous worksheet.
2. Insert the applicable Task No. from the Scope of Work that the equipment supports. Multiple tasks may be identified.
3. Insert a description of the equipment. The description should be sufficient to allow the Energy Commission to easily tie the equipment to backup documentation provided with the invoice and the Scope of Work.
4. Insert a concise purpose of the equipment (i.e., why is the equipment needed for the project?).
5. Insert the number of units to be purchased.
6. Insert the ***per unit*** cost of the equipment.
7. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
9. Totals on each line ***must equal*** # of Units multiplied by the Per Unit Cost.
10. Confirm all totals across and down are accurate.

Attachment 5

Materials & Miscellaneous

(see instructions)

Organization Name

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
	Permit	**Permitting for the EVCS**	1	$ 3,000	$ -	$ 3,000	**$ 3,000**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				$ -	$ -	$ -	**$ -**
				Total:	**$ -**	**$ 3,000**	**$ 3,000**

Materials & Miscellaneous Instructions

Attachment 5

1. Materials are items under the agreement that do not meet the definition of Equipment. Miscellaneous are items of cost that do not fit in other cost categories contained in this workbook.
2. Insert the applicable Task No. from the Scope of Work that the material/miscellaneous expense supports.
3. Insert a description of the material/miscellaneous item. The description should be sufficient to allow the Energy Commission to easily tie the material/miscellaneous expense to backup documentation provided with the invoice and the Scope of Work.
4. Where appropriate and logical, materials and miscellenous items can be grouped together. Grouped items must be clearly and thoroughly described. Grouped items can use "varies" for the # of units and unit cost. (Examples may include various pipes and pipe fittings or various nuts and bolts, etc...)
5. Insert a concise purpose of the material/miscelleneous expense (i.e., why is the material/miscellaneous expense needed for the project?).
6. Insert the number of units to be purchased.
7. Insert the ***per unit*** cost of the material/miscelleneous item.
8. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
10. Totals on each line ***must equal*** # of Units multiplied by the Per Unit Cost.
11. Confirm all totals across and down are accurate.

Attachment 5

Subcontracts

(see instructions)

Organization Name

Task No.	Subcontractor Name	Purpose	CA Business Certifications DVBE/ SB/MB/None	Energy Commission Funds	Match Share	Total
	TBD	Construction of the charging site(s)	TBD	$ -	$ 620,890	**$ 620,890**
	TBD	Permit package/ Engineering	TBD	$ -	$ 22,500	**$ 22,500**
	TBD	Site Survey	TBD	$ -	$ 8,000	**$ 8,000**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
				$ -	$ -	**$ -**
			Total:	**$ -**	**$ 651,390**	**$ 651,390**

Subcontracts Instructions

Attachment 5

1. Each subcontract containing: 1) $100,000 or more of Energy Commission funds; or 2) 25% or more of the total Energy Commission funds requested requires completion of separate set of complete budget forms detailing the expected expenditures of the subcontractor.
2. Include all subcontractors that have a direct contractual relationship with the organization to which these budget forms pertain including those that must also complete their own set of budget forms.
3. Insert the applicable Task No. from the Scope of Work that the subcontract supports. Insert multiple task numbers if applicable.
4. Insert the name of the subcontractor, if known. If not known, insert "TBD."
5. Insert a concise purpose of the subcontract (i.e., why is the subcontract needed for the project?).
6. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
7. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
8. Totals on each line ***must equal*** total amount of subcontract.
9. Confirm all totals across and down are accurate.
10. Insert whether the subcontractor is a certified Disabled Veteran Business Enterprise (DVBE), Small Business (SB) or Micro Business (MB). Appropriate answers are "DVBE", "SB", "MB", "None", or "TBD". Certification status can be verified at the following website: http://www.bidsync.com/DPXBisCASB

Attachment 5

Indirect Costs and Profit

(see instructions)

Organization Name

Indirect Cost(s)

Name of Indirect Cost	Maximum Rate	Indirect Cost Base Description	Indirect Cost Base Amount	Energy Commission Funds	Match Share	Total
	0.00%		$ -	$ -	$ -	$ -
	0.00%		$ -	$ -	$ -	$ -
	0.00%		$ -	$ -	$ -	$ -
	0.00%		$ -	$ -	$ -	$ -
	0.00%		$ -	$ -	$ -	$ -
			Total:	$ -	$ -	$ -

Profit

(Profit is not allowed for Grant Recipients)

Profit Rate	Profit Base Description	Profit Base Amount	Energy Commission Funds	Match Share	Total
0.00%		$ -	$ -	$ -	$ -
		Total:	$ -	$ -	$ -

Indirect Costs Instructions

1. All indirect costs charged must be reasonable, allocable to the project, and fully supported by backup documentation. The Energy Commission reserves the right to request supporting documentation of all indirect costs reimbursed or charged as match share.

2. Indirect costs must adhere to the Agreement Terms and Conditions, Generally Accepted Accounting Principles (GAAP) and the OMB Circular or Federal Acquisition Regulations applicable to your organization.
3. Insert the name of the indirect cost.
4. Insert the maximum indirect cost rate to be charged during the approved term of the agreement.
5. The indirect cost rates on this form are caps, or the maximum amount allowed to be billed. The Contractor/Recipient/Subcontractor can only bill for actual indirect costs incurred, not to exceed the rates specified in these forms.
6. Describe the indirect cost base (categories or items of costs within the budget) on which the indirect cost rate is applied.
7. Insert the dollar amount of the indirect cost base. This is the sum of the budgeted costs described in the indirect cost base description.
8. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
10. The Energy Commission expects to only reimburse indirect costs which are allocable to the indirect base costs reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the costs included in the indirect cost base, the Energy Commission expects to only reimburse up to 45% of the indirect costs. Match share expenditures are allowed to cover higher percentages of indirect costs.
11. Totals on each line must be less than or equal to Maximum Indirect Cost Rate multiplied by the Indirect Cost Base Amount.
12. Confirm all totals across and down are accurate.

Profit Instructions

1. **For Grant Agreements Only:** Recipients CANNOT be reimbursed for more than their actual allowable expenses (i.e., cannot include profit, fees, or markups) under the agreement. Subcontractors (all tiers) are allowed to include up to a maximum total of 10% profit, fees or mark-ups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a subcontractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the subcontractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.

2. **For Contract Agreements Only:** Contractors and subcontractors can include up to a maximum total of 10% profit, fees or markups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a contractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the contractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.
3. **For All Agreement Types:** Forgone profit, fees, or markups are NOT eligible match share expenditures. Forgone profit, fees and markups are defined as profit, fees or markups that are not claimed or actually paid to a contractor, recipient or subcontractor. For example, if a contractor pays its own funds to a subcontractor (funds the contractor will not seek reimbursement from the Energy Commission) and the payment includes profit, fees or markups, the amount paid to the subcontractor including the profit, fees or markups can count as a match share expenditure since it was actually paid. However, if a contractor or subcontractor would normally include profit, fees or markups in its invoices and indicates it will forgo charging these costs, the forgone profit, fees, or markups cannot count as a match fund expenditure since it was not paid. This restriction does not apply to equipment or material discounts appropriately documented and provided to the project.
4. Insert the maximum profit rate to be charged during the approved term of the agreement. The profit rate in these forms are caps, or the maximum amount allowed to be billed.
5. Describe the profit base (categories or items of costs within the budget) on which the profit rate is applied.
6. Insert the dollar amount of the profit base. This is the sum of the budgeted costs described in the Profit Base Description.
7. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
9. The Energy Commission expects to only reimburse profit which is allocable to the profit base reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the profit base costs, the Energy Commission expects to only reimburse up to 45% of the profit. Match share expenditures are allowed to cover higher percentages of profit.
10. Totals on each line must be less than or equal to: Max. Profit Rate X Profit Base Amount.
11. Confirm all totals across and down are accurate.

Attachment 5

Indirect Costs and Profit

(see instructions)

San Francisco Department of the Environment

Indirect Cost(s)

Name of Indirect Cost	Maximum Rate	Indirect Cost Base Description	Indirect Cost Base Amount	Energy Commission Funds	Match Share	Total
Indirect Overhead (IOH)	25.70%	Direct Labor + Fringe Benefits	$ 974,511	$ 250,449	$ -	**$ 250,449**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
	0.00%		$ -	$ -	$ -	**$ -**
			Total:	**$ 250,449**	**$ -**	**$ 250,449**

Profit

(Profit is not allowed for Grant Recipients)

Profit Rate	Profit Base Description	Profit Base Amount	Energy Commission Funds	Match Share	Total
0.00%		$ -	$ -	$ -	**$ -**
		Total:	**$ -**	**$ -**	**$ -**

Indirect Costs Instructions

1. All indirect costs charged must be reasonable, allocable to the project, and fully supported by backup documentation. The Energy Commission reserves the right to request supporting documentation of all indirect costs reimbursed or charged as match share.

2. Indirect costs must adhere to the Agreement Terms and Conditions, Generally Accepted Accounting Principles (GAAP) and the OMB Circular or Federal Acquisition Regulations applicable to your organization.
3. Insert the name of the indirect cost.
4. Insert the maximum indirect cost rate to be charged during the approved term of the agreement.
5. The indirect cost rates on this form are caps, or the maximum amount allowed to be billed. The Contractor/Recipient/Subcontractor can only bill for actual indirect costs incurred, not to exceed the rates specified in these forms.
6. Describe the indirect cost base (categories or items of costs within the budget) on which the indirect cost rate is applied.
7. Insert the dollar amount of the indirect cost base. This is the sum of the budgeted costs described in the indirect cost base description.
8. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
9. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
10. The Energy Commission expects to only reimburse indirect costs which are allocable to the indirect base costs reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the costs included in the indirect cost base, the Energy Commission expects to only reimburse up to 45% of the indirect costs. Match share expenditures are allowed to cover higher percentages of indirect costs.
11. Totals on each line must be less than or equal to Maximum Indirect Cost Rate multiplied by the Indirect Cost Base Amount.
12. Confirm all totals across and down are accurate.

Profit Instructions

1. **For Grant Agreements Only:** Recipients CANNOT be reimbursed for more than their actual allowable expenses (i.e., cannot include profit, fees, or markups) under the agreement. Subcontractors (all tiers) are allowed to include up to a maximum total of 10% profit, fees or mark-ups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a subcontractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the subcontractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.

2. **For Contract Agreements Only:** Contractors and subcontractors can include up to a maximum total of 10% profit, fees or markups on their own actual allowable expenses less any expenses further subcontracted to other entities (i.e., profit, fees and markups are not allowed on subcontractor expenses). For example, if a contractor has $100,000 in actual allowable costs but has further subcontracted $20,000 to another entity, then the contractor can only include up to 10% profit on $80,000 ($100,000 minus $20,000). See terms and conditions for more information on allowable costs.
3. **For All Agreement Types:** Forgone profit, fees, or markups are NOT eligible match share expenditures. Forgone profit, fees and markups are defined as profit, fees or markups that are not claimed or actually paid to a contractor, recipient or subcontractor. For example, if a contractor pays its own funds to a subcontractor (funds the contractor will not seek reimbursement from the Energy Commission) and the payment includes profit, fees or markups, the amount paid to the subcontractor including the profit, fees or markups can count as a match share expenditure since it was actually paid. However, if a contractor or subcontractor would normally include profit, fees or markups in its invoices and indicates it will forgo charging these costs, the forgone profit, fees, or markups cannot count as a match fund expenditure since it was not paid. This restriction does not apply to equipment or material discounts appropriately documented and provided to the project.
4. Insert the maximum profit rate to be charged during the approved term of the agreement. The profit rate in these forms are caps, or the maximum amount allowed to be billed.
5. Describe the profit base (categories or items of costs within the budget) on which the profit rate is applied.
6. Insert the dollar amount of the profit base. This is the sum of the budgeted costs described in the Profit Base Description.
7. Insert the dollar amount to be reimbursed with Energy Commission funds. ***Whole dollars only.***
8. Insert the dollar amount to be charged as match share. ***Whole dollars only.***
9. The Energy Commission expects to only reimburse profit which is allocable to the profit base reimbursed by the Energy Commission. For example, if the Energy Commission reimburses 45% of the profit base costs, the Energy Commission expects to only reimburse up to 45% of the profit. Match share expenditures are allowed to cover higher percentages of profit.
10. Totals on each line must be less than or equal to: Max. Profit Rate X Profit Base Amount.
11. Confirm all totals across and down are accurate.

Attachment 6
CONTACT LIST

California Energy Commission	Recipient
Commission Agreement Manager: TBD by CEC California Energy Commission 1516 Ninth Street, MS-6 Sacramento, CA 95814 Phone: (916) 654-4405 Fax: (916) XXX-XXXX e-mail: XXXXXX	**Project Manager:** SF Department of the Environment Lowell Chu 1455 Market, 12th floor San Francisco, CA 94103 Phone: (415) 355-3700 Fax: (415) 554-6393 e-mail: lowell.chu@sfgov.org
Commission Agreement Office California Energy Commission 1516 Ninth Street, MS-18 Sacramento, CA 95814 Phone: (916) 654-4381 Fax: (916) 654-4423	**Administrator:** SF Department of the Environment Joseph Salem 1455 Market, 12th floor San Francisco, CA 94103 Phone: (415) 355-3721 Fax: (415) 554-6393 e-mail: joseph.salem@sgov.org
Accounting Office California Energy Commission 1516 Ninth Street, MS-2 Sacramento, CA 95814	**Accounting Officer:** SF Department of the Environment Mark Brown 1455 Market, 12th floor San Francisco, CA 94103 Phone: (415) 355-3789 Fax: (415) 554-6393 e-mail: mark.brown@sfgov.org
Legal Notices: Tatyana Yakshina Grants Manager 1516 Ninth Street, MS-18 Sacramento, CA 95814 Phone: (916) 654-4204 Fax: (916) 654-4423 e-mail: tatyana.yakshina@energy.ca.gov	**Recipient Legal Notices:** SF Department of the Environment Jennifer Kass 1455 Market, 12th floor San Francisco, CA 94103 Phone: (415) 355-3762 Fax: (415) 554-6393 e-mail: jennifer.kass@sfgov.org

Attachment 6

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) WORKSHEET

The California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000 et seq.) requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible.[1] Under CEQA, an activity that may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment is called a "project." (Public Resources Code § 21065.) Approval of a contract, grant, or loan may be a "project" under CEQA if the activity being funded may cause a direct physical change or a reasonably foreseeable indirect physical change in the environment. Agencies must comply with CEQA before they approve a "project." This can include preparing a Notice of Exemption or conducting an Initial Study and preparing a Negative Declaration, a Mitigated Negative Declaration, or, if there are significant impacts, an Environmental Impact Report.

The Lead Agency is the public agency that has the greatest responsibility for preparing environmental documents under CEQA, and for carrying out, supervising, or approving a project. Where the award recipient is a public agency, the Lead Agency is typically the recipient. Where the award recipient is a private entity, the Lead Agency is the public agency that has greatest responsibility for supervising or approving the project as a whole.[2] When issuing contracts, grants or loans, the Energy Commission is typically a "Responsible Agency" under CEQA, which means that it must make its own CEQA findings based on review of the Lead Agency's environmental documents. If the Energy Commission is the only public agency with responsibility for approving the project, then the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project.

This worksheet will help the Energy Commission determine what kind of CEQA review, if any, is necessary before it can approve the award, and which agency will be performing that review as a Lead Agency. Please answer all questions as completely as possible. It may also help you to think through the CEQA process necessary for your proposed project. The Energy Commission may request additional information in order to clarify responses provided on this worksheet.

[1] For a brief summary of the CEQA process, please visit .
[2] 14 C.C.R. §§ 15050, 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

1. **What are the physical aspects of the project? (Check all that apply and provide brief description of work, including any size or dimensions of the project).**

Type of Project	Yes	No	Project Description
Construction (including grading, paving, etc.)	☒	☐	Project includes developing 3 electric vehicle (EV) charging plazas at to-be-determined sites.
Trenching	☒	☐	Trenching for conduit to serve charging stations
New or replaced pipelines	☐	☒	
Modification or conversion of a facility	☒	☐	Sites not yet determined, however, will likely require modification of existing lots.
New or modified operation of a facility or equipment	☒	☐	Electric Vehicle Supply Equipment (EVSE) installation.
On-road demonstration	☐	☒	
Paper study (including analyses on economics, feedstock availability, workforce availability, etc.)	☐	☒	
Laboratory research	☐	☒	
Temporary or mobile structures (skid-mounted)	☐	☒	
Design/Planning	☒	☐	Design/planning for installation of charging stations
Other (describe and add pages as necessary)	☐	☒	

2. Where is the project located or where will it be located? (Attach additional sheets as necessary.)

Address	County	Type of Work to Be Completed at Site
N/A	San Francisco	Installation of EVSE at three sites across San Francisco.

3. Will the project potentially have environmental impacts that trigger CEQA review? (Check a box and explain for each question.)

Question	Yes	No	Don't Know	Explanation
Is the project site environmentally sensitive?	☐	☒	☐	The project sites, likely covered in impervious surfaces, are not anticipated to be environmentally sensitive areas.
Is the project site on agricultural land?	☐	☒	☐	The project sites are located within the City of San Francisco, an urban area, and are therefore not on agricultural land.
Is this project part of a larger project?	☐	☒	☐	3 charging plaza sites are the only infrastructure pieces of the project.
Is there public controversy about the proposed project or larger project?	☐	☒	☐	The proposed project is currently not known to be a controversial project
Will historic resources or historic buildings be impacted by the project?	☐	☒	☐	Selected project sites will be chosen so as not to impact historic resources or historic sites.
Is the project located on a site the Department of Toxic Substances Control and the Secretary of the Environmental Protection have identified as being affected by hazardous wastes or cleanup problems?	☐	☐	☒	To be determined as sites are identified. If project sites are within an area of suspected soil and/or ground water activity and project includes more than 50 cubic yards of soil disturbance, it will be subject to Article 22A of the San Francisco Health Code, also known as the Maher Ordinance, and would be required to enroll in the San Francisco Department of Public Health's (DPH) Maher program. Compliance with the Maher program would reduce potential impacts from hazardous materials releases.

Question	Yes	No	Don't Know	Explanation
Will the project generate noise or odors in excess of permitted levels?	☐	☒	☐	Operational noise would be required to comply with the San Francisco Noise Ordinance and is not anticipated to substantially increase noise levels at the project sites. Construction-related noise is also regulated by the Noise Ordinance and would be temporary and intermittent. Thus, construction activities are not anticipated to increase noise above permitted levels. The proposed electric vehicle charging infrastructure, solar panels, and batteries are not anticipated to result in odors in excess of permitted levels.
Will the project increase traffic at the site and by what amount?	☒	☐	☐	Charging plazas will necessarily increase traffic to site. Traffic impacts are not yet known, but will be calculated upon identification of project sites.

4. Will the project require discretionary permits or determinations, as listed below?

Type of Permit	No	Modified	New	Approving Agency	Reason for Permit, Summary of Process, and Anticipated Date of Issuance
Air Quality Permit	☒	☐	☐		
Water Quality Permit	☒	☐	☐		
Conditional Use Permit or Variance	☒	☐	☐		
Building Expansion Permit	☒	☐	☐		

Type of Permit	No	Modified	New	Approving Agency	Reason for Permit, Summary of Process, and Anticipated Date of Issuance
Hazardous Waste Permit	☒	☐	☐		
Rezoning	☒	☐	☐		
Authority to Construct	☐	☐	☒	Planning Dept and Building Inspection	Installing EVSE, timeline to be determined upon site identification.
Other Permits (List types)	☒	☐	☐		

5. Of the agencies listed in #4, have you identified and contacted the public agency who will be the lead CEQA agency on the project?

☒ **Yes**. Provide the name of and contact information for the lead agency.
San Francisco Planning Department
Jessica Range, jessica.range@sfgov.org

☐ **No.** Explain why no contact has been made and/or a proposed process for making contact with the lead agency.

6. Has the public agency prepared environmental documents (e.g., Notice of Exemption, Initial Study/Negative Declaration/Mitigated Negative Declaration, Environmental Impact Report, Notice of Determination) under CEQA for the proposed project?

☐ **Yes**.

Please complete the following and attach the CEQA document to this worksheet. (For "Not a project," the title of the document may be an e-mail, resolution, or letter.)

Type of Environmental Review	**Title of Environmental Document**	**State Clearinghouse Number**	**Completion Date**	**Planned Completion Date (must be before approval of award)**
"Not a project"		N/A		N/A
Exempt (Resolution of public agency or Agenda Item approving Exemption)		N/A		N/A
Exempt (Notice of Exemption)		N/A		
Initial Study				
Negative Declaration				
Mitigated Negative Declaration				
Notice of Preparation				
Environmental Impact Report				
Master Environmental Impact Report				
Notice of Determination				
NEPA Document (Environmental Assessment, Finding of No Significant Impact, and/or Environmental Impact Statement)				

☒ **No**. Explain why no document has been prepared. Propose a process for obtaining lead agency approval and estimated date for that approval (~~must occur before the Energy Commission will approve the award~~).

Unable to prepare documentation until project sites have been identified, upon completion of the Google Mapping Tool that will use community input, information about interconnection, and other factors to determine where to site new EVSE installation projects. SF Environment will ensure compliance with CEQA upon identification of proposed sites.

Certification: I certify to the best of my knowledge that the information contained in this worksheet is true and complete. I further certify that I am authorized to complete and sign this form on behalf of the proposing organization.

Name: Shawn Rosenmoss_____

Title: Manager of Development, Community Partnerships and SF Carbon Fund

Signature:  _____

Phone Number: 415-355-3746_____

Email: shawn.rosenmoss@sfgov.org _____

Date: 10/23/2020 _____

Attachment 8

LOCAL HEALTH IMPACTS INFORMATION

SF Environment GFO-19-603

Air Quality Guidelines (California Code of Regulations, Title 13, Chapter 8.1, Section 2343(c)(6)(A)) require the Energy Commission to analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

This information must be provided for all AB 118 funding categories, including fueling stations, fuel production, feedstock production or procurement, and vehicle or technology component production.

INSTRUCTIONS

Please complete the following information *for all sites where work for the proposed project that will require a permit will be done*. Attach additional pages if necessary. If the project includes multiple sites, you may submit this information in a table format using the bolded font below as column headers.

PROJECT NAME

Electric Vehicle Ready Communities Phase II Blueprint Implementation:

EV Charging Plazas

APPLICANT'S NAME AND ORGANIZATION

San Francisco Department of the Environment

PROJECT SITE(S) DESCRIPTION

Provide the precise street address(es) of the site(s) and a description of existing infrastructure or facilities (if any), surrounding structures, reference to any regional plans or zoning requirements for each location, and its proximity to residences, day care facilities, elder care facilities, medical facilities, and schools.

Sites for charging plazas will be identified during the proposed program. One plaza will be located in a DAC, most likely zip code 94124, San Francisco's Bayview Hunters Point Neighborhood. Charging plaza site selection will be made using the Google Mapping Tool that will be completed early in the project. The tool will help the City and charging station providers identify feasible sites that meet basic criteria and are served by sufficient electrical infrastructure. The public will participate in final site selection

using the Mapping Tool's "crowdsource" function. Together, these functions will ensure that investments in electric vehicles supply equipment is both feasible and needed.

PROJECT-GENERATED EMISSIONS

Provide a quantified description of the air emissions (criteria and toxic) directly associated with the project's operations, including, but not limited to: 1) transport (truck or rail) of fuel, feedstock or other material to project site as required for operations and production; 2) production of fuel or technology components; 3) fueling of alternatively-fueled vehicles; 4) potential increases to traffic.

We calculate the emissions associated with the charging plaza project, over the grant period, as follows:

(Total Emissions Reduced by Replacing an ICE vehicle with an EV)

– (Total Emissions Generated Through Operation of Charging Plazas)

– (Emissions Generated Through Construction of Charging Plazas)

= Total Emissions Reduced Through Project

We anticipate that over the grant period, the charging plaza project will result in GHG emissions reduction by powering EV VMT in place of ICE VMT:

Table 1: Charging Plaza GHG Emissions Reduction

Year	Utilization Rate	Number of Chargers	Charge Rate (kW)	Annual kWh	Miles Powered	GHG Emissions Reduced (in metric tons)
1	0	8	80	0	0	0
2	0.15	8	80	840960	2522880	1019.24352
3	0.2	16	80	2242560	6727680	2717.98272
4	0.2	24	80	3363840	10091520	4076.97408
Total over Grant Period						7814.20032

GHG emissions are calculated under the following assumptions:

- *There will be 8 chargers per plaza.*
- *The first plaza will be completed by the beginning of year 2, the second constructed by the beginning of year 3, and the final constructed by the beginning of year 4. The plazas will be under construction the entirety of year 1.*
- *Each mile charged using charging plaza infrastructure replaces a mile that would otherwise be an ICE VMT*
- *One kWh powers 3 EV miles*[1]
- *ICE vehicles emit on average 404 g/mi*[2]
- *Utilization rates will rise over time as presence of the charging plazas facilitates adoption*[3] *but will not surpass EVGo's target utilization rate of 20%.*

[1] As estimated by EVGo in October, 2020.
[2] EPA, "Greenhouse Gas Emissions From a Typical Passenger Vehicle." March 2018. < https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>
[3] Assumption drawn from a white paper by the International Council on Clean Transportation (ICCT), "LESSONS LEARNED ON EARLY ELECTRIC VEHICLE FAST-CHARGING DEPLOYMENTS." July 2018. < https://theicct.org/sites/default/files/publications/ZEV_fast_charging_white_paper_final.pdf>

Tailpipe emissions are zero because the plaza will serve EVs. Upstream emissions are zero because the charging plazas will utilize San Francisco's 100% renewable energy sources. Therefore, operating emissions are zero.

Precise construction emissions will be calculated using the California Emissions Estimator Model (CalEEMod) upon identification of sites and as project plans are developed. Using a general emissions calculator to estimate emissions generated through general construction projects results in a range from 16 – 200 metric tons.

As a result, the final emissions reduction equation is:

7814.2. metric tons

– 0 metric tons

– 16 – 200 metric tons

= 7614.2 – 7798.2 metric tons GHG emissions reduced

Note that this emissions reduction is calculated for the duration of the grant period. The benefits of reduced emissions for all 3 charging plazas (4076.97 metric tons annually) will continue to accrue throughout the lifetime of the plaza.

Additionally, ICCT's paper on early EV fast charging deployment suggests that the presence of DC Fast Chargers has emissions benefits beyond the EV VMT they provide directly.[4] The presence of a DCFC in a neighborhood increases the confidence of potential EV owners that they could charge away from home if needed. This means that the presence of DCFC increases adoption of EVs and reduces range anxiety, even if those new EV owners never actually use the public DCFC. This suggests that additional emissions reductions are likely thanks to this additional induced demand for EVs.

Finally, the plazas will increase traffic in the surrounding neighborhood, but of only zero-emissions vehicles.

PROJECT HEALTH IMPACTS

Using the demographic data and emissions information, provide a description of the project's potential localized health impacts. For this section, "potential localized health impact" denotes the project's potential to add criteria pollutants and toxic air contaminants to a localized air shed and affect ambient air quality levels to an extent that local community health is adversely affected.

PROJECT SUMMARY

Provide the page number in the proposal that describes the project goal and proposed infrastructure changes.

Project sites to be identified upon completion of Google Mapping Project.

Pages 1 – 2 of the narrative define the proposed infrastructure changes:

[4] ibid

San Francisco has established a public-private partnership with EVgo to build **three public fast-charging plazas, the EV-equivalent to the petroleum fueling stations.** One of these plazas will be installed in or adjacent to a disadvantaged community." Additionally, SF will use the Mapping Tool to streamline the process of identifying appropriate charging sites and de-risk the development process.

Each public fast-charging plaza will have approximately 6 – 10 charging stations, to be determined by site logistics.

Page 5 of the narrative map out project goals, including:

- Expedite the project development process for each of the plazas.
- "Connect charging providers with owners of under-utilized or vacant lots, and initiate project development.
- "Explore developing a policy to require existing fueling stations to include public charging.
- "Develop Monetary incentives to charging provider(s) to prioritize and develop projects near MUDs, in or adjacent to DAC, and on major thoroughfares."

Provide estimate of environmental benefits and/or impacts from the proposed project.

The project will provide environmental benefits and impacts due to emissions reduction, as highlighted in the "Project Emissions" section above. Any adverse environmental impacts will be due to initial construction of the charging plazas and will be far outweighed by the environmental benefits of reduced emissions.

OUTREACH EFFORTS

Describe outreach efforts to be implemented throughout the project to educate the surrounding community of these benefits and/or impacts. Include method of outreach (e.g. flyer, town hall meeting), frequency of outreach, number of targeted stakeholders, and information to be provided.

Outreach will be supported by education and materials appropriate for potentially affected residents, with an emphasis on providing information in languages spoken in those neighborhoods. We plan to use a variety of outreach methods to ensure participation in the crowdsourcing function of the Mapping Tool. These will be based on what will work best in selected neighborhoods. In addition, both SF Environment, Grid Alternatives and the SF Municipal Transportation Agency have been very involved in transportation planning in Bayview Hunters Point (the identified DAC for one of the charging plazas) and have done in-depth community engagement. We will leverage these existing relationships and build on ongoing outreach and communication work.

Attachment 10
GFO-20-605
PAST PERFORMANCE REFERENCE FORM
EVGo

Provide references for grants received by the Applicant or team in the last 10 years, or for similar or related types of projects completed in the last 10 years, to verify Applicant's or team's past performance. Each reference must include a contact person name and phone number (or email address). If contacted by California Energy Commission staff, references should be able to speak to Applicant's ability to successfully complete projects in a timely manner.

Applicants should fill out a separate Past Performance Reference Form for each reference addressed in the Project Narrative.

Name of Organization	Bay Area Air Quality Management District (BAAQMD)
Address	375 Beale St, Suite 600, San Francisco 94105
Contact Name	Mark Tang
Contact Title	Program Lead - Zero Emission Vehicles
Contact Phone Number (or Email)	(415) 749-4778 / mtang@baaqmd.gov
Title of Project	Charge! EVgo's Electric Vehicle Charging Project
Agreement Number or Other Unique Identifier	Charge! 19EV006, effective 9/24/2019
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	EVgo requested a six-month extension for COVID impacts.
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Installation of 20 DCFC (50 kW or higher). Project is currently underway

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	CA - Transportation Fund for Clean Air - San Francisco 2019
Address	1455 Market Street, 22nd Floor, San Francisco, CA 94103
Contact Name	Mike Pickford
Contact Title	Senior Transportation Planner
Contact Phone Number (or Email)	415-522-4822 / mike.pickford@sfcta.org
Title of Project	Mixed Use Building Fast Charging in San Francisco
Agreement Number or Other Unique Identifier	SFCTA 20SF01, effective 10/18/2019
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	EVgo requested a six-month extension for COVID impacts.
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Project is currently underway.

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	Bay Area Air Quality Management District (BAAQMD)
Address	375 Beale St, Suite 600, San Francisco 94105
Contact Name	Amy Dao
Contact Title	Strategic Incentives Division
Contact Phone Number (or Email)	(415)749-4933 / adao@baaqmd.gov
Title of Project	Installation of 100 kW EV Fast Chargers Project
Agreement Number or Other Unique Identifier	19RFG13 / Reformulated Gas Settlement West Oakland Grant; effective 10/10/2019
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	EVgo requested a six-month extension and amended contract to replace a site.
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Installation of eight (8) DCFC (100 kW). Project is currently underway

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	Los Angeles Department of Water and Power (LADWP)
Address	111 N Hope St Los Angeles, CA 90012
Contact Name	Yamen Nanne P.E.
Contact Title	Electric Transportation Program Manager
Contact Phone Number (or Email)	213-949-6748 / Yamen.Nanne@ladwp.com
Title of Project	LADWP Commercial Rebate
Agreement Number or Other Unique Identifier	N/A – Rebate, effective 10/3/2019
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	N/A
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Installation of 16 Level 2 chargers at EVgo Headquarters.

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	Bay Area Air Quality Management District (BAAQMD)
Address	375 Beale St, Suite 600, San Francisco 94105
Contact Name	Mark Tang
Contact Title	Program Lead - Zero Emission Vehicles
Contact Phone Number (or Email)	(415) 749-4778 / mtang@baaqmd.gov
Title of Project	Charge! EVgo's Electric Vehicle Charging Project
Agreement Number or Other Unique Identifier	Charge! 19EV077, effective 2/10/2020
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	N/A
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Installation of 20 DCFC (50 kW or higher). Project is currently underway.

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	California Energy Commission
Address	1516 9th St, Sacramento, CA 95814
Contact Name	Thanh Lopez
Contact Title	Air Pollution Specialist
Contact Phone Number (or Email)	(916) 654-3929 / than.lopez@energy.ca.gov
Title of Project	DC Fast Chargers for California's North-South Corridors
Agreement Number or Other Unique Identifier	ARV-15-058 and ARV-15-060
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	EVgo worked with the Energy Commission to execute an extension agreement to open a total of 5 DCFC stations to the public by 3/31/2020 and was able to fulfill this amended schedule. Delays in site development ranged from permitting to utility construction and utility interconnection.
Describe any severe audit findings and how they were ultimately addressed and resolved.	This project has not undergone audit.
Describe the final outcome of the project.	EVgo worked with the Energy Commission to execute an extension agreement to open a total of 5 DCFC stations to the public by 3/31/2020. EVgo successfully installed a total of 14 DCFC and 5 dual port L2s and is currently in the operating period through 9/31/2020.

Attachment 10
GFO-20-605

PAST PERFORMANCE REFERENCE FORM

EVGo

Name of Organization	California Energy Commission
Address	1516 9th St, Sacramento, CA 95814
Contact Name	Delaney Appel (Center for Sustainable Energy)
Contact Title	Rebate Processing Specialist
Contact Phone Number (or Email)	(858) 429-5205
Title of Project	California Electric Vehicle Infrastructure Project (CALeVIP)
Agreement Number or Other Unique Identifier	A-00392
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	N/A
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Opened a 2 x 50 kW DCFC in Orange County on 12/18/2019, currently in the operating period. EVgo has a number of other projects awarded or in queue for this rebate program.

Attachment 10
GFO-19-603

PAST PERFORMANCE REFERENCE FORM
Grid Alternatives

Provide references for grants received by the Applicant or team in the last 10 years, or for similar or related types of projects completed in the last 10 years, to verify Applicant's or team's past performance. Each reference must include a contact person name and phone number (or email address). If contacted by California Energy Commission staff, references should be able to speak to Applicant's ability to successfully complete projects in a timely manner.

Applicants should fill out a separate Past Performance Reference Form for each reference addressed in the Project Narrative.

Name of Organization	Bay Area Air Quality Management District
Address	375 Beale Street, Suite 600 San Francisco, CA 94105
Contact Name	Tin Le
Contact Title	Staff Specialist, Technology Implementation
Contact Phone Number (or Email)	tle@baaqmd.gov
Title of Project	Clean Cars 4 All
Agreement Number or Other Unique Identifier	N/A
(For projects that did not complete (or timely complete) project objectives) Describe the challenges faced, what led to those challenges and indicate whether those challenges were within the Applicant's control.	N/A
Describe any severe audit findings and how they were ultimately addressed and resolved.	N/A
Describe the final outcome of the project.	Project has been going well and has now exhausted available funding and is on waitlist.

Resumes
SF Department of the Environment
Proposal to California Energy Commission
Community EV Implementation

Staff	***Organization***	***Role/Responsibility***
Bevington, Andrew	SFPUC, Utility Analyst	Tech support for e-bike program
Carter, Sandy	SFPUC, Utility Analyst	General coordination on all aspects of project—grid, e-bikes, ombudsperson
Christopher, David	SFPUC, Utility Specialist	Work with Google on mapping tool and data integration
Chu, Lowell	SF Environment, Manager of Energy Programs	Project Manager: Interact with CAM, ensure contract compliance, and monitor budget and lead overall administration of grant
Dawe, Justin	Mobility Executive	Procurement, management, storage, distribution of e-bikes and equipment
Dinh, Paul	EVgo, Field Operations Manager	Manage and improve user experience at charging plazas
Ghantous, Sami	EVgo, Vice President, Engineering & Construction	Oversight of development and installation of charging plaza in DAC. Manage relationships with site development, utilities, contractors, and project managers
Goebel, Bryan	LAFCo, Policy Advisor to City Hall	Provide technical assistance on program design, connect with key stakeholders and participants, and provide ongoing research
Cynthia Ibarra	GRID, Clean Mobility Coordinator	Case manager for e-bike program
Khamoushian, Linda	GRID, Director of Shared Mobility	Program Manager of e-bike program
Lombardo, Nicole	Google, Business Development & Partnerships, Google - Environmental Insights	Project Manager for enhancing Mapping Tool
Loosen, Suzanne	SF Environment, Clean Cities Coalition Coordinator and Zero Emission Vehicle Specialist	Manage e-bike pilot project, coordinate outreach and education with Ombudsperson, coordinate dissemination through CCC
Morelan, Vanessa	GRID Alternatives Bay Area, Program Manager	Case Management for e-bike program participants
Peters, Lars	EVgo, Senior Director of Business Development	Primary point of contact for Phase II charging plazas, and project developer
Sanchez, Tessa	SF Environment, Zero Emission Vehicle Specialist	Lead tracking and monitoring of Mapping Tool enhancement, coordinate with EV Ombudsperson, dissemination, reporting, coordinate update of Playbook
Schumwinger, Matt	Driver's Seat Cooperative, Co-Founder	Manage e-bike program data analytics and reporting
Tyler, Eliana Marcus	SF Bike Coalition, Program Coordinator	Develop and implement e-bike safety training program
Whaling, Jeremy	EVgo, EV Systems Engineer	Technical expert for charging plazas
Witt, Hays	Driver's Seat Cooperative, Co-Founder	Manage e-bike data collection program

Andrew Bevington

406 Boardwalk Ave. #7
San Bruno, CA, 94066
Phone: (650) 307-5207
Email: abevington35@gmail.com

Work Experience:

Utility Analyst - San Francisco Public Utilities Commission
San Francisco, CA. 2019-Present

- Support CleanPowerSF, San Francisco's Community Choice Aggregator program.
- Provide support to large commercial customers served by CleanPowerSF, including coordinating with PG&E to solve billing issues, perform usage analysis to create cost comparisons, and miscellaneous other issues.
- Support CleanPowerSF's Customer Solutions team, including launching new customer programs and supporting existing offerings. Supported programs include demand-response, energy efficiency, and electric vehicle infrastructure.
- Provide customer data support for miscellaneous CleanPowerSF program needs, including customer data analysis, billing analysis, and program research.

Risk & Compliance Analyst - Pacific Gas & Electric Co.
San Francisco, CA. 2017 - 2019

- Support PG&E's Land & Environmental Management (L&EM) team in building a comprehensive inventory and management process for federal, state and local compliance requirements.
- Support roll-out of enterprise reporting process for compliance violations, as well as violation ranking and investigation procedures for L&EM.
- Manage Risk & Compliance Committee process for Law, L&EM and PG&E's General Counsel. This process consisted of monthly meetings with leadership at the VP level to discuss compliance risks, violations, near hits, and operational risks.
- Develop comprehensive compliance communications plan targeting L&EM employees, including environmental, records management and safety requirements.
- Manage the Clarke Environmental Award, a recognition program for environmental compliance and outstanding environmental performance given internally to PG&E employees.

Energy Efficiency Policy Analyst - Pacific Gas & Electric Co.
San Francisco, CA. 2015 - 2017

- Implemented provisions of AB 32, SB 32, and SB 350, California's greenhouse gas reduction bills, across the portfolio of PG&E's energy efficiency programs. Managed projects involving staff across multiple teams both within energy efficiency and outside of the department.
- Supported outreach and coordination with other energy efficiency program administrators and other external stakeholders, including planning and staging off-site meetings, and creating externally facing reports and presentations.
- Managed $750,000 annual energy efficiency sponsorship budget, tracking spending on conference and organization sponsorships and managing the relationship with those entities. Created and implemented market presence strategy unifying energy efficiency sponsorships and external engagement opportunities.

Communications Associate - The Hannon Group, under contract to US Dept. of Energy, Building Technologies Office
Washington, DC. 2014 - 2015

- In coordination with project managers and DOE web team, designed and created web outreach strategy for the High Impact Technology Catalyst program, the umbrella program for the Commercial Buildings Integration team's energy efficiency technology deployment work.
- Translated complex technical reports into fact sheets, web content, presentations, and other externally facing and internally facing materials for DOE's building energy efficiency analysis tools.
- Wrote blog posts and success stories showcasing successful projects for DOE's Energy Efficiency and Renewable Energy blog.
- Supported project closeout on technology demonstration reports and other deliverables by creating supplementary materials and coordinating the approval process.

Technical Activities and Communications Support - National Academy of Sciences, Transportation Research Board
Washington, DC. 2013 - 2014

- Created online surveys to gather webinar and e-newsletter feedback and data through SurveyMonkey.
- Improved data reporting system for weekly Transportation Research Board webinar program, reducing reporting time from 1 hour to 15 minutes or less.
- Wrote and designed website providing instructions and assistance to researchers submitting papers to the Transportation Research Board's academic journal.

Online Media Outreach and Knowledge Management Intern - **World Resources Institute, EMBARQ Program**
Washington, DC. 2012 - 2013

- Translated complex reports focused on the technical capabilities of transportation infrastructure around the world into public-facing blog posts and presentations.
- Created online guides and trained staff to use new Salesforce project management system.
- Created social media posts, gathered and distributed analytics and created monthly web impact report.
- Assisted in planning, outreach and registration for EMBARQ's Transforming Transportation conference.

Education:

UC Berkeley Extension - Certification, Project Management
San Francisco, CA. Ongoing.
American University - MS Sustainability Management
Washington, DC. 2012 - 2014
Humboldt State University - BA Political Science, English
Arcata, CA. 2006 - 2010
University of the Philippines, Diliman - Study Abroad, Political Science
Manila, Philippines. June - December 2008

References available upon request.

SANDY CARTER

scarter@sfwater.org | 410-829-2120 | San Francisco, CA

SUMMARY OF QUALIFICATIONS

- Over 5 years of environmental experience in energy, conservation, and water issues
- Extensive project management experience for non-profits and public agencies
- Master's degree in environmental science and management with specialization in energy and climate; bachelor's degree in environmental studies and political science
- Significant graduate level coursework in statistics and data analysis
- Demonstrated skills at drafting and delivering communication materials on energy technologies and policies

EDUCATION

Master of Environmental Science and Management, 3.91 GPA (June 2019)
Energy and Climate Specialization
Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)
Selected Coursework: Economics for Environmental Management, Energy and Resource Productivity, Energy Law and Regulation, Statistics and Data Analysis
Leadership: MESM Dean's Advisory Council Class of 2019 Representative, Environmental Justice Club Co-Chair, Bren Environmental Justice Advisory Committee Founding Member

Bachelor of Arts in Environmental Studies and Political Science, 3.74 GPA (June 2013)
The University of Chicago, Chicago, IL
Senior Thesis: *Capturing the Sun and Protecting the Earth: Bridging the Human-Nature Divide*

MASTER'S THESIS GROUP PROJECT

Utilizing Flexible EV Charging to Mitigate Renewable Energy Curtailment & Support a Low Carbon Grid
Client: Southern California Edison (4/18 – 6/19)

- Created, as part of an interdisciplinary team, a framework for matching the growing demand for electric vehicles (EVs) with the daily overgeneration of renewable energy in California
- Built a model in RStudio and a web application to show how EV charging times shift in response to price and communication signals and subsequently reduce greenhouse gas emissions and air pollution

EXPERIENCE

San Francisco Public Utilities Commission, San Francisco, CA
***Utility Analyst*, Programs & Planning, Power Enterprise** (9/19 – Present)

- Lead strategic planning efforts, including the creation of Enterprise-wide performance metrics and the facilitation of two 15+ person groups focused on electric rates and key customer accounts
- Create and manage the eMobility Readiness Project, an effort to ensure the SFPUC is fully prepared to support electric vehicle charger deployment involving 24 people across 16 teams
- Engage with the SF Department of Environment weekly on a range of energy and climate issues and programs, such as building decarbonization and light-, medium-, and heavy-duty electric vehicles
- Develop strategies to ensure San Francisco achieves its goal of achieving 100% renewable electricity by 2030 and 100% renewable energy by 2050, in support of the 2020 update to San Francisco's Climate Action Plan
- Conduct technical analysis for special projects, including determining the financial implications of deploying electric vehicle chargers across San Francisco and launching a new program for affordable housing customers

Bren Communication and Southern California Edison, Santa Barbara, CA
***Project Manager*, Strategic Communication for Energy Efficiency in Southern California** (1/19 – 8/19)

- Updated 6 outreach materials and developed 2 video testimonials for a program that spreads awareness about clean energy programs available for income eligible communities of color in LA
- Organized weekly meetings with student fellows and liaised with community organizations in the program

California Public Utilities Commission, San Francisco, CA
***Biomass Carbon Lifecycle Intern*, RPS Team, Energy Division** (6/18 – 9/18)

- Wrote a 100-page report on the climate, environmental justice, and economic tradeoffs associated with using dead trees to produce energy in California that will inform policy and regulatory conversations at the CPUC
- Crafted and implemented a 12-week research plan to review 150 papers and interview 5 stakeholders

-Continued-

EXPERIENCE (Cont'd)

The Nature Conservancy, Michigan Chapter, Chicago, IL
***Project Manager*, African Great Lakes Inform** (remotely from Santa Barbara, CA) (7/17 – 5/18)

- Organized and implemented upgrades to African Great Lakes Inform, a web-based information sharing and delivery system for conservation in the African Great Lakes, while also selecting and training new site owners
- Managed and updated over 200 articles describing programs, projects, success stories, and conservation issues

***Product Manager*, Great Lakes Information Management/Delivery Program & Blue Accounting** (9/16 – 6/17)

- Created technical and programmatic processes for encouraging conservation groups to submit their project data in order to inform regional progress tracking and online dashboards around key Great Lakes issues
- Managed and tracked content on Great Lakes Inform, an online conservation collaboration platform

***Conservation Information Manager*, GLIMD** (1/15 – 9/16)

- Drafted 5 program fact sheets and authored a 60-page report on best practices for collaborative groups
- Improved content classification and ensured continuous functioning of basic web features

Alliance for the Great Lakes, Chicago, IL
Adopt-a-Beach Affiliate (5/14 – 11/14)

- Recruited and trained individuals and organizations to host over 120 beach cleanups in Illinois and Indiana
- Directly coordinated and facilitated weekly education and volunteer events with up to 200 attendees

Green Corps: Field School for Environmental Organizing, Troy, MI
***Community Organizing Fellow*, Sierra Club Beyond Coal Campaign** (8/13 – 10/13)

- Trained individuals in petitioning, phone-banking, and press engagement in order to urge DTE Energy to adopt a Sustainable Clean Energy Plan
- Recruited and managed an 8-person core volunteer team and 50-person extended volunteer network

White House Council on Environmental Quality, Washington, D.C.
National Environmental Policy Act (NEPA) Team Intern (4/13 – 7/13)

- Researched policies and regulations regarding federal and state level environmental review processes
- Analyzed federal agencies' NEPA implementing procedures to ensure compliance with NEPA guidelines

ENVIRONMENTAL AND CLIMATE LEADERSHIP

Co-Chair—Alliance for the Great Lakes, Young Professional Council, Chicago, IL (6/16 – 6/17)
Facilitated monthly meetings and oversaw a 30-person associate board in developing a $10,000 annual micro-grant program to catalyze small-scale community projects consistent with the Alliance's values and mission.

Community Organizing Intern—Sierra Club: National Beyond Coal Campaign, Chicago, IL (6/12 – 9/12)
Drafted political strategies and policies for a city-wide renewable energy campaign, Community Aggregation, and prepared and edited press advisories and releases for a 200-person rally as part of an environmental justice campaign opposing construction of a coal gasification plant

Chair—Chicago Youth Climate Coalition (CYCC), Chicago, IL (6/12 – 12/12)
Coordinated bimonthly meetings for an environmental activism network with representatives from 5 universities and negotiated a group agenda that considered internal resources as well as external political limitations.

Chicago Youth Climate Coalition Representative (10/12 – 12/12)
Director/ Internal Communications Coordinator (10/10 – 11/11)
UChicago Climate Action Network (UCAN), Chicago, IL
Recruited and organized students to collect and deliver petitions and attend rallies for an environmental justice campaign to transition Chicago away from coal-fired power plants; educated over 30 students about the environmental and political concerns of the Keystone XL Tar Sands Pipeline to help determine advocacy actions.

SKILLS & AFFILIATIONS

Computer: Microsoft Office Suite, MS Project, Raiser's Edge, Drupal, WordPress, HTML, RStudio
Presentations: Presented Great Lakes conservation projects to 60+ people at both formal scientific conferences and informal community gatherings; provided updates at board of director meetings for 2 organizations
Publications: Collaborative Best Practices Report at The Nature Conservancy

David K. Christopher

DChristopher@sfwater.org
525 Golden Gate Ave – 7th Floor – San Francisco, CA - 94102 - (415) 470-8779

PROFILE:

Thought leader with 8+ years of experience in economic and environmental consulting, litigation, and policy analysis. Subject matter expertise in climate change risk and resiliency, public infrastructure development, utility resource planning, environmental regulation, and conservation strategies. Technical expertise in econometric, geospatial, and graphical analysis, including mastery of multiple software packages (ArcGIS, QGIS, R, SQL, Stata, BenMAP, and Microsoft Office).

EDUCATION:

Master of Public Affairs (MPA)
Master of Science in Environmental Sciences (MSES)
Indiana University (Bloomington, IN) August 2010- December 2012
Honors: SPEA Scholar, 2012 SPEA Engagement Scholarship Recipient

Bachelor of Science (BS)
Human Geography and Certificate in Env. Studies
University of Wisconsin-Madison (Madison, WI) August 2004- June 2008
Honors: Dean's List
Honor's Thesis: "The Media, Groundwater, and Development: Scientific Input in the *Arizona Daily Star*" (published)

WORK EXPERIENCE:

Utility Specialist, SF Public Utilities Commission (Power Enterprise)
San Francisco, CA January 2020 – present

- Support efforts to identify strategic investment opportunities in electric distribution infrastructure, electric vehicle charging stations, and distributed generation. Conduct research on technical and policy issues, build and maintain interactive maps of electric assets, and develop guidance documents to support planning work.
- Devise and execute spatial and statistical analyses related to infrastructure planning, electric load forecasting, and wholesale distribution tariff compliance.
- Compiled Power Enterprise's successful application for American Public Power Association's Smart Energy Provider designation, which recognizes utilities for maintaining best practices related to energy efficiency, distributed generation, renewable energy, and environmental initiatives.
- Served as Situation Status Unit Leader in SFPUC's Department Operations Center during COVID response.

Associate, The Brattle Group
San Francisco, CA July 2013 – Nov 2019

- Acted as key subject matter and technical expert on consulting and litigation support projects related to climate change risk, natural resource management, water/utility supply planning, public infrastructure development, and environmental contamination. Developed litigation testimony, academic and industry studies, and consulting reports for public (state, local, and federal) and private clients. Designed and executed economic, statistical, spatial, and policy analyses to support project work.
- Served as main project manager for firm's environmental group. Devised and maintained staffing forecasts, budget projections, and project timelines. Supervised teams of analysts and associates to assist with data analysis and report development. Coordinated workflow with external experts and served as key point of contact for clients.

David K. Christopher

DChristopher@sfwater.org
525 Golden Gate Ave – 7th Floor – San Francisco, CA - 94102 - (415) 470-8779

- Advised public agencies on economic and policy issues related to climate change, infrastructure development, and environmental conservation, including: SFPUC, CADWR, CA Office of the Governor, USDOJ, various municipal governments, and multiple water/electrical utilities.
- Served as firm's primary expert in GIS analysis and mapping. Planned and implemented spatial analyses, developed and presented training materials for colleagues on GIS tools and techniques, managed project teams, and developed marketing materials to promote GIS capabilities internally and externally.
- Some examples of key projects include:
    - Spatial and economic analysis of changes in CAA criteria pollutant emissions associated with shutdown of nuclear energy facilities in Illinois, New York, New Jersey, and Pennsylvania.
    - Valuation of health risk associated with changes in particulate matter emissions caused by installation of pollution control technology on coal-fired power plant in Missouri
    - Environmental analyses of urban and agricultural development, water quality, and water supply allocation issues for original jurisdiction water apportionment cases before the US Supreme Court (Florida v. Georgia, Texas v. New Mexico)
    - Economic assessment of public electric utility's ability to pay for mitigation measures to protect endangered bird species in Hawaii
    - Valuation of electrical transmission line and natural gas pipeline right-of-ways for Tribal Nations in Wyoming and Louisiana

Consultant, Haitjema Consulting

Bloomington, IN — August 2012 – August 2013

- Conducted analysis of wetland hydrology for expert witness testimony in a federal Clean Water Act case. Assisted with wetland delineation and basic hydrology modeling.
- Acquired, processed, and analyzed data relating to riparian wetlands and groundwater hydrology, and generated statistical models based on on-the-ground observations
- Coordinated workflow between expert witness teams in hydrology, soil science, and biology. Provided logistical and analytical support for field visit and expert report development

Teaching Assistant and SPEA Scholar, Indiana University

Bloomington, IN — August 2010 – December 2012

- Introductory Statistics- instructed students on basic statistical theory and calculations, as well as basics of programming and use of statistical software
- Applied Math for Env. Science- instructed students on basic calculus principles, led weekly recitation section
- Limnology - led laboratory section and instructed students on data collection, analysis of water quality parameters, and identification of aquatic organisms

Researcher, Delft University of Technology

Delft, Netherlands — March 2012 – September 2012

- Researched the applicability of interactive modeling for the development of public infrastructure projects in California, China, and the Netherlands with a faculty member in the Department of Hydraulic Engineering
- Schematized the water distribution systems in California, China, Thailand, Indonesia and developed diagrams documenting distribution infrastructure for publication. Developed detailed understanding of laws, regulations, and technical design that relate to water use, infrastructure development, and climate change resiliency
- Presented research at conference of European Geographers in Dublin, Ireland. Developed research papers published in the European Journal of Geography (Vol. 4 Issue 1), and E-proceedings of the 2nd International Symposium on Hydraulic Modelling and Measuring Technology Congress (May, 2018)

Lowell Chu

Interim Energy Program Manager

SF Environment
Our home. Our city. Our planet.
A Department of the City and County of San Francisco

CREDENTIALS

Years of Experience: 13

Certifications/Licenses:

- Certified Energy Manager, CEM
- Lighting Certified, L.C.
- California Department of Real Estate
- LEED AP

Education:

- B.S. Mechanical Engineering, California State University Sacramento

EXPERIENCE

SF Department of Environment / Interim Energy Program Manager, 01/2019 - present

- Managed administration, implementation and budget for the Department's energy efficiency and electric vehicle programs.

SF Department of Environment / Senior Energy Specialist, 2010-present

- Managed Bay Area Regional Energy Network Program design, administration and implementation
- Planned/tracked BayREN annual budget to the Department
- Managed RFP and contracting for BayREN Implementor and Administrator contracts for BayREN Commercial Program
- Co-authored of the BayREN Business Plan Commercial Chapter, Program Manual and Implementation Plan
- Contributed to comments on EE proceedings representing City and County of San Francisco

SF Department of Environment / Energy Specialist, 2008-2010

- Performed energy audits at commercial sites, and worked to enroll in energy efficiency programs, tracked and reported on progress of projects, provided quality control
- Provided technical assistance and project management

AutoDesk, San Rafael, CA / Software Engineer 2006-2008

- Researched and developed 3-dimensional organic-modeling module for AutoCAD
- Tested specific features and service packs for the software

Justin Dawe

Mobility Executive

510.559.0955
dawe.justin@gmail.com

Skills

Experienced at building high-performing organizations, identifying & pursuing business opportunities, and leading complex sales and partnership processes in the US as well as internationally.

Education

Harvard Business School / MBA

August 2005 - June 2007, Cambridge MA

Focus on entrepreneurship. President of campus Energy Club.

Stanford University / BS & MS Engineering

August 1993 - June 1998

Completed BS Engineering & MS Engineering Economic Systems in 4 years. Spent one year in manufacturing engineering fellowship at Intel.

Experience

Justin Dawe Enterprises, LLC / Principal

April 2020 - Present, San Francisco Bay Area

Initiate and consult on a variety of ebike and escooter projects, all with the goal of helping more people access affordable, clean mobility. Among these projects:

- created Free Bike program in collaboration with GRID Alternatives to provide free ebikes and similar vehicles to people in need;
- managing the establishment of US operations for a Top 5 global manufacturer of light electric vehicles;
- consulting with several sharing companies on strategy, vehicle sourcing, and program development.

Bird Rides / VP New Ventures

July 2019 - March 2020, San Francisco & Santa Monica CA

Established 20 person New Ventures team at Bird after the acquisition of Scoot. Identified and tested a series of new lines of business for the company.

Scoot Networks / CEO

October 2016 - June 2019, San Francisco CA

Scoot was the world's first shared electric micromobility company. Helped lead Scoot through international expansion in Europe and LatAm, growth to 200 people, and sale to Bird. Promoted from GM to President to CEO.

C12 Energy / Founder & CEO

September 2008 - February 2014, Berkeley CA

Raised $4.5M Series A from Sequoia & General Catalyst, followed by $25M Series B and $200M private equity growth round. Built company to 35 people and a portfolio of energy projects before hiring a management team

to take over.

Early career / Engineer, Community Organizer, Project Manager

June 1998 - July 2005, California / Colorado / Maine / Massachusetts

Worked as an Engineering Program Manager for Sun Microsystems. Left engineering to be a community organizer doing clean energy policy advocacy, culminating in helping initiate, run, and win the nation's first statewide ballot measure for renewable energy (Colorado Amendment 37 in 2004). After MBA, joined Horizon Wind Energy and helped manage development of a portfolio of wind energy projects.

For additional information, see: https://www.linkedin.com/in/jadawe/

Paul Dinh
Field Operations Manager
Phone: 310.954.2936
Paul.Dinh@EVgo.com

EDUCATION AND TRAINING

University of California Davis, BSc- Mechanical Engineering 2003
NABCEP Solar Installer Certificate 2008-2012

EMPLOYMENT HISTORY

EVgo Services LLC
Field Operations Manager

- Responsible for maintaining 98% uptime of EVgo Electric Vehicle charging fleet
- Manage vendor performance
- Collaborate with internal and external development teams to enhance applications and improve charger user experience
- Triangulate with charger OEMs, vehicle manufacturers, network operators and service stakeholders to troubleshoot short and long range opportunities
- Train internal and external departments on agreed responsibilities related to EVSE infrastructure, support and maintenance

UL Responsible Sourcing
Global Operations Manager

- Responsible for global workplace labor and safety operations – representing services in over 125 countries
- Executed global operations field strategy, including resource management, scheduling & logistics, skills development, budgeting, forecasting and quality control
    - Responsible for the quality, cost and delivery of global safety audit services – representing 90% of division revenue
    - Increased operational global capacity by 15% to accommodate an additional $4 million in revenue
    - Improved operational efficiency by 30% through streamlined processes, new IT solutions and refocused training
    - Create and maintain partnerships with vendors, subcontractors, and joint venture partners
- Managed overall operations training program and strategic planning for consistent roll-out and implementation for 300 global staff
    - Executed restructure of training program to reflect changes to industry/client requirements, IT improvements and revised company standards
    - Explored, evaluated, and implemented use of training tools such as: performance support tools, video learning, subject modules, training videos, classroom training, and mentorship programs
    - Collaboration with business departments to ensure training requirements and best practices are reflected in service delivery
- Implementation management and training of IT system go-live
    - Worked with all business departments for requirements gathering and translated needs to IT applications team
    - Conducted classroom trainings, created trained the trainer program, wrote technical manuals and provided training videos on new system(s)
- Provided leadership and mentoring to global teams of 7 Regional Managers, 3 Global Trainers, and 6 line employees

Sami Ghantous
Vice President, Engineering & Construction
Phone: 310.954.2936
Sami.Ghantous@EVgo.com

EDUCATION AND TRAINING

D'Amore-McKim School of Business at Northeastern University- MBA, High Technology
University of Massachusetts Amherst- B.A. Mechanical Engineering

EMPLOYMENT HISTORY

EVgo Services LLC
Vice President, Engineering & Construction

- Managing the team of Project Managers to install EV charging networks across the USA
- Increasing collaboration between site development, utilities, contractors, and project managers
- Managing contractor relationships to ensure safe and high-quality installations
- Standardizing on the tools and process to drive consistency throughout all EVgo installations
- Promoting a positive work environment to enhance customer experience

Shell
New Energies Business Development- Energy Storage

- Led the development of Shell's capabilities to assess and acquire Utility Scale energy storage projects and companies.
- Sought partners through trade shows and network for co-development opportunities
- Established Shell revenue and cost criteria for potential project funding
- Collaborated with Shell Energy to formulate revenue modeling capabilities
- Built in-house expertise for energy storage modelling and sourcing

NEC Energy Solutions
Senior Sales Engineer/Proposal Manager

- Managing the proposal process for Utility Scale battery storage projects of all types of applications.
- Translate customer use cases into technical parameters for Applications Engineering to design systems
- Provide strategic advice to Sales Directors on best options to propose to customers
- Work closely with customers to support their technical needs for project development during the proposal phase
- Prepare and issue final proposal document for submission to customer
- Collaborate with Product Management on forward looking designs to future proposals
- Utilize prior solar experience to lead the analysis and modeling for DC Coupled Solar + Storage

BRYAN GOEBEL
San Francisco, Ca.
415-572-4612
velobry@gmail.com
LinkedIn: https://www.linkedin.com/in/bryangoebel/

- Policy advisor at SF City Hall who oversees innovative labor research and develops policy recommendations to help gig workers and improve the City's community choice energy program
- Former award-winning advocacy and public radio journalist who wrote about sustainable transportation solutions

PROFESSIONAL EXPERIENCE

SAN FRANCISCO LOCAL AGENCY FORMATION COMMISSION, Executive Officer (2018-present) – Staff person for a 5-member commission that includes three members of the SF Board of Supervisors. Manage a team of renewable energy consultants, labor researchers and interns performing research to inform policy solutions to clean energy barriers and poor working conditions in the gig economy. Helped commission the nation's largest representative survey of gig workers, which has been cited in the NY Times, SF Chronicle, TechCrunch, CityLab, and other publications.

BICYCLE COURIER, UberEats, Caviar, Doughbies (2017) – Independent contractor who hustled around San Francisco on a bicycle, delivering lunch, dinner and treats with a smile and friendly attitude.

HUMAN STREETS, Editor and Founder (2017 - 2018) Editor of a start-up non-profit devoted to coverage of bicycle, pedestrian and urban design issues. Oversaw a small freelance team of writers and photographers**.**

KQED PUBLIC MEDIA, Reporter (2013 - 2017) On-air and online transportation reporter covering bicycling, Uber, Muni, BART and the movement for safe streets. Named 2015 "Investigative Reporter of the Year" by the San Francisco Trial Lawyers Association.

FREELANCE, Writer/Reporter (2012 - 2013) Urban planning and sustainable transportation features writer. Stories published in Streetsblog and Rails-to-Trails Magazine.

STREETSBLOG SAN FRANCISCO, Editor/Writer (2008 - 2012) Built Streetsblog SF into a nationally-recognized transportation blog. Managed two transportation reporters and a team of freelance writers and photographers. Turned wonky issues into fun, easy to read stories. Co-wrote the current editorial manual for all Streetsblogs. Staff awarded 2010 Golden Wheel Award from the SF Bicycle Coalition for "intelligent journalism...leading the conversation."

KCBS RADIO, Editor/Anchor/Reporter (2001 - 2008) Overnight news anchor and editor with a focus on issues often overlooked by mainstream news media. Produced live interviews and wrote breaking news stories for KCBS.com.

REDBAND BROADCASTING, Podcast Producer (2001) Produced podcast interviews with authors and writers for the website of Publishers Weekly Magazine.

PREVIOUS EXPERIENCE:

ABC 7 NEWS, San Francisco – Planning editor (1999 - 2001)
KXTV CHANNEL 10, Sacramento – Night assignment editor (1996 - 1998)
HUMAN RIGHTS COMMISSION, Sacramento – Media coordinator (1996)
KFBK RADIO, Sacramento – Managing Editor (1991 - 1996)

PREVIOUS WRITINGS:

https://www.kqed.org/author/bgoebel
https://humanstreets.org/
https://sf.streetsblog.org/author/bryan/

ADDITIONAL AWARDS:

-1995 California Journalism Award from the California State University, Sacramento for coverage of Proposition 209, the anti-affirmative action measure.
-Winner of the Silver Medallion Award from the California Bar Association for a series of investigative reports on Sacramento County Juvenile Hall.
-Named "Favorite Radio Personality" by the Lambda Gay and Lesbian Center for coverage of the 1993 Gay March on Washington.

CYNTHIA IBARRA

cibarra@gridalternatives.org (510) 646-9843 www.linkedin.com/in/cynthia-ibarra-30031a114

OBJECTIVE

Dedicated worker pursuing the opportunity to expand both GRID Alternatives' clean mobility efforts and organizational EID efforts

EDUCATION

Bachelor of Science, Environmental Studies
2012 – 2016

University of California, Santa Barbara (UCSB)

Relevant Courses:

- Energy and the Environment
- Science Writing for the Public
- Advanced Environmental Education and Practicum
- Air Quality and the Environment

EXPERIENCE

Clean Mobility Coordinator
Jan 2020 - Present

GRID Alternatives Bay Area

- Lead integration of clean mobility and solar programs including development of equitable systems and outreach practices
- Build partnership with Bay Area and Central Coast community organizations and stakeholders to expand reach and access of clean mobility programs
- Execute clean mobility projects such as Ride & Drive events, lead acquisition for EV incentive/charging programs, tenant engagement for affordable housing charger installations
- Support Bay Area Air Quality Management District's (BAAQMD) Clean Cars for All program

Program Coordinator
Oct 2018 - Dec 2019

GRID Alternatives Central Coast

- Managed funding contracts with local governments and partner organizations including: keeping clear communication lines, developing systems to keep in adherence with project requirements, liaising with multiple parties to successfully execute invoicing and reporting processes
- Designed, supported implementation, and tracked campaigns resulting in outreach team exceeding monthly lead generation goals

SolarCorps Outreach Fellow
Aug 2017 - Oct 2018

GRID Alternatives Central Coast

- Supported lead generation efforts by attending community events, canvassing, implementing direct mailer campaigns, and obtaining referrals
- Developed curriculum on the topics of outreach and environmental justice and implemented as part of educational programs geared towards high school and college students

Team Lead
April - June 2016

Environmental Education Practicum

- Worked effectively with a group to create a culturally relevant platform for Latino/a parents to be more involved with their student's environmental education

SKILLS

- Bilingual proficiency in English and Spanish
- Skilled utilization of Salesforce
- Enthusiastic learner committed to meeting challenges through the use of new concepts and technology
- Resourceful and responsive team player with a positive attitude

Linda Khamoushian, Director of Shared Mobility

Current Projects

- California Air Resources Board – Clean Mobility Options Voucher Program

Employment History

2020 – Present, Director of Shared Mobility, GRID Alternatives, Sacramento, CA

- Serve as GRID Alternatives' lead on the statewide administrative team for the Clean Mobility Options (CMO) Voucher Pilot Program, funded through the California Air Resources Board
- Develop, design, and implement a multi-pronged equity outreach strategy for the CMO program that centers reaching communities with least resources to independently access major statewide funding
- Directly engage with local government staff, community-based organizations and tribal communities throughout California and provide application and program technical assistance
- Serve as a strong voice for equity on the CMO administrative team including creating a platform where partners and program beneficiaries from frontline communities can use their voices to help shape clean transportation programming

2019 – 2020, Policy Director, California Bicycle Coalition, Sacramento, CA

- Developed, led, and implemented policy agenda including new state legislation and administrative policy and practice
- Serve as a member of the Active Transportation Program Technical Advisory Committee and member of the California Walk and Bike Technical Advisory Committee to provide valuable insight and expertise to the CA Department of Transportation and the California Transportation Commission
- Work with local and state allies, members, and other key stakeholders to develop consensus and lead state campaign efforts for policy change
- Managed and directed policy team members and coordinated closely with development and communications staff on key and on-going funding and outreach matters

2017 – 2019, Senior Policy Advocate, California Bicycle Coalition, Sacramento, CA

- Lead campaign organizer for SB 127 "Complete Streets for Active Living;" developed and executed strategic campaign plan, overcoming political and administrative challenges to present the Governor with strong policy proposal
- Advocated for active transportation priority and inclusion in key equity funding programs provided by the California Air Resources Board, including successfully advocating for bike-share in the Clean Mobility Options program
- Successfully managed and led campaigns for access to clean mobility SB 400 (e-bikes as mobility options) and traffic safety SB 1266 (bicycle traffic control device), both signed by Governor Newsom

Education, Training and Leadership

Master of Urban and Regional Planning, University of California, Los Angeles, 2014

B.A Political Economy in Industrial Societies, University of California, Berkeley, 2010

Nicole Lombardo

Nicole has over a decade of experience in renewable energy and software technologies. Prior to Google, Nicole held senior roles at Intel, Solarcity, and Oracle where she led high performing teams with a focus on business strategy and operations, product management and advertising, and partnerships across customers in public/ private sectors.

EMPLOYMENT

Google
Business Development & Partnerships, Environmental Insights, Project Sunroof
Jul 2015 – Present

Nicole Lombardo leads business strategy and partnerships across Google's Geo's organization for the Environmental Insights team. In this role, Nicole is responsible for partnering with product management and engineering teams to pioneer new products, set strategic go-to-market plans, and manage partnerships for providing access to high quality data. These tools enable public sector and commercial businesses to drive smarter climate policies and profitable solutions to advance sustainability and a resilient, low-carbon future.

Her work has led to receiving the UNFCCC Climate Change award for the launch of Project Sunroof which utilize Google's extraordinary mapping capabilities enabling the world's renewable energy transition. More recently, the work she did to develop and launch Environmental Insights Explorer, led to receiving Google's Green Award, which recognizes teams for their significant contributions that drive sustainability across the company.

Intel
Director, Global Media **Oct 2010 – Mar 2013**

SolarCity
Director, Marketing **Sep 2006 – Oct 2010**

EDUCATION

University of California, Davis
Bachelor of Science/Marketing Communication and Design

Stanford University Graduate School of Business
Executive Program for Women Leaders

Suzanne Loosen

City and County of San Francisco

Years of Experience: 20

Education:
2005: Bachelor of Arts, International Political Economy (honors)
University of California, Berkeley

Summary Biography
Suzanne Loosen is the San Francisco Department of the Environment's Zero Emission Vehicles Coordinator, and the San Francisco Clean Cities Coalition Coordinator. She manages several CEC-funded grants focused on ZEVs and has 20 years of experience in private and public sector transportation program management and communications.

Professional Experience
Suzanne served as a Senior Transportation Planner at the Transit Authority of Marin, where she managed the Congestion Management Program, the Safe Routes to Schools Program, and the Marin Travel Model. She also developed Marin's electric vehicle infrastructure and outreach program, coordinated the site assessment and installation of publicly accessible EV charging stations on municipal properties, and launched National Plug In Day at the Marin Farmers Market.

Suzanne also served as a Transportation and Communications Consultant in the San Francisco Bay Area. During this time, she was a Project Manager for the Bay Area Climate Collaborative, a Project Manager for the Marin EV Program, and a Community Outreach Analyst to communities affected by construction activities associated with the VTA/BART Silicon Valley Berryessa Extension. During her time as a consultant, Suzanne provided technical assistance, cost-benefit analyses, and best practices regarding the adoption of electric vehicles. She also developed an innovative multi-agency collaboration with Marin Energy Authority, Marin Transit, and Transportation Authority of Marin to procure electric buses.

Currently, at the City and County of San Francisco's Department of the Environment, Suzanne manages California Energy Commission grants for alternative fuels planning, hydrogen fuel readiness planning, and multi-unit dwelling EV charging. She coordinates trainings and events to educate a wide array of audiences on alternative fuels, vehicles, and technologies, and works with government agencies and private-sector stakeholders to develop grant proposals and strategies to secure funding for alternative fuel and vehicle projects.

In addition to her work for the Department of the Environment, Suzanne manages San Francisco's Clean Cities Coalition, advancing economic, environmental, and energy security by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption. She also provides technical assistance to San Francisco and Clean Cities stakeholders regarding alternative fuels and vehicles.

Key Skills
Zero emission vehicles; program and policy development and implementation; program and grant management; community outreach and education

Vanessa Morelan

408-406-4527 | morelan.v@gmail.com

EXPERIENCE

GRID Alternatives; Oakland, California

Acting Program Manager | June 2020 – Current

Assistant Program Manager | November 2019 – June 2020

Program Coordinator | March 2019 – November 2019

- Provide case management services in English and Spanish to Clean Cars for All interested parties, applicants, and grantees to assist with the application process and discuss aspects of transiting to clean vehicles.
- Facilitate and review charging incentive reimbursements for program grantees to increase accessibility and independence.
- Advocate for increased opportunity and representation of underserved communities within transit and nexus policy areas.
- Identify and attend outreach events to increase awareness of the program and establish relationships with underserved and neglected communities.
- Coordinate electric vehicle showcases and ride and drives to discuss program opportunities, provide education, and familiarize interested parties with electric vehicles and charging infrastructure.

Energy Solutions & Cool Roof Rating Council; Oakland, California

Energy Efficiency Associate – Codes and Standards | March 2016 – September 2017

- Utilized primary and secondary resources to construct and recommend an energy benchmarking and audit ordinance to the City of Richmond that achieves milestones established in their Climate Action Plan and General Plan.
- Data harvested products certified to the California Energy Commission database to assess Title 20 compliance, identify areas for improvement and develop resources to enhance compliance throughout the compliance chain.
- Coordinated and facilitated Utility-Sponsored Stakeholder meetings and Code and Standards Enhancement reports to assist in the development and implementation of 2019 Title 24, Part 6 energy efficiency standards.
- Explored power factor and harmonic regulations and identified product metrics to assist in estimating statewide energy savings for the Title 20 low power modes Codes and Standards Enhancement study.
- Researched federal efficiency standards to determine additional energy savings opportunities at the state level.

Technical Coordinator, Cool Roof Rating Council | March 2016 – September 2017

- Performed technical review of testing data to ensure completion and accuracy of test methods and roof product ratings.
- Organized and assisted working groups, subcommittees, and the technical committee to support conflict resolution, and the development of standardized test methods, program protocols, and technical research.
- Conducted the interlaboratory comparison study to confirm consistent, accurate measurements among accredited laboratories, manufactures, and test farms.

California Independent System Operator; Folsom, California

Infrastructure Contracts & Management Intern | June 2015 – August 2015

- Consolidated amendments to three-party generator interconnection agreements to improve efficiency and precision of contract negotiations within the greater Queue Management system.
- Investigated tariffs and contract processes of Independent System Operators and Regional Transmission Organizations to support the department goal of streamlining and enhancing the efficiency of interconnection agreements.

Regulatory Affairs Intern | June 2014 – September 2014

- Analyzed San Diego Gas & Electric's vehicle to grid integration pilot programs and collected interview analysis to facilitate the formation of Alternative Fueled Vehicle proceeding comments.
- Researched the regulatory agencies of coordination to enhance internal and external knowledge of organizational structure, regulatory authority, and legal procedure, then presented to the Policy and Client Services department.

University of California Davis Energy and Efficiency Institute

Program Lead and Research Analysis Intern | September 2014 – June 2015

- Conducted research to identify barriers to implementing deep energy retrofits in restaurants to develop recommendations and augment existing SDG&E energy efficiency programs.
- Supported curriculum development for the Intern Development Program, and co-led the program by guiding weekly meetings, promoting correspondence, overseeing granted projects, hosting professional workshops, and supervising research projects.

Research Analysis Intern | October 2013 – June 2014

EDUCATION

University of California, Davis | December 2015

Bachelor of Science: Environmental Policy, Analysis, and Planning - *Energy and Transportation Focus*

Lars J. Peters
Director, Utilities & Public Agencies
Phone: 707-364-9879
Lars.Peters@EVgo.com

EDUCATION AND TRAINING

Kellogg School of Management, M.B.A.
University of Amsterdam, M.A. International Economic Environmental Policy & Regional Economics

EMPLOYMENT HISTORY

EVgo Services LLC
Director, Utilities & Public Agencies

- Responsible for tracking and planning utilities and public agencies funding programs to expand and accelerating the EVgo fast charging network in California and the pacific northwest
- Developing new partner relationships and nurture existing partnerships with the goal of securing funding to build, operate, and own EVgo charging stations

City & County of San Francisco
Senior Advisor, Zero Emission Vehicles / FUSECORPS

- Crafted San Francisco's first Electric Mobility Strategy leading the Subcommittee of the Electric Vehicle Working Group with broad industry and public sector representation
- Introduced 100% Electric Vehicle readiness for new buildings and 100% Electric Fleet ordinances as the first city in the US
- Won a $9M CARB grant to electrify 6 commercial fleets in San Francisco and Sacramento and a California Energy Commission grant to develop an EV Blueprint strategy for San Francisco
- Frequent speaker / panelist on EV policy. E.g., at Prospect Silicon Valley's "Ticket to Ride: Autonomous Vehicle Programs in Public and Private Sectors", Mechanics institute's 'The Future of Cars', 2017 Intersolar and Infocast's 'EV & The Grid' and 'Western Energy Market Summit'
- Scouted and selected sites for the development of high-powered charging infrastructure in partnership with leading charging network providers. Hands-on involvement in utility service provisioning, accessibility compliance and permitting.
- Recruited through FUSE (founded by McKinsey emeritus Lenny Mendonca) for the SF Mayor's office, role extended with support from Supervisor Katy Tang

Meraki
Director Global Service Provider- Sales

- Achieved two consecutive years of 400% growth for Meraki's global business through SP channel
- Built global SP channel and managed relationships with Tier 1 partners resulting in service launches with Verizon, Shaw, KPN, DT, TI and LGI
- Created and presented bi-monthly Webinar product demo with 50-100 attendees (14 months running)
- Developed and executed competitive take out programs for Education and Hospitality verticals. Each resulted in multiple $M business opportunities in the 1st year of launch
- Built the enablement program consisting of SP value proposition, demo script and battle cards

Tessa Sanchez

562.310.3749 hellotessasanchez@gmail.com Oakland, CA

EXPERIENCE

Energy and Electric Vehicle Coordinator

San Francisco Department of the Environment

04/2018 - Ongoing San Francisco, CA

Company Description

- Developed an EV Blueprint for the City of San Francisco. Assisted key city officials to develop strategies for smart city programs focused on EV infrastructure, emerging mobility, public awareness campaigns, and incentive programs. Mayor's office using the Blueprint to achieve the City's bold new vision to make all transportation GHG-free by 2040.
- Design, develop, and deliver energy efficiency and electrification programs for a regional local government partnership.
- Facilitate cross-department collaboration on strategic objectives that support the City's Climate Action Strategy. Originate funding and new legislation opportunities, lead workshops and listening sessions, and analyze the national clean transportation and decarbonization policy landscape.

Analyst

Current, powered by GE 07/2017 - 04/2018 San Ramon, CA

Current blends advanced energy technologies with networked sensors and software to make buildings more energy efficient & productive

- Supported the Customer Success team build the strategic digital pilots business, focused on Fortune 100 companies.
- Managed the project development process by working closely with sales, product, and design & engineering teams to originate and deliver energy management solutions to commercial customers.

Director of Customer Success

WegoWise 06/2016 - 06/2017 Boston, MA

WegoWise is the nation's leading energy benchmarking, building analytics, and sustainability reporting SaaS company

- Led customer support organization responsible for retaining 50% of company's revenue. Functions included client onboarding, technical training, utility data analysis, and energy savings identification within customer's building portfolios.
- Deployed new upsell/cross-sell strategy that leveraged customer data and emphasized cross-team collaboration, resulting in 30% increase in additional revenue within first 6-months.

Senior Client Manager

WegoWise 06/2015 - 05/2016 Boston, MA

- Managed enterprise client relationships, spanning $0.5M+ in business. Evaluated customer portfolio's for upsell/cross-sell opportunities, resulting in $125k in additional revenue during tenure.
- Managed team of three responsible for driving customer retention.

Client Manager

WegoWise 07/2013 - 05/2015 Boston, Ma

- Performed detailed benchmarking analysis on utility data and worked directly with customers to create sustainability plans and recommend energy efficiency measures at targeted buildings.

EDUCATION

B.A. Environmental Analysis and Policy

Boston University

2012

SKILLS

Skills

Program Management **Energy Policy**

Government Affairs **Data Analysis**

Building Auditing **Microsoft Suite**

PROJECTS

CALeVIP

2018 - 2019 SF Department of the Environment

- Cross-functional team lead for forthcoming city-wide EV infrastructure incentive program.
- Guided initial concept and program design, resulting in $20 million dollar proposal.
- Responsible for ensuring timely execution of all major program targets.

EV Mapping Tool

2018 SF Department of the Environment

- Co-led effort with Google's Environmental Insights and Cloud teams to create a mapping and modeling tool that identifies priority areas for near- and long-term EV charging infrastructure investments in San Francisco.

ACHIEVEMENTS

Climbed

the career ladder at WegoWise to become the company's first female Director.

Marched

in the Women's March on Washington

Balanced

approach to work and life. I'm a great lover of hot yoga, bike-commuting, culinary explorations, and the American Southwest.

Matt Schumwinger

Data Consultant

Contact matt@biglakedata.com
Portfolio biglakedata.com/solutions

I am a City of Milwaukee-based, independent consultant specializing in data mining and data visualization. I have seven years' experience in providing data analytics solutions to clients in the non-profit and public sectors. I have graduate-level training in data mining and applications, and have developed and deployed custom analytic tools and web applications for clients. I am differentiated by my expertise in the analysis and communication of spatial data.

Relevant Skills

Analytical

- Statistical analysis (exploratory, inferential, predictive)
- Theory and application of machine learning algorithms
- Spatial analysis and advanced web-mapping
- Data processing, data mining, and text mining methods

Organizational

- Workshop training, large group presentations, facilitation
- Project management and budgetary authority (~$500,000)
- Team-based software development and collaboration

Software & Programming Languages

- R - advanced user and package author
- Javascript /HTML/CSS - proficient
- SQL relational database framework - proficient
- GIS - advanced user of QGIS
- Vector graphics editors (Illustrator, Sketch) - advanced
- Git/GitHub version control and collaboration environment

Work Experience

Data Consultant & Founder, Big Lake Data LLC

2010 – Present

Providing data analytics, visualization, and custom web applications to non-profits and government contractors.

A hallmark of my consultancy is finding the story within the data and then telling it with meaning and clarity. Clients have successfully used my work to develop policy goals, plan new initiatives, and win new business.

Examples and case studies of the solutions I have delivered to clients can be found at biglakedata.com/solutions

Field Organizing Director at SEIU labor union

2009 – 2010

Directed a large-scale field campaign that successfully organized 5,500 homecare workers in Wisconsin.

Administered voter database, assigned turf to organizing teams and made campaign decisions based on data analysis. Created an effective data management process by discerning best practices through consultation with experts, developing appropriate data entry protocol, and hiring skilled staff.

Coordinated the financial and human resources of several allied organizations.

Managed a diverse group of twenty campaign staff and 70+ member organizers. Supervised the work of lead organizers, communication specialists, and database developers.

Systematically assessed and developed skills of lead staff, member organizers, and interns. Planned workshops, trained facilitators, and coached leads on training to their team members' needs.

Program Director at SEIU labor union

2007 – 2009

As Laundry & Food Service Director for SEIU's Midwest affiliate:

Coordinated the union's bargaining and representational work in laundry and food service industries.

Ran volunteer trainings and led canvassing teams for the 2008 Obama Presidential Campaign in Wisconsin and for John Edward's 2008 Presidential Campaign in the Iowa primary.

Supervised staff on special projects, such as strike preparation and internal organizing problems.

Bargaining Director at SEIU labor union

2005 – 2007

As Bargaining Director for a ground-breaking SEIU national organizing project:

Developed and implemented a national bargaining program for thousands of newly organized workers in the business services industry.

Developed mechanisms to measure progress and success of the program, such as peer debriefs and evaluations, and created a national contract tracking database.

Supervised staff responsible for negotiating scores of collective bargaining agreements. Personally bargained contracts at strategic and/or troubled units.

Built staff development goals into bargaining program. Trained fifty staff in bargaining, including intensive training for nine senior staff.

Matt Schumwinger

Data Consultant

Contact matt@biglakedata.com
Portfolio biglakedata.com/solutions

Assistant State Director at UNITE labor union
2003 – 2005

Increased the union's Wisconsin membership by 30% through the successful affiliation of more than 500 workers in ten different bargaining units.

Directly represented and negotiated contracts for more than 1,000 workers with fifteen employers.

Led canvassing teams for the 2004 Kerry Presidential Campaign.

Organizing Supervisor at UNITE labor union
2000 – 2003

Conceived the union's Wisconsin organizing and representational strategy; implemented assignment to grow union from 1,500 to 2,000 members in 2003.

Directed campaign that organized 440 blue-collar county employees in Mobile, Alabama – the first successful public sector organizing campaign in the county's history.

Led teams that varied between three and twelve organizers; supervised lead organizers, evaluated individual performance, and maintained morale.

Strategic Researcher and Campaign Consultant
1997 – 2000

Researcher at UNITE labor union 1999 – 2000

Conducted research to support organizing direct caregivers of the developmentally disabled in New York. This work contributed to the successful organizing of 3,000 new union members in four years.

Wrote comprehensive public critiques of industry, highlighting the relationship between substandard worker pay and poor care. Presented research findings to public officials and the media.

Consultant at Labor Research Association 1998 -1999

Developed expertise on New York State's nursing home industry; consulted for union clients on financial and regulatory aspects of New York and Pennsylvania health care industries.

Created a relational database containing nursing home Medicaid cost report data used for employer and policy research.

Researcher at SEIU labor union 1997 – 1998

Supported multi-party contract negotiations by performing elaborate contract cost comparisons.

Constructed a relational database used to support a 40,000 union member election campaign.

Education

Cornell University BS in Industrial and Labor Relations 1993 – 1997

Concentrations in statistics and labor economics

Stanford University Graduate Certificate in Data Mining and Applications 2015 – 2016

1st Place (of 92 teams) in Kaggle InClass machine learning competition: "Getting a 'Handel' on Data"

Presentations & Workshops

Data Viz Theory & Techniques

Guest lectures to Applied Planning Methods URBPLAN 721 class, University of Wisconsin-Milwaukee December 2015 & 2016

Data Mapping for Non-Profits

Data visualization workshop series sponsored by IMPACT Planning Council, Milwaukee, Wis. March/April 2014

Open Source GIS: Web mapping with MapBox/TileMill

GIS Day, University of Wisconsin-Milwaukee November 2013

Data Visualization Theory and Practice

Presenter at annual conference of the Council for Community and Economic Research, Memphis, Tenn. May 2013

Eliana Marcus-Tyler (she/her pronouns)
1787 McAllister Street, Apartment #1
San Francisco, CA 94115
ertyler23@gmail.com • 973-619-2570

EXPERIENCE

San Francisco Bicycle Coalition, San Francisco, CA *March 2019-present*
Program Coordinator

- Design, establish and revise curricula for Adult Bicycle Education programming, ensuring adherence with the California Vehicle Code and local regulations
- Hire and manage a team of 12 part-time, multilingual bicycle educators, including scheduling, staffing and siting classes around the city
- Oversee multiple education contracts to ensure objectives are executed and invoiced appropriately
- Serve as the organizational thought leader on all matters related to adult bicycle education, including constituent services and PR engagements
- Solicit, secure, and manage additional adult bike education contracts with private companies and public agencies to provide high-quality and individualized services to their organizations
- Drive student attendance and engagement through promotion and outreach, including sending a monthly newsletter to over 5,000 subscribers

One Community Inc.: Institute for Community Equity and Sharing, Brooklyn, NY *November 2018 - January 2019*
Institutional Liaison (Contract Position)

- Conduct research, prepare reports, and present findings to local universities on models of community engagement that they can adapt to be better integrated with their local community
- Collaborate with re-entry organizations to recruit participants for bike mechanic training that will lead to permanent employment

Journey's End Farm Camp, Newfoundland, PA *February 2017 - August 2018*
Assistant Director

- Co-managed the day-to-day functioning of a 60+ person sleepaway camp located on a 210-acre farm
- Interviewed, hired, and supervised a 30+ person staff
- Planned and led an intensive, week-long staff training
- Communicated regularly with parents and guardians of campers and provided additional support to parents and guardians whose children struggled with adjusting
- Supervised, designed and executed camp activities

EDUCATION AND CERTIFICATIONS

League Cycling Instructor #6212 *March 2019-present*
Vassar College, Poughkeepsie, NY *May 2018*
Bachelor of Arts in Sociology *GPA: 3.8*

- Thesis: *"Between 'the Potential' and 'the Actual': Lead Poisoning in New Orleans as State Sanctioned Environmental Racism"*

Honors: Departmental Honors and Member of Phi Beta Kappa (International Sociology Honor Society), 5-time Liberty League All-Academic Honors

Jeremy Whaling
EV Systems Engineer
Phone: 424.397.2149
Jeremy.Whaling@EVgo.com

EDUCATION AND TRAINING

University of California at Irvine, B.S., Electrical Engineering

EMPLOYMENT HISTORY

EVgo Services LLC
EV Systems Engineer

- Designer of Submetering Solutions
  - Developed in house solution for submetering EV charger load for repayment to site host
  - Performed pilot assembly for first run of units
- Level 2 AC charging hardware expert
  - Studied existing Level 2 hardware in use by EVgo
  - Evaluating and testing hardware available in the marketplace
- Low power DCFC (<30 kW) hardware expert
  - Evaluating and testing hardware available in the marketplace
  - Directing vendors to create products for fleet solutions
- Policy and government
  - Represented the company in stakeholder working groups, workshops, and speaking events
-

American Honda Motor Company, Inc.
Grid Connected Project Manager

- Manager of Workplace Charging on campus
  - Liaison to ChargePoint on API development
  - Notified drivers for planned and non-planned outages
  - Invoiced the California Energy Commission for payout of Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) grant
  - Studied electric vehicle charging patterns in home, workplace, and public for application to grid services and renewable energy integration
- Project Manager for Honda Smart Charge
  - Developed and managed a program for Vehicle-Grid Interaction in CAISO markets
  - Resolved contracts between Honda and various utility companies
  - Managed scope of work for three outside vendors
  - Provided feedback to team members, upper management, as well as external entities during development
  - Reviewed legal terms and conditions for users, contracts with vendors, and subcontractors
- Policy and government relations
  - Represented the company in stakeholder working groups, workshops, and speaking events
- Subject matter expert for electric vehicle infrastructure and EV policy for the company

California ISO
Real Time Scheduler

- Monitored and adjusted schedules as necessary to maintain reliability and verify actual flows with adjacent utilities.
- -Communicated effectively to other operators any changes or impacts to system conditions.
- -Detailed knowledge of renewable energy power plants and concepts.
- -Studied the evolution of the grid from customer, distribution, and transmission changes.
- -PI Process book screen designer for scheduling displays.
- -OATI software expert in ETS, ITS, and WebSAS.

Hays Witt

4110 SE Hawthorne Blvd #258, Portland, Oregon, 97214

213-200-1133 | hays@driversseat.co

SUMMARY OF QUALIFICATIONS

- Built and operate the first gig worker data cooperative - connecting gig workers with other gig economy stakeholders via data sharing.
- Developed innovative policy research, analysis, and recommendations on the intersection of new mobility and workers rights for the Cities of San Francisco and Seattle, as well as national advocacy organizations.
- 21 years of experience facilitating the direct engagement of low-wage workers in policy changes that raise industry standards.

EXPERIENCE

Co-founder, Driver's Seat Cooperative – October 2018 – present

Driver's Seat Cooperative is a start-up that empowers gig workers to take ownership of the full spectrum of information that they generate while they work. Starting with rideshare drivers and delivery people, we support worker-owners in sharing, making meaning of, and capturing the value of their data.

Founder and Principal, Strategic Action LLC, March 2017-October 2018

Founded a boutique consulting firm that advised progressive non-profits, local governments, small businesses and worker organizations on how to simultaneously meet workforce, racial equity and environmental goals in rapidly changing sectors of the economy. Specialties in policy research and development, strategic planning, and grassroots engagement.

Deputy Director, Partnership for Working Families, 2016-2017

Responsible for management of multiple policy and organizing initiatives at a progressive national non-profit network. Led and supervised staff in development and execution of core program areas related to the Future of Work, Climate Justice, and Equitable Cities.

Transforming Trash Director, Partnership for Working Families, 2011 – 2015

Led a multi-city initiative to transform the commercial waste and recycling sector, winning good jobs, major reductions in diesel truck emissions, and increased waste diversion.

Southern California Airports Coordinator, Service Employees International Union - USWW, 2007 - 2010

UCLA Lead Organizer, AFSCME 3299, 2004-2006

Neighborhood Revitalization Director, Environmental Health Coalition 2002-2003

Community Organizer, Office of LA City Councilmember Jackie Goldberg, 1999-2001

EDUCATION AND LANGUAGES

- Bachelor of Arts, 1998, The Evergreen State College, Olympia, WA.
- Fluent in Spanish and English.

References available upon request

Letters of Support and Commitment
SF Department of the Environment
GFO-19-603
Implementing Community EV Blueprint

	Organization	Commitment	Value
1	SF Dept of Environment	Project lead, overall management. Staff time commitment	$90,000
2	DoorDash	Support their drivers in participating in e-bike pilot	
3	Drivers Seat	Provide data on 100 delivery workers, provide findings, support development of outreach materials, onboard and train participants	
4	EVgo	Support development of ombudsperson processes, participate in testing and validation of mapping tool, develop charging plazas	$634,390
5	Golden Gate Restaurant Association	Technical assistance for e-bike program, outreach about project	
6	Google	Use Google Geo Environmental Insights Explorer data and Google Cloud tech to enhance EV Mapping Tool created in Phase 1 of EV Community Blueprint. Support Dissemination.	$150,000
7	GRID Alternatives	Program design, community engagement, job training, dissemination	
8	LAFCo	Technical assistance for E-bike pilot	$13,500
9	Postmates	Support for e-bike program	
10	SF Bike Coalition	Tech Support and outreach for e-bike pilot	
11	SF Dept of Building Inspection	Support with streamlining permitting and supporting ombudsperson position	in-kind staff
12	SF Mayor's Office	General support, including policy and coordinating with other city depts	In-kind staff
13	SFMTA	Community outreach, support for e-bike program, charging plaza development, mapping tool, outreach and streamlining infrastructure development processes.	In-kind staff
14	SF Planning Dept	Support with streamlining infrastructure development processes, support for Ombudsperson process/position	In-kind staff
15	SF Public Utilities Commission	Tech support for charging expansion and e- bike program. Support for Ombudsperson processes. Grid-related assistance for charging plazas. Staff time commitment	$125,312
16	SF Supervisor Mandelman	General support including policy	
17	Uber	Support for e-bike program, supporting participating delivery workers	

SF Environment
Our home. Our city. Our planet.
A Department of the City and County of San Francisco

London N. Breed
Mayor

Deborah O. Raphael
Director

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 23, 2020

Dear Mr. Worster,

The San Francisco Department of the Environment (SF Environment) is delighted to commit match funding for Phase 2 implementation of San Francisco's EV-Ready Community Blueprint.

As the designated home of the San Francisco Clean Cities Coalition (SFCCC) for 20 years, we are well positioned to provide funding we receive annually from the US Department of Energy for that program to support outreach, education, and dissemination for this project. San Francisco is a founding member of the Clean Cities Coalition and the Blueprint implementation supports the overall goals of the USDOE, the State and the City and County of San Francisco to accelerate the shift to cleaner fuels and reduce emissions.

Specifically, the SFCCC coordinator will provide project management services for the e-bike program and support reporting and dissemination of project results, including case studies and presentations, organizing webinars, and conducting outreach. The value of the match is $90,000, which will be documented per the terms of the grant agreement.

Our team has put together an outstanding project. I personally am committed to working with other department heads and the Mayor's Office to ensure it achieves its goals and objectives and serves as a model and inspiration to other municipalities.

Thank you for your consideration.

Sincerely,

Deborah O. Raphael

Deborah Raphael
Director
Deborah.raphael@sfgov.org
415-355-3701

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 15, 2020

Dear Mr. Worster,

We write in support of the City and County of San Francisco Department of the Environment's grant application for the California Energy Commission's funding opportunity titled "Electric Vehicle Ready Communities Phase II - Blueprint Implementation."

DoorDash is a technology company headquartered in San Francisco that connects customers with their favorite local and national businesses in more than 4,000 cities and all 50 states across the United States, Canada, and Australia. Founded in 2013, DoorDash empowers merchants to grow their businesses by offering on-demand delivery, data-driven insights, and better in-store efficiency, providing delightful experiences from door to door. By building the local delivery infrastructure for cities, DoorDash is bringing communities closer, one doorstep at a time.

Today, Dashers use a variety of mobility options to complete many different types of deliveries using the DoorDash platform and we are constantly exploring opportunities to assist them in utilizing the modes of transportation that best fit their needs. We find that e-bikes and other forms of emerging mobility can enhance Dashers' ability to complete deliveries quickly, easily, and efficiently - particularly in dense urban areas.

We believe e-bikes serve as a viable, sustainable method of transportation with the potential to reduce vehicle miles traveled, decrease greenhouse gas emissions, improve the Dasher pick-up and drop-off experience in areas where parking availability is limited, and facilitate local goods delivery to the benefit of all three sides of our marketplace in addition to the broader community. To that end, we are eager to make these alternative modes of transportation more easily accessible to Dashers.

At DoorDash, we share the San Francisco Department of the Environment's goal to make the City's transportation system more sustainable, equitable, and efficient. Thank you for your consideration of the Department's grant application as part of the City's efforts to work toward a carbon neutral transportation network.

Mariah Ray
Public Policy and Partnerships Lead
DoorDash

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 23, 2020

Dear Mr. Worster,

The Driver's Seat Cooperative is delighted to support the Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

Driver's Seat is a driver-owned cooperative committed to data democracy. Our mobile app helps on-demand drivers take control and maximize their earnings with free data insights. We pool and analyze that data to deliver unique insights that help city planners and agencies understand and make informed decisions about shared mobility and logistics in their community.

The Driver's Seat shares the SF Department of Environment's goal to improve working conditions of delivery drivers in San Francisco by switching to electric bikes. Food delivery has become a lifeline and critical food distributor for San Francisco residents. As app-based delivery services continue to grow, electric bikes will be key to not only reducing emissions—we see huge potential in e-bikes making deliveries faster and increasing both drivers' earnings and merchant sales, especially in dense urban areas such as San Francisco.

This project continues our partnership with San Francisco's Local Agency Formation Commission (LAFCo) and Department of Environment. Driver's Seat organized, collected, and analyzed data that was the foundation of LAFCo's 2019 labor study on emerging mobility services that included groundbreaking representative survey of gig economy workers. One key recommendation from the study is to establish an electric bike rebate program.

Driver's Seat has a deep understanding and connection with our drivers, which gives us unique insight into the data they share with us. For this program, we will:

- *Provide our mobile app to enable up to 100 delivery workers to collect mobility and earnings data during the study period.*

- *Provide onboarding and training to program participants for the data collection period,*
- *Provide findings to the project team for further analysis and reporting, and*
- *Support the program team in developing outreach materials and public dissemination of pilot findings.*

This project is a wonderful example of a public-private partnership that is helping all of us achieve our goals in way that probably would not happen if we were acting alone.

Thank you for your consideration,

Hays Witt
CEO
hays@driversseat.co

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 23, 2020

RE: Commitment letter City of San Francisco EV Blueprint Implementation

Dear Mr. Worster,

EVgo is pleased to support the San Francisco Department of the Environment's proposal to the California Energy Commission to implement components of its 2018 Community EV Blueprint. As one of the key EV charging stakeholders who participated in creating the Blueprint, we are excited to see it come to fruition.

Founded in 2010 and headquartered in California, EVgo is leading the way on transportation electrification in the state and across the nation. With more than 800 fast charging locations in 66 metropolitan areas across 34 states, we are the largest public fast EV charging network in the country and continuing to expand rapidly. We partner with automakers, fleet and rideshare operators, states and cities, retail hosts like hotels, shopping centers, gas stations, and parking lot operators, and other stakeholders to make it easier for all Americans to take advantage of the benefits of driving an EV. Most recently we have committed to working with General Motors to triple the size of the nation's largest public fast charging network over the next five years.

The City and County of San Francisco Department of the Environment has been a valued partner since we installed our first charger there in 2013. To continue our history of successful collaboration, EVgo is committed to working with the City to ensure that EV charging is available its most vulnerable neighborhood, Bayview Hunters Point. This is particularly important in this time of COVID, as so many residents of these communities are front-line workers, who must have safe and affordable ways to get to work.

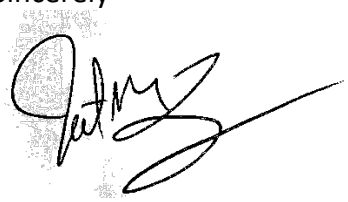
EVgo commits to participating in the implementation of three project elements:

1. Ombudsperson Pilot: EVgo will participate in the testing and refinement of an EV ombudsperson program in conjunction with the development of one large or several smaller EVgo charging plazas.
2. EV Blueprint Mapping Tool: EVgo will participate in the testing and validation of an EV Blueprint Mapping Tool.
3. Charging Plaza: EVgo will develop a charging plaza to be sited in Bayview Hunters Point using the mapping tool

The value of this commitment is $634,390 for the estimated cost of design, permitting and construction of one or more charging plazas with a total of 8 DC Fast Chargers. The source of this funding is EVgo's capital.

Thank you for your consideration of this exciting proposal. Together, we can create a cleaner and greener future for all.

Sincerely



Jonathan Levy
Senior Vice President
EVgo

Jonathan.levy@evgo.com

GOLDEN GATE
RESTAURANT
ASSOCIATION
est: 1936

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 2, 2020

Dear Mr. Worster,

The Golden Gate Restaurant Association (GGRA) is delighted to support the Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

GGRA's mission is to celebrate and empower the restaurant community through advocacy, education, marketing, events, and training. We are a trusted one-stop resource for the culinary community in the Bay Area and beyond. Our member community includes restaurants of all sizes and profiles, and we have a valuable network of resources to support them through all stages of growth.

Supporting the City's Phase II Blueprint implementation is one more project in GGRA's history of successful collaboration with San Francisco and its Department of Environment. We worked closely with Mayor Breed's office on behalf of our members on the 15% delivery commission cap implemented in April 2020, and have coordinated with the Department on a range of initiatives, including Zero Waste and the Green Business Program.

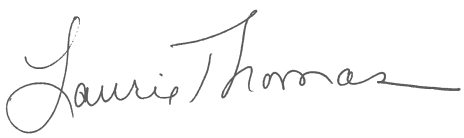
GGRA shares the SF Department of Environment's goal to help delivery drivers in San Francisco access a range of zero-emissions mobility options. Food delivery has become a lifeline for our restaurants and a critical food distributor for San Francisco residents. The prolonged pandemic and shifting consumer habits indicate that app-based delivery services will continue to grow and expanding options for safe, zero emission deliveries is essential to our members' long-term success. Data collected via this program will help them better understand how and where food is being delivered.

To that end, GGRA will provide as-needed technical assistance on the e-bike program, communicate information about the program to our members through our newsletter and social media channels, and work with San Francisco to explore other opportunities to support the program.

In addition to the environmental benefits of zero-emissions transportation, we see huge potential in e-bikes making deliveries faster and increasing both drivers' earnings and merchant sales, especially in dense urban areas such as San Francisco.

This project is a wonderful example of a public-private partnership that is helping all of us achieve our goals in a way that probably would not happen if we were acting alone.

Thank you for your consideration,



Laurie Thomas
Executive Director, Golden Gate Restaurant Association
Laurie@ggra.org

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 7, 2020

Dear Mr. Worster,

Google is delighted to support the application for the City and County of San Francisco's: **Phase II Blueprint implementation is but one more project in Google's history of successful collaboration with the SF Department of Environment.**

Background
As part of Google's most ambitious decade of climate action, we're making a commitment to help more than 500 cities and local governments reduce an aggregate of 1 gigaton of carbon emissions per year by 2030 and beyond. To do this, we aim to support cities around the world like San Francisco, with the Environmental Insights Explorer (EIE), a platform we developed by analyzing Google's comprehensive global mapping data together with standard greenhouse gas (GHG) emission factors to easily estimate the carbon footprint of their buildings and transportation activities, as well as assess interventions that could be designed to reduce emissions.

Purpose and Tasks
Google LLC's contribution to the project is to harness Geo Environmental Insights Explorer data and Google Cloud technologies in collaboration with the City of San Francisco to develop San Francisco's Electric Vehicle Ready Communities Phase II Blueprint, and potentially create a tool that can be used by other cities in California to develop their own EV infrastructure plans. The support will be provided from January of 2021 to December 2021.

Funding
Upon award, Google LLC's is prepared to provide all resources as defined in the City of San Francisco scope of work and budget for the project's duration. If the team is selected, Google LLC is prepared to provide $150k in the form of staff time, equipment, technical advising, research, Geo datasets, and Google Cloud Platform technology and services to run the analysis to support this project.

Duration
This Letter of Commitment may be modified by mutual consent of the signatories, but any change must be communicated to the California Energy Commission.

Thank you for your consideration,

Nicole Lombardo
Google, Environmental Insights Partnerships

Denise Pearl
Google Cloud

October 16, 2020

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

Dear Mr. Worster,

GRID Alternatives Bay Area is delighted to support the Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

GRID Alternatives' vision is for a successful transition to clean, renewable energy that includes everyone. We are a national leader in making clean, affordable solar power and solar jobs accessible to low-income communities and communities of color.

We have a long and successful relationship with the SF Department of the Environment and have partnered with them on several projects—including the installation of more than 100 PV systems in San Francisco's Bayview Hunters Point, a CalEnviroScreen-identified DAC.

In addition to the environmental benefits of zero-emissions transportation, we see huge potential in e-bikes making deliveries faster and increasing both drivers' earnings and merchant sales, especially in dense urban areas such as San Francisco. As a national leader in energy access, GRID is also excited about the potential to share information about this project to the many communities in which we operate.

For this pilot, we will bring our experience with program design and implementation, job training, and community engagement. Specifically, GRID will manage bike procurement and logistics, work with SFE to finalize program design and an implementation plan, and provide case management for individual low-income participants. We will also support SFE in compiling project results and best practices to support scaling or implementing this program in other communities.

This project is a wonderful example of a public-private partnership that is helping all of us achieve our goals in a way that probably would not happen if we were acting alone.

Thank you for your consideration,

Sincerely,

DocuSigned by:
Arthur Bart-Williams
DAA81386C28448E...

Arthur Bart-Williams
Executive Director
GRID Alternatives Bay Area

GRID Alternatives Bay Area | 1171 Ocean Avenue, Oakland, CA 94608 | O 510.731.1310 F 510.225.2585 | E infoba@gridalternatives.org W gridalternatives.org

San Francisco Local Agency Formation Commission
City Hall
1 Dr. Carlton B. Goodlett Place, Room 409
San Francisco, CA 94102-4689
Tel. 415.554.6756 Fax. 415.554.5163

October 2, 2020

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

Dear Mr. Worster,

The San Francisco Local Agency Formation Commission (LAFCo) is delighted to support the application for the City and County of San Francisco's Electric Vehicle Ready Communities Phase II Blueprint.

LAFCo is an independent commission whose mission is to ensure the logical and orderly provisioning of government services. It's made up of three members of the SF Board of Supervisors, one public member and one alternate. State statutes give LAFCo broad authority to conduct special studies, which gives us the ability to assist and support the City on studies and specialized consultant hiring, and to assess its municipal service needs. Some examples of LAFCo special studies for San Francisco include studies on energy services, tidal wave power, waste, undergrounding of utility wiring, open source voting and increasing voter participation.

Supporting the implementation of Phase II of the EV-Ready Community Blueprint is but one more project in the LAFCo's demonstrated alignment with the SF Department of Environment on sustainability issues. We were instrumental to forming San Francisco's community choice energy program, CleanPowerSF. LAFCo also led a 2019 labor study on emerging mobility services that included a groundbreaking representative survey of app-based workers. A key recommendation from the study is to establish an electric bike rebate program, as 39% of surveyed delivery drivers indicated they would switch from a vehicle to an electric bike with an incentive, while 31% said they might switch.

LAFCo is a critical partner to developing such an incentive program. We will provide technical assistance on program design, connect the team with key stakeholders and surveyed participants and provide ongoing research. The value of this commitment is $13,500, funded through LAFCo's budget for staff time from the City of San Francisco's General Fund.

Our implementation activities will contribute to San Francisco's progress towards achieving its goal of net-zero emissions by 2050.

Thank you for your consideration,

Sandra Lee Fewer, Chair
Member, San Francisco Board of Supervisors, District 1

Cynthia Crews-Pollock, Vice Chair
Public Member

Gordon Mar
Member, San Francisco Board of Supervisors, District 4

Matt Haney
Member, San Francisco Board of Supervisors, District 6

Shanti Singh
Alternate Public Member

Postmates Inc.
201 3rd Street
Second Floor
SF, CA 94103

October 21, 2020

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

RE: Proposed e-Bike Rebate Pilot Program for Third-Party Delivery Workers

Dear Mr. Worster,

On behalf of Postmates I am writing to express support for the Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

Launched in 2011, Postmates has pioneered both the technology and logistics powering on-demand delivery in the United States. Our revolutionary online marketplace and mobile platform connect customers with local merchants, and when requested, with local couriers who use Postmates to deliver anything from any store or restaurant in minutes. In an era where e-commerce goliaths are crowding out local businesses with regional warehouses, Postmates is doing the opposite: empowering local brick & mortar merchant partners, through offering greater access to their products. Postmates currently operates in more than 4,200 cities across the United States, providing access to more than 600,000 merchants.

In San Francisco alone, Postmates has partnered with approximately 4,000 merchants across the City & County allowing residents to unlock the best of our city with a reliable on-demand "anything" network. Postmates has helped facilitate the sales of more than a quarter of a billion dollars worth of goods**,** a number that continues to grow amidst the pandemic. And S.F. residents who performed services on the platform as couriers (or “Postmates”) earned nearly $20 million in earnings in 2019 alone.

As we transform the movement of commerce in our cities, we share the SF Department of Environment’s goal to help our delivery drivers’ access a range of zero-emissions mobility options.

- We have partnered with the SF Bike Coalition in the past to amplify the importance of Vision Zero goals as well as encourage members of our fleet to consider bike options.
- We have piloted an e-bike delivery program, in collaboration with GenZe, to ease the carbon footprint of on-demand delivery.
- And we have worked with the City’s Board of Supervisors, City Administrator and Office of Emergency Technology, to pioneer innovative delivery systems such as our non-contact, carbon-free autonomous delivery device known as SERVE.

In that spirit, the EV Blueprint Implementation Project is an opportunity to apply the lessons learned from these carbon-neutral pilots to foster cross-sector collaboration. In particular, the lessons generated from this pilot could inform Postmates’ efforts to expand Postmates’ zero-emissions mobility options across the City and beyond, while balancing the realities couriers face on a daily basis. To that end, Postmates is

open to providing technical assistance on the e-bike program and supporting recruitment if and where practicable.

In addition to the environmental benefits of zero-emissions transportation, we see the potential in e-bikes to increase delivery efficiencies, increasing both drivers' earnings and merchant sales, especially in dense urban areas such as San Francisco -- provided access to the bikes are cost effective.

Thank you for your consideration & leadership during this time.

Vikrum Dave Aiyer
Vice President of Public Policy & Strategic Comms

San Francisco Bicycle Coalition
1720 Market Street
San Francisco, CA 94102

T 415.431.BIKE
F 415.431.2468

sfbike.org

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 20, 2020

Dear Mr. Worster,

The San Francisco Bicycle Coalition is very pleased to support the Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

For over 45 years, the San Francisco Bicycle Coalition has been transforming San Francisco streets and neighborhoods into more livable and safe places by promoting the bicycle for everyday transportation. We are one of the largest and most effective bicycle advocacy groups in the country. Through our working partnerships with City and community agencies, the SF Bicycle Coalition creates safer streets and more livable communities for all San Franciscans.

Supporting the City's Phase II Blueprint implementation extends our long history of successful collaboration with San Francisco and its Department of Environment, including on Vision Zero and Safe Routes to School.

The San Francisco Bicycle Coalition shares the SF Department of Environment's goal of helping delivery drivers in San Francisco switch to electric bikes. Food delivery has become a lifeline and critical food distributor for San Francisco residents, and app-based delivery services will likely continue to grow. The environmental impact of that growth would be mitigated by supporting workers' access to zero-emission delivery options, and switching to e-bikes would ease the impact on curb space demand.

SF Bicycle Coalition served as technical advisor to the LAFCo study that inspired this pilot program. In that study, 70% of those who deliver by bike reported feeling unsafe doing this work in San Francisco. To address that barrier, SF Bicycle Coalition will provide classroom-based (or webinar) and on-bike safety training at the beginning of the pilot program to increase safety and confidence of participants as they use their e-bikes.

In addition to the environmental benefits of zero-emissions transportation, we see potential for e-bikes to increase both delivery workers' earnings and merchant sales by increasing the speed of deliveries in the dense urban area of San Francisco.

This project is a wonderful example of a public-private partnership that is helping all of us achieve our goals in a way that probably would not happen if we were acting alone.

Thank you for your consideration,

Christopher White
Program Director
christopher@sfbike.org

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814
October 15, 2020

Dear Mr. Worster,

The San Francisco Department of Building Inspection (DBI) is delighted to support the application for the City and County of San Francisco's Electric Vehicle Ready Communities Phase II Blueprint.

DBI is the regulatory building safety agency responsible for overseeing the effective and efficient enforcement of building, electrical, plumbing, disability access and housing codes for the City and County of San Francisco's more than 200,000 commercial and residential buildings. DBI is currently overseeing an almost unprecedented building boom in the City. These projects include public and private developments as well as affordable and market-rate housing. DBI's mission is to provide provides transparent, consistent, efficient, and equitable services to support our growing building and infrastructure stock.

Supporting the implementation of Phase II of the EV-Ready Community Blueprint is a continuation of DBI's longstanding partnership with the San Francisco Department of Environment (SFE). The partnership has resulted in the adoption of some of the most aggressive green building standards in the state, the nation, and the world. For example, since 2008, San Francisco has adopted an energy reach code stricter than California's Title 24 Energy Standards in every code cycle, and adopted complementary policies preparing building energy systems for both the present and the future. The partnership also served as a platform to implement groundbreaking initiatives such as the EV Readiness and Better Roofs Ordinances. Both Ordinances are substantially stricter than CalGreen. Specifically, the EV Readiness Ordinance requires new buildings and major renovations to install EV-ready infrastructure, and the Better Roofs Ordinance mandates solar and living roofs on all commercial and residential new construction of 10 floors or less.

As the agency responsible for issuing permits for EV infrastructure, DBI is a critical partner particularly for charging expansion, and to support the EV-Ombudsperson. DBI and SFE shall establish a Memorandum of Understanding to not only memorialize the roles and responsibilities of the EV-Ombudsperson, but also to establish best-in-class permit processes. DBI will also provide permit-related technical assistance on the construction of public charging plazas to serve residents in multi-unit dwellings and disadvantaged and low-income communities. In summary, Phase II implementation activities will contribute to substantial progress to expanding EV infrastructure.

Thank you for your consideration,

James Zhan, P.E.
Senior Engineer and Manager, Mechanical and Electrical Plan Review Division
San Francisco Department of Building Inspection

OFFICE OF THE MAYOR
SAN FRANCISCO

LONDON N. BREED
MAYOR

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 5, 2020

Dear Mr. Worster,

On behalf of the San Francisco Mayor's Office, I am delighted to support the Department of the Environment's proposal to the California Energy Commission to implement Phase 2 of the City and County of San Francisco's Electric Vehicle Ready Communities Phase II Blueprint.

If this grant is awarded, our office will work with relevant city department stakeholders to ensure smooth implementation of the various project components—from installing an EV charging plaza in one of our communities of concern, to creating processes to streamline the permitting process for these chargers, and working with app-based food delivery companies to help their drivers transition to using electric bikes.

San Francisco's groundbreaking initiatives such as our EV Readiness and Better Roofs Ordinances have been modeled throughout California. By creating replicable tools and processes to promote charging infrastructure, successes here in San Francisco will translate into successes throughout California.

Thank you for your consideration,

Andres Power
Policy Director
Office of Mayor London N. Breed

1 DR. CARLTON B. GOODLETT PLACE, ROOM 200
SAN FRANCISCO, CALIFORNIA 94102-4681
TELEPHONE: (415) 554-6141

October 19, 2020

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

Dear Mr. Worster,

The San Francisco Municipal Transportation Agency (SFMTA) is delighted to support the application for the City and County of San Francisco's Electric Vehicle Ready Communities Phase II Blueprint.

SFMTA's mission is to connect San Francisco through a safe, equitable, and sustainable transportation system. The SFMTA is a department of the City and County of San Francisco (City) responsible for the management of all ground transportation in the city. The SFMTA has oversight over the Municipal Railway (Muni) public transit, as well as bicycling, paratransit, parking, traffic, walking, and taxis. We serve San Francisco by creating transportation options that are constant, practical and everywhere; we connect people with their community to enhance the economy, environment and quality of life. We operate today's transportation system and work with our partners to plan the transportation system of tomorrow.

This project is a continuation of SFMTA's long history of successful collaboration with the City's Department of Environment, including working on a range of policies to incentivize the use of mass transit. We have also partnered on two iterations of the City's Climate Action Plan, in 2004 and 2013, and are currently working on another update. Notably, we are collaborating on a range of electric vehicle (EV) plans, policies, and initiatives, including expanding EV-charging infrastructure in municipal lots and garages, exploring potential curb-side charging pilots, and developing strategies to electrify the sector while also prioritizing transit, bicycling and walking trips.

We are excited about the potential for getting app-based delivery drivers out of their cars and onto bikes and are particularly supportive of the Phase II Implementation component to develop a charging plaza in one of the City's low-income communities. SFMTA is committed to transportation equity and has done extensive community engagement and outreach across the city's diverse neighborhoods over the last 20 years, most recently through the Bayview Community Based Transportation Plan. Through our ongoing work in the community, we fully understand the need for access to EV's and a robust charging infrastructure for those who must rely on vehicles.

In closing, the SFMTA's support and partnership in Phase II implementation will ensure success in achieving the objectives of the grant. We are committed to bringing our expertise in shared mobility,

bike infrastructure, bike safety, slow streets, vehicle electrification and curb management to provide technical assistance to this project.

Your consideration of this is sincerely appreciated.

Jeffrey Tumlin
Director of Transportation

San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
www.sfplanning.org

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

September 24, 2020

Dear Mr. Worster,

The San Francisco Planning Department (Planning) is delighted to support the application for the City and County of San Francisco's Electric Vehicle Ready Communities Phase II Blueprint.

Planning plays a central role in guiding the City's growth and development. Furthermore, Planning works with other City agencies and the communities to help balance the needs of residents, businesses, and civic leaders to protect the environment and historical resources, create inspiring and livable urban spaces, cultivate neighborhood resilience, and enforce good land-use practices. In particular, Planning is responsible for zoning and related requirements. These requirements ensure proposed projects' connection to a comprehensive suite of transportation modes. The resulting connections reduce greenhouse gas emissions and improve the quality of life for San Franciscans and visitors.

Supporting the implementation of Phase II is a continuation of Planning's longstanding partnership with the San Francisco Department of the Environment (SFE). In collaboration with the SFMTA, Department of Building Inspection, and SFE, San Francisco has adopted some of the most aggressive sustainability requirements in the state, the nation, and the world. Notably, the Better Roofs Ordinance generates socio-environmental benefits by requiring living roof or solar installation on all new construction of 10 stories or less. In addition, Planning plays the pivotal role of communicating those code requirements to the public, as well as conducting California Environmental Quality Act reviews.

As the agency responsible for zoning for EV infrastructure, Planning is a critical partner for Phase II tasks: EV-Ombudsperson and EV-Charging Expansion. Planning and SFE shall establish a Memorandum of Understanding to not only memorialize the roles and responsibilities of the EV-Ombudsperson, but to also establish best-in-class zoning processes. Planning will also provide zoning-related technical assistance on the construction of public charging plazas to serve residents in multi-unit dwellings and disadvantaged and low-income communities. In summary, the continued partnership between Planning and SFE will contribute to the successful implementation of Phase II tasks.

Thank you for your consideration,

Heidi Kline

Heidi Kline, Senior Planner
Flex Team and PIC Specialist
San Francisco Planning Department

Member, Board of Supervisors
District 8

City and County of San Francisco

RAFAEL MANDELMAN

September 29, 2020

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, CA 95814

Re: San Francisco's Electric Vehicle Ready Communities Blueprint Phase II Proposal

Dear Mr. Worster,

As a member of the San Francisco Board of Supervisors, I am writing in strong support of the Department of the Environment's proposal to the California Energy Commission to implement Phase II of the City and County of San Francisco's Electric Vehicle Ready Communities Blueprint. My district has a high number of electric vehicles (EV) registrations, compared to other parts of the city. Despite the progress, availability and access to public charging infrastructure remains a barrier to expanded EV ridership. With two-thirds of San Francisco residents living in multifamily buildings and City policies that seek to limit the amount of private on-site parking spaces, the lack of public charging infrastructure is particularly acute in our community. In order for San Francisco to comply with Governor Newsom's executive order for new EVs, the City must aggressively expand fast, affordable public charging, while continuing to facilitate convenient and sustainable transportation options.

The City's Phase II project builds the infrastructure required to advance total transportation electrification in San Francisco. It will create an effective process to site EV-charging projects, thereby reducing lead-time and costs for developing charging infrastructure. As a result, by 2025, San Francisco will have three new public fast-charging plazas, one of which will be designated to serve low-income communities. Moreover, the project will inform an equitable and economically-viable plan for existing petroleum fueling stations, many of them small businesses, to transition to vehicle energy centers that will distribute energy to EVs and e-bikes. Finally, the proposal will work with app-based food delivery companies to help their drivers transition to using e-bikes, while improving delivery efficiencies and increasing wages.

With the Governor's recent order to prohibit sales of new gasoline-fueled cars in 2035 and the increasing effects of climate change impossible to ignore, decisive action to broaden EV access is more important now than ever. San Francisco has long been a proving ground for environmental initiatives. With this proposal I look forward to the opportunity to continue leading by example, and hope our bold and innovative EV efforts will inspire and support commitments to an electric vehicle future in communities across California, and beyond. Thank you for your consideration.

Sincerely,

Rafael Mandelman
San Francisco Board of Supervisors

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San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 13th Floor
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Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 2, 2020

Dear Mr. Worster,

The San Francisco Public Utilities Commission (SFPUC) supports the application for Phase 2 funding of the San Francisco EV-Ready Community Blueprint.

The SFPUC operates three essential service utilities. We provide retail drinking water and wastewater services to all residents and businesses in the City, wholesale water in three Bay Area counties, and serve as the primary electricity provider in the City and County of San Francisco. We operate two retail electricity programs – Hetch Hetchy Power, our publicly owned utility, and CleanPowerSF, our community choice program – that offer carbon-free, renewable, affordable, customer-responsive service to over 380,000 accounts.

As the utility responsible for providing more than 70% of the City's overall electricity use, the SFPUC is a critical partner, particularly for charging expansion, but also mode-shifting to electric bikes. The EV-Ombudsperson will reduce charging-project lead-time and costs. The SFPUC will also provide grid-related technical assistance for the public charging plazas intended to meet the unique needs of residents in multi-unit dwellings and disadvantaged and low-income communities. The SFPUC will also ensure that our electric bike program – currently in development -- aligns with this project's e-bike program for mobile-app deliveries. The funding requested for Phase 2 implementation activities will contribute to substantial progress towards the City's commitment to net-zero emissions by 2050.

Thank you for your consideration.

Sincerely,

DocuSigned by:
E7C8A7AF513B400...

Barbara Hale
Assistant General Manager, Power
San Francisco Public Utilities Commission

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

San Francisco Public Utilities Commission Staff time committed to Implementation of San Francisco's EV Community Blueprint							
Name	**General Activity**	**Y 1**	**Y 2**	**Y 3**	**Total**	**$/hour**	**Total $**
David Christopher and team	• Present his outstanding map to Google • Work with Google on data integration; attend meetings • System Testing - test and provide feedback, defects, improvements, etc • Provide HHP capacity data for map (as available/ relevant) • Consulting and conducting implementation activities on development of the e-bike pilot • Assist w/ final evaluation	133	98	81	312	$163.51	$51,021
Sandy Carter	• General coordination on all projects + report review (8 hours/year=32 hours) • e-bike program support (4 hours/year =12 hours) • Mapping tools support (40 hours) • Smart charging pilot integration (10 hours). • Team updates, assist with final evaluation, and reserve for as-needed support for the project (other – 26 hrs)	45	45	30	120	$113.70	$13,644
Andrew Bevington	• Consulting and conducting implementation activities on the development of the e-bike pilot • Assist w/ final evaluation	70	60	50	180	$113.70	$20,466
TBD (most likely Julia Allman)	• Provide general guidance and feedback on e-bike program and staff support	14	12	10	36	$166.48	$5,993
TBD (most likely Mike Hyams)	• Update Assistant GM and provide general guidance and feedback for project.	20	24	20	64	$219.12	$14,024
TBD (Matt Ho or designee)	• Monthly ombudsperson meetings (12 X 1 hour x 3yrs • Engineering support for charging plaza (design review, estimating, scheduling, miscellaneous discussions) (50 hours)	26	36	36	98	$205.76	$20,164
TOTAL					810		$125,312

Uber

Brad Worster, Commission Agreement Officer
California Energy Commission
1516 Ninth Street, MS-18
Sacramento, California 95814

October 2, 2020

Dear Mr. Worster,

We are writing to lend our support for the San Francisco Department of the Environment's Electric Vehicle Ready Communities Phase II Blueprint Implementation for the City and County of San Francisco.

Uber Eats' food delivery platform that makes getting great food from favorite local restaurants as easy as requesting a ride. Our app connects users with a broad range of local restaurants and food, and provides our delivery people with a reliable and flexible way to earn an income.

As the largest mobility and delivery platform in the world, we know that our impact goes beyond our technology and are focused on doing our part to build back better and support a green recovery in our cities and communities. We can accomplish that by helping our drivers go electric and bringing our innovation, technology, and talent to the fight against climate change by partnering with NGO's and public agencies.

Making food deliveries more accessible and more sustainable has been a priority for us and Uber Eats shares the SF Department of Environment's goal to help our delivery drivers' access a range of zero-emissions mobility options like e-bikes and e-scooters. The EV Blueprint Implementation Project is an opportunity to apply the lessons learned from our previous zero-emissions mobility efforts to create a successful cross-sector collaboration. In particular, the data generated from this pilot may help inform our efforts to expand our delivery people's zero-emissions mobility options across the City and beyond.

Thank you for your consideration,

Andrew Byrne
Senior Director, Public Policy
Uber Technologies, Inc.

Table of Contents

PROJECT NARRATIVE

A. Implementation Strategy

1. Project Description and Proposed Changes

The City's Phase II builds from the work performed and needs identified in Phase I. Specifically, San Francisco has identified three Phase I interlocking strategies as having the greatest near term (3-year) potential to accelerate EV adoption and reduce congestion and greenhouse gas (GHG) emissions—1) Public Awareness, 2) Charging Infrastructure, and 3) Fleet & Emerging Mobility Electrification.

The City's public awareness strategy has three components. It will:

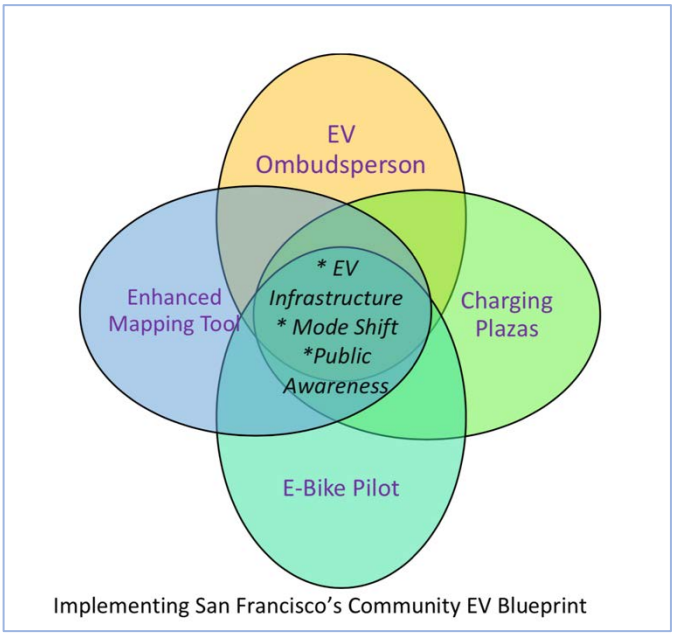
- Continue its public-private partnership with Google to enhance the Phase I Blueprint Mapping Tool to be used by the public and other stakeholders, including municipalities and EV charging providers.
- Create a full-time EV-ombudsperson position limited to 2-year duration. This position is the EV "clearinghouse" for the City, answering all EV-related inquiries from residents, businesses, EV charging providers, city departments and agencies. Additionally, this position will develop a streamlined process to reduce lead time and development costs related to expanding its charging infrastructure in general, and specifically to install three public fast-charging plazas. Best practices will be documented and shared widely with other authorities having jurisdiction to reduce permitting lead times across the state.
- Leverage its GreenStacks partnership with the SF Public Library to and its membership in US Department of Energy's Clean Cities Coalition (CCC) to raise general awareness about EV-benefits and disseminate project information. GreenStacks is a decade-long collaboration that provides environmental information and resources (including EV education workshops) to the 50% of San Francisco residents that hold a library card. The City was founding member of CCC more than 25 years ago and this legacy partnership has built a robust public awareness dissemination system to advance affordable, clean transportation fuels and technologies.

The City is committed to substantially increasing its public charging infrastructure. While EV technology is readily available, and EVs are achieving price parity with internal combustion vehicles, the lack of charging infrastructure remains a stubborn barrier to widespread adoption. This lack of infrastructure is particularly problematic in a dense urban environment like San Francisco, where 2/3 of residents live in multi-unit dwellings (MUD), with little access to off-street parking. A recent International Council on Clean Transportation (ICCT) report estimates that the City will need at least 260 fast charging stations to support the number of EVs projected in 2030—to date, the City has 56.

To increase its charging infrastructure the City:

- Has established a public-private partnership with EVgo to build three public fast-charging plazas, the EV-equivalent to the petroleum fueling stations. One of these plazas will be installed in or adjacent to the City's Bayview Hunters Point-a CalEnviroscreen-identified DAC.
- Will use the Blueprint Mapping Tool to streamline the process of identifying appropriate charging sites and de-risk the process of installing charging infrastructure for developers.
- Will task the Ombudsperson with reducing permitting barriers to rapid deployment of infrastructure

The final component of the City's implementation project will address fleet electrification and mode shift by launching a pilot to help app-based delivery workers transition from internal combustion engine vehicles to electric bikes (e-bikes) for deliveries. Mode shift has been identified as a crucial component in achieving the City's share of the state's emission reduction goals. This highly replicable pilot has significant potential to reduce congestion and emissions, while also improving delivery efficiency, traffic-safety and potentially increasing workers' earnings. The pilot will be informed by LAFCo (Local Agency Formation Commission) and UC Santa Cruz's research (see below) and will provide empirical evidence to inform future mode-shift incentive programs, identify gaps, and establish a sound precedent for other communities and municipalities to replicate.



Implementing San Francisco's Community EV Blueprint

As a result of various clean transportation efforts that the City has completed or embarked on since Phase I, the City is proposing a few enhancements for Phase II implementation of the Blueprint Mapping Tool. It will enhance the Blueprint Mapping Tool with new features and datasets that will significantly reduce charging project development time and expense. Enhanced elements include:

- Google will lend its scalable mapping data and capabilities to enhance the Blueprint Mapping Tool to allow citizens to propose sites for EV charging stations and dramatically reduce the time developers currently spend prospecting for sites. This has been a tedious manual process requiring developer staff time and resources and generally leaves out a valuable resource—the public.

  In addition, the enhancement could allow potential site-hosts who may be interested in providing EV charging as an amenity and additional source of revenue to contribute their needs and ideas for infrastructure. With the customized tool, the user simply enters an address or uploads a photo of a desired location to initiate crowdsourcing and enable anyone to comment and/or vote, based on interest in charging at that location. This gives EV charging providers, parking lot operators, businesses, and local governments, critical information on where there is the most need in the City.

- In late 2019, PG&E made the electrical capacity data in the Integration Capacity Analysis (ICA) map available via an API. This information is an enhancement to the Blueprint Mapping Tool, as critical low-voltage distribution data can be integrated. The Blueprint Mapping Tool will be capable of generating a credible feasibility analysis of an interconnection request, including: 1) grid impact, 2) equipment upgrade costs, and 3) anticipated utilization rates. This capability will eliminate weeks of waiting for the results of PG&E's analysis, allowing charging project developers to quickly assess potential sites for development.

- Users and other stakeholders can integrate consumer data to assess the likelihood that residents of particular neighborhoods will purchase EVs in the future and identify which neighborhoods may need more intensive outreach to encourage adoption.

- Information on underutilized parking garages and lots derived from an SF County Transportation Authority (SFCTA) 2020 geospatial analysis will be added as a data layer. This new information source will be critical for charging project developer siting plans.

- The Google team will integrate real-time traffic flow data to improve driver convenience and accurately calculate GHG emissions from light-duty vehicles.

Furthermore, projects and research completed in the last nine months have also informed San Francisco's selection of specific Phase II activities including:

- ICCT's "EV Charging Demand in San Francisco,"[1] commissioned by SF Environment, quantified the City's charging infrastructure needs by ZIP-codes for San Francisco to meet its goal of reaching 100% EV sales by 2030. The analysis also estimated charging infrastructure for growing electric ride-hailing and urban delivery truck fleets and assessed energy load requirements and grid impacts. It cited the need for public charging plazas and indicated the city would need 260 DCFC and 1,200 public Level 2 chargers by 2030. The study indicated this would also need a 25% increase in sustainable trips and congestion pricing in the downtown business district to reduce overall VMT.
- The Harvard Kennedy School's "Leading the Charge: Public EV Charging Infrastructure for a Greener San Francisco,"[2] also commissioned by SF Environment. The report analyzed EV adoption and municipal charger utilization in the City today and developed a framework for deploying public EV charging infrastructure.
- LAFCo collaborated with UC Santa Cruz to examine working conditions of app-based delivery workers and identified transportation mode shift strategies for TNC-drivers that would alleviate congestion and reduce emissions without impacting employment. This is the most representative survey of on-demand workers in the US, revealing that about 20% of workers may be earning nothing after expenses and that up to 70% would consider switching from cars to electric bikes.
- The San Francisco Public Utilities Commission (SFPUC) continues to develop its "eMobility Readiness Plan" that identifies eMobility programs (including an e-bike program) and streamline the process and support customers installing EV chargers at various scales.
- Google continues to invest substantial staff time and resources to support governments in their climate action planning efforts and reducing emissions. Google has stepped up new commitments to help more than 500 cities and local governments reduce an aggregate of one gigaton of carbon emissions per year by 2030 and beyond. To do this, Google is empowering city planners, policymakers, climate subject matter experts and NGOs with its Environmental Insights Explorer (EIE). Currently their datasets and the EIE tool is accessible to more than 3,000 cities worldwide — a 25-fold increase since launching efforts 2 years ago.
- As part of its Phase I Community EV Blueprint, SF Environment created a Playbook to help guide other municipalities adapt, scale, and replicate the City's EV Ready Community Blueprint best practices to achieve an emission-free transportation future. Specifically, the Playbook is a step-by-step guide that outlines how San Francisco established and coordinated the EV Working Group, engaged with the community, and developed an EV Ready Community Blueprint and Blueprint Mapping tool. Through this project, the team will update the Playbook to include findings from the research, reports, and planning, adding to this original product in order for other California communities and cities to learn and replicate from.

2. Implementation plan for the Phase II, from strategies identified in the Phase I blueprint.

The complete implementation plan is outlined in the Scope of Work. The project will be implemented in the City and County of San Francisco.

[1] [1] Hsu, C. and Slowik, P., "City Charging Infrastructure Needs to Reach 100% Electric Vehicles: The Case of San Francisco," The International Council on Clean Transportation, Working Paper. (2020).

[2] Kong, A. and Bell, J. (2019). *Leading the Charge: Public Electric Vehicle Charging Infrastructure for a Greener San Francisco.* [Master's capstone project, Harvard Kennedy School].

Elements of Phase 1 that have informed Phase II include:

Phase 1 – Strategy Description	**Phase 1 - Action Description**	**Phase II - Implementation**
Public Awareness	EV Staff Position *"Create a City staff position to coordinate a citywide EV public awareness campaign, operate an EV Help Desk, and develop an extended EV test drive program."*	Engage Clean Cities Coalition to promote awareness and help desk Staff EV-ombudsperson
Charging Infrastructure	Off-Street EV Charging Masterplan *"Develop a masterplan to establish a citywide publicly available EV charging network, including fast charging hubs, to meet current and future demand. This masterplan will leverage findings from the EV Blueprint Mapping Tool.*	Blueprint Mapping Tool Enhancement
Charging Infrastructure	Privately-Owned Facilities *"Accelerate deployment of charging stations in privately-owned, publicly accessible parking garages and lots, and identify a pathway to electrify existing MUD parking."*	3 Fast Charging Plazas; one will be in, or adjacent to a DAC
Fleet & Emerging Mobility Electrification	Shared Mobility Services *"evaluate options for electrifying shared mobility services."*	E-bike Pilot for app-based delivery workers as groundwork for scalable program.

3. Technical and economic feasibility.

Project activities are more thoroughly described in the Scope of Work. In general, the team will access the relationships established over the years to ensure various project components are successful. Committed partners include app-based food delivery companies, Google, EVgo, city departments, and community stakeholders (Please refer to enclosed letters of support/commitment).

Economic Feasibility – Based on team experience, this project is economically feasible. A portion of the cost of installing the three charging plazas is being provided by the developer, who has 10 years of experience in this area, has worked in San Francisco and has a thorough understanding of related costs. Creating the Ombudsperson position is based on City salary levels, which are not anticipated to change dramatically. In addition, this position will last no longer than two years. Part of the job will be to put the structures and processes in place to be used by appropriate municipal staff and the position will no longer be necessary.

Technical Feasibility – The Team established the technical viability criteria for the Blueprint Mapping Tool in Phase I. The integration of new datasets, and their continued update, are capabilities built into the Google EIE application. Although the proposed new features are custom to the EIE, crowdsourcing applications have reached market maturity and do not present a technical barrier to the Google engineering team. Fast-charging EV equipment and their ancillary equipment (software and hardware) have also reached market maturity. In the last decade, e-bikes have grown in popularity and scale thanks to a number of recent developments, including: (1) expanded distance ranges due to battery technology improvements, (2) falling purchase costs as the industry achieves economies of scale, and (3) investments in supportive infrastructure such as bike lane networks.

4. Goals, objectives and implementation plan.

The goals of the project are to accelerate EV-adoption by building infrastructure and creating demand for EVs. To that end, the City will deploy strategies to increase awareness, streamline the process for developing large-scale charging infrastructure, build large-scale charging infrastructure, and pilot emerging mobility electrification. Objectives and supporting actions have been incorporated and the Scope of Work.

Ltr	Objective	Supporting Actionable Items
A	Increase public awareness	• Leverage relationship with CCC to promote EVs and mode shift • Leverage SF Environment's Greenstacks partnership with SF Public Library to reach the 50% of San Franciscans with a library card to ensure understanding of the availability and benefits of EVs, as well as to promote use of the Blueprint Mapping Tool • Promote the use of the Blueprint Mapping Tool's crowd-sourcing feature by the public through SF Environment's robust social media network, as well as through partners
B	Establish EV-ombudsperson position and streamline process for developing charging infrastructure	• Recruit and hire for limited-term position • Evaluate root causes of institutional problems & recommend mitigation strategies and tactics • Institutionalize mitigation actions into a process / system; documented in a dynamic guide • Track and evaluate impact; course-correct • Interact with the public on EV-related topics • Represent the City in EV-related events, conferences, and workshops • Develop guidelines for implementing an Ombudsperson process developed to streamline charging station installations and promote EVs, focusing on replicating processes (to be included in Playbook). • Develop guidebook for internal city stakeholders and "sunset" the position
C	Enhance the Blueprint Mapping Tool	• Add distribution-level grid data and other data-sets. • Add capability for crowd-sourcing EV charging sites to the Blueprint Mapping Tool. • Enhance and use new crowd-sourcing features for the public and interested businesses to nominate sites and to become site-hosts.
D	Reduce time spent on siting public fast-charger installations, and capacity analysis by 20% and their associated costs by 10% and "de-risk" installation to the developer	• Conduct studies on requiring existing petroleum stations to add EV-charger(s). • Enhance and use the Blueprint Mapping Tool to quickly evaluate potential site for electrical capacity. • Analyze feasibility of adding charging to existing petroleum stations.
E	Reduce project development time and cost. Reduce times spent on permitting, planning, and interconnection by 20%, and their associated costs by 10%.	• Develop and maintain Citywide database of EVcharging infrastructure projects to document issues and for timely follow-ups. • Deploy the EV-ombudsperson as a single point of contact, the "clearinghouse," for EV charging projects. • Deploy the streamlined process; measure and evaluate effectiveness.
F	Add 200 Level 2 and 50 DCFC throughout SF	• Identify siting parameters of all major charging providers and match them using the Blueprint Mapping Tool.

		• Evaluate Planning Department's list of under-utilized and vacant lots for EV charging potential. Organize the list to share with EV charging providers to initiate prioritizing sites for infrastructure development. • Provide EV charging providers with a list of 50 sites for project development, by Year 2 of the grant. • Recruit new site-hosts for more public fast-charging plazas, particularly under-utilized or vacant lots and petroleum stations. • Connect EV charging providers with owners of under-utilized or vacant lots, and initiate project development. • Explore developing a policy to require existing fueling stations to include public EV charging. • Explore providing incentives to EV charging provider(s) to prioritize and develop projects near MUDs, in or adjacent to DAC, and on major thoroughfares.
G	Complete three public fast-charging plazas, with one located near or in a DAC.	• Deploy the Blueprint Mapping Tool and the ombudsperson to facilitate the installation of three publicly available fast-charging plazas to serve most EV makes and models. • Engage communities about the charging plazas particularly the one that will be installed in or adjacent to the DACs: Bayview Hunters Point, South of Market and Tenderloin
H	Implement a pilot program that provides e-bikes to app-based delivery workers to evaluate performance (vs. cars/bikes) and other key indicators such as impact on GHGs, worker earnings, road safety, and congestion; and identifies best practices, and lays groundwork for scaling up the program.	• Finalize the design process to deliver e-bikes, safety equipment, training, and support to pilot participants. • Implement data collection program using an app-based program that collects time and location data, for two peer groups: e-bike deliveries and vehicle deliveries. • Implement data collection program that evaluates mode-shift benefits; impact on GHGs, worker earnings, road safety, and congestion; and identifies best practices, and lays groundwork for scaling up the program. • Conduct surveys with study participants to understand dollars earned per delivery, number of deliveries made per shift, delivery distance, where their batteries are charged, and dwell time. • Analyze and synthesize results and recommendations for scaling up future incentive programs.
I	Disseminate information about the project to a range of stakeholders	• Update San Francisco's EV Ready Playbook to include: 1. An updated Blueprint Mapping Tool. 2. Guidelines for implementing an Ombudsperson process. 3. Findings from research, reports, and studies conducted. • Develop case study and presentation, to disseminate information about the project, and in particular ensure that other municipalities access the Blueprint Mapping Tool. • Develop case study and presentation on e-bike pilot results to help public- and private-sector actors improve and scale e-bike delivery programs. • Organize webinars to share case studies and results with California local governments and community choice aggregators, individually and through networks such as the Clean Cities Coalitions, Green Cities CA, Urban Sustainability Directors Network, C40, and California Community Choice Association.

The team has engaged in extensive planning for this project and proposed Implementation Plan activities and actions have been informed and vetted by a diverse group of stakeholders and is adequate to achieve

these goals and objectives. The team has secured commitments from private partners such as Google and EVgo, organizations noted for their on-going success. The e-bike component was developed with extensive stakeholder input and has secured support from a diverse set of stakeholders. Organizations from the Golden Gate Restaurant Association to the SF Bicycle Coalition, to delivery-companies such as Postmates and DoorDash, are committed participating in this component of the Implementation Plan.

The project team has long-term relationships with various City departments, such as Dept of Building Inspection (DBI), LAFCo, Planning, SF Municipal Transportation Agency (SFMTA), SFCTA, and SFPUC. They have assisted in the development of the Implementation Plan, have pledged support and/or in-kind match, and are fully aware of the expectations and desired results. The project team has surveyed five EV charging providers across eight projects to identify major institutional barriers as well as the associated length of the delay to the development of rapid charging infrastructure in the City. Thus, the team has a clear sense of the kinds of issues the ombudsperson will need to immediately start working on.

While this is not a comprehensive list, some of the most pressing issues identified include:

Type of Delay	Description of Delay	Project Specs	Length of Delay
Engineering	Power route required multiple redesigns to meet power need and site host requirements.	4 chargers, DCFC/L2	6.5 months
Permit Applications with City	Lack of easily accessible public information resulted in confusion about which permits were required. EVSP had to get permit after finishing construction.	4 chargers, L2	1 year
	Multiple rounds of comments from both building and electrical plan checks, instead of issuing one complete list of comments.	4 chargers, L2	6 months
Construction	Limited area for staging of equipment required project to be completed in phases. No access to storage in public right of way.	4 chargers, DCFC	1 month
Interconnection Process	Interconnection process required multiple City permits including permits from transit, right-of-way, encroachment, etc.	4 chargers, DCFC/L2	8 months
Miscellaneous Delays	Underground interconnections are stopped because of a street excavation moratorium on newly paved roadways	4 chargers, DCFC/L2	3 months

The team's extensive research and other groundwork performed between Phases I and II, the commitments from the range of public and private partners, as well as the Mayor's pledge to reduce GHG emissions while ensuring that environmental benefits are spread across the City ensure project success.

5. Actionable items and Performance Measures.

Ombudsperson--Actionable items include:

- Recruit and hire
- Document processes
- Identify root causes of problems and issues
- Proactively engage and build coalitions with technical experts, local and state authorities, and other key stakeholders
- Ensure effective communication between city agencies, utility partners, and charging providers.
- Facilitate project progress and following up to trouble-shoot issues
- Engage the public to promote EVs and advocate for accessible, affordable and public charging

Why in SF? As the second densest city in the US, the tools, lessons, and processes created here may be used by other cities and communities. As in many municipalities, San Francisco's charging installation process is fragmented and spread out among multiple agencies and departments. Developing EV charging infrastructure is one of the most complex development projects to implement, regardless of density. Generally municipal staff, particularly those who are engaged in permitting and planning, have not been brought up to speed on EV charging projects. Very often they may be a subject matter expert in a specific area and are being asked to apply their skills to EVs and charging infrastructure. Specialized trainings such as California Code Ace that updates building inspectors, designers and engineers on building codes do not exist for EV charging. As a result, many inspectors and planners may not be ready to react to charging plazas and other large-scale charging infrastructure projects.
The ombudsperson will create and operationalize processes and a institutionalize a system to overcome challenges to deploying EV infrastructure. These will be devised to be updated regularly, to become the "Code Ace" resource for EV charging in the future. Furthermore, the ombudsperson will establish best practices that go beyond AB 1236 permit streamlining compliance, like those outlined in GO-Biz's EV Charging Station Permitting Guidebook. Best practices such as established timelines for EV permit application reviews, pre-application meetings with charging project developers, concurrent reviews between overseeing departments, and more consistent collaboration with the EV charging industry, have the potential to substantially accelerate the pace of charging network development. By the end of the ombudsperson's tenure, these best practices will become standard practices in San Francisco.

Performance measures linked to project Objectives 1, 2, and 3 include:

a. Baselining and measuring the reductions in permitting, planning, install times, capacity analysis time, and cost reductions.
    i. *Challenges Summary Report*
    ii. *Root Cause Analysis Report*
    iii. *Quarterly Project Tracking Report*
b. Institutionalize operations, process and systems..
    i. *Interdepartmental dynamic guide that documents the improved process for city employees.*
    ii. *One-stop-shop website to serve EV charging installations for developers, the public and other stakeholders*

Expanding charging infrastructure-Actionable items include:

- Use the Mapping Tool to recruit under-utilized or vacant lots and petroleum stations for public fast charging plazas, prioritizing those near MUDs and DAC/DAC-adjacent and major thoroughfares.
- Use ombudsperson and resulting processes to build three public charging plazas, and to develop, test and finalize a process resulting in 200 publicly-accessible Level 2 and 50 DCFC chargers.

Why in SF? In 2018, nearly 50% of the City's emissions came from the transportation sector—with nearly 75% of these emissions sourced from private cars and trucks. To achieve net zero emissions by 2050, San Francisco has set one of the nation's most aggressive electrification targets—100% of new vehicles will be electric by 2030 (Figure 1), five years in advance of Governor Newsom's mandate. As a major commuter City, San Francisco's charging infrastructure serves drivers from around the Bay Area. Even with the shifting driving patterns as a result of the pandemic, the City needs to continue building EV charging infrastructure to serve commuters.

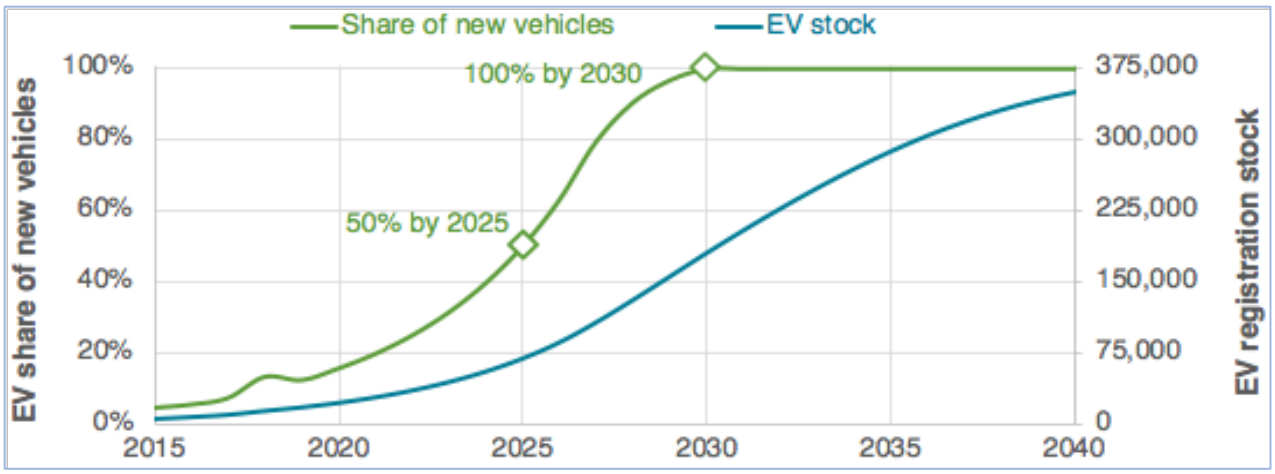


Figure 1. San Francisco new vehicle EV share and total EV stock from 2015 to 2040

Further, according to ICCT, San Francisco needs 260 DCFC stations to support the 2030 goal (Figure 2). The lack of infrastructure is particularly acute for those living in MUDs, without home-charging. Adoption requires increasing infrastructure to improve EV functionality and the convenience for EV drivers. Lessons learned from creating an infrastructure to support those living in MUDs can be replicated in area with a similar housing mix. San Francisco is also home to one of the largest number of EV registrations in the US. As of 2019, over 36% of newly registered vehicles in San Francisco are battery-and fuel-cell electric. To sustain this momentum, the City must proactively plan its infrastructure to match vehicle electrification goals.

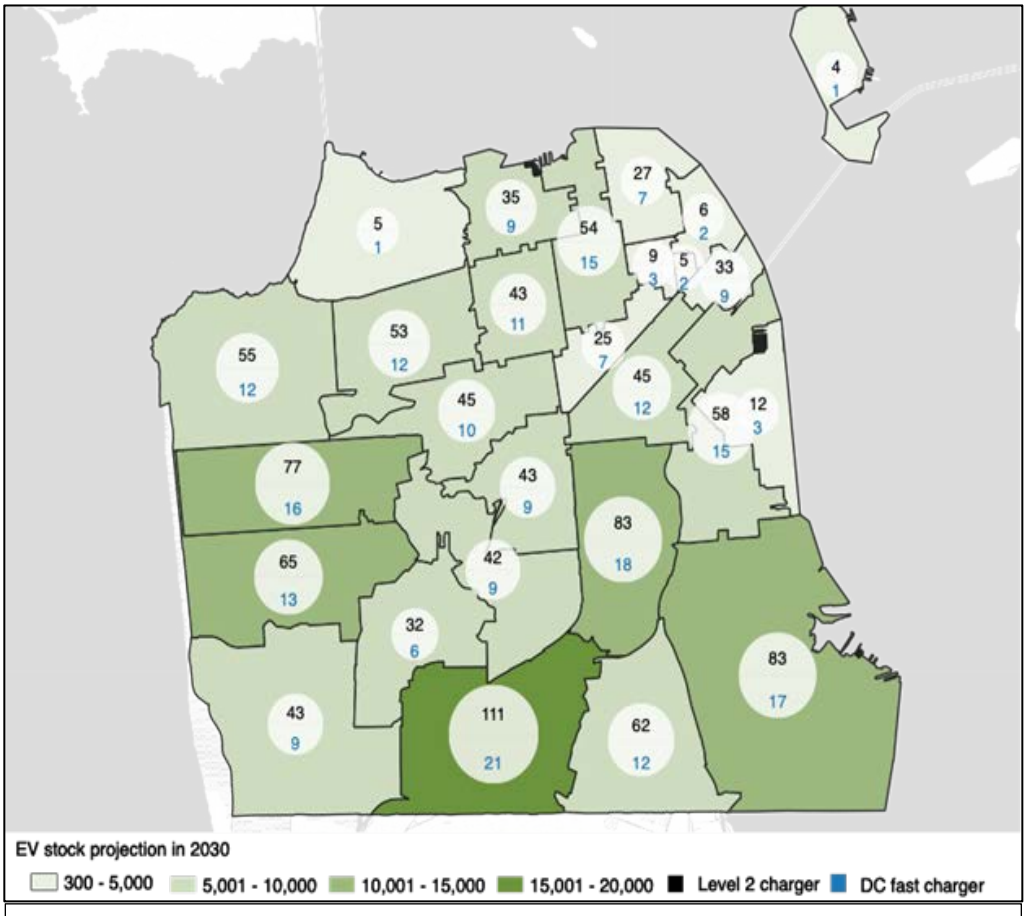


Figure 2: Numbers of Level 2 (black) and DCFC (blue) by 2030

Performance measures linked to Project Objectives B, C and D include:

a. *Sites identified for public charging infrastructure, categorized by DACs, DAC-adjacent and AB1550 areas.*
b. *Project Tracking Report*
c. *Land Utilization Data*

The Blueprint Mapping Tool - Actionable items include:

- Integrate new datasets and develop new functionalities, including crowdsourcing, interconnection analysis, and co-development of fast charging.
- Conduct user acceptance tests and beta-tests with limited public users
- Recruit PG&E territory municipalities to building regional version of Blueprint Mapping Tool

Why in SF? San Francisco has a well-established relationship with Google. The collaboration that initiated in Phase I is relevant not only to getting installation projects up and running, but also to inform policy development around land use development and how spaces get used (commercial garages, gas stations, former brownfield sites). The Blueprint Mapping Tool will allow utility partners, municipal planners, EV charging providers, and even the citizen, to site EV charging stations by simply entering an address or uploading a photo of the desired location to initiate crowdsourcing. With this feature, any user could suggest a location in their neighborhood, and comment or vote based on their interest in charging at that location. Presently, public requests for preferred charging infrastructure come to local governments and EV charging providers only through occasional calls or at community forums. A crowdsourcing feature will give EV charging providers, parking lot operators, businesses, and local governments, critical information on where there is need within the City.

Currently, EV charging providers canvass businesses to identify potential site hosts. The Blueprint Mapping Tool will cut down on this labor-intensive search by serving as a "matchmaker", enabling a direct connection between interested site-hosts and EV charging providers. The Blueprint Mapping Tool will allow commercial property and business owners to express their interest in hosting EV charging as an amenity to their businesses or to generate revenue from underused parking spaces. They can upload photos and/or provide their geographic locations (address, intersection, etc.) directly to EV charging providers. The EV charging providers will receive the request, use the Blueprint Mapping Tool to conduct a preliminary feasibility study, and conduct follow-up.

Additionally, several recent landmark announcements have changed the transportation electrification landscape including CARB's Advanced Clean Truck Rule to accelerate a large-scale transition of zero-emission medium-and heavy-duty (MD/HD) vehicles. Both Uber and Lyft have committed to going 100% electric by 2030. These announcements signal the imminent arrival of mainstream electrified ride-hailing vehicles and MD/HD trucks on city streets. Municipalities can no longer only consider planning for light-duty, private vehicles but must take into account how this diverse mix of EVs will charge over the course of a day. "Co-development"— the enablement of a single location to simultaneously serve multiple vehicle types — will be imperative to the planning process.

The Blueprint Mapping Tool supports co-development by enabling accurate interconnection analysis to precisely calculate the load impacts of a site enabled for multiple charging uses. The inclusion of grid and real estate data allows EV charging providers to quickly identify and prioritize areas of the City with excess power capacity to fast-charge MD/HD trucks and TNC fleets. The Tool also indicates socio-economic data to identify future vehicle-purchasing trends. It can be used to identify low-income neighborhoods where residents may need additional engagement to understand that EVs are accessible for them, as well as neighborhoods where residents may already be on a trajectory for adopting EVs. The Blueprint Mapping Tool could even identify traffic flow to improve driver convenience. For instance, if there is a 4-way

intersection, the preferred fast-charging site is the corner on the right after the light to avoid left-hand turns, and to allow drivers to get past the light before charging.

As municipalities consider future transportation options and developing EV charging infrastructure, they must develop a thorough understanding of impacts to the grid of future EV adoption levels and charging patterns. With newly available ICA grid map data, the Blueprint Mapping Tool will provide grid transparency, with efficient visual and graphical displays, to quickly assess the feasibility of deploying EV charging stations without increasing soft costs and engineering time. This information is crucial to facilitate efficient charging station placement and related capital investments. Currently, delays in the grid interconnections can add more than a year to a project schedule and thousands of dollars in soft costs. The Blueprint Mapping Tool will significantly reduce the time required of EV infrastructure stakeholders, municipal planners, and other users (researchers, industry advocates, etc.) and reduce or even eliminate the upfront soft cost associated with grid interconnection requests.

The Blueprint Mapping Tool has the potential to provide real-time data that will allow for sophisticated policy intervention, such as targeting public programs and long-term asset planning. It will enable municipal planners and policymakers to initiate planning for charger network development in the same way that they currently plan for land use and transportation in their General Plans. By removing the current bottleneck in interconnection request processing, a problem that will only get worse as EV adoption grows, stakeholders will be better equipped to meet their aggressive electrification and carbon emissions reduction goals. As a founding member of the Bay Area EV Coordinating Council, San Francisco is ideally positioned to disseminate the Blueprint Mapping Tool to municipalities throughout the State. Google will partner with the team to disseminate to other state municipalities.

Performance measures linked to Project Objectives D, F and G include:

d. Google/SF Environment Check-ins (biweekly)
e. Project Management Plan w/ Mile Markers
f. Education and Outreach Plan to select California/U.S. Cities
g. Blueprint Mapping Tool has been tested and validated.

E-Bike pilot project - Actionable items include:

- Implement program to deliver e-bikes, safety equipment, training, and support to pilot participants.
- Implement data collection program using an app-based program that collects time and location data (daily total vehicle miles traveled (VMT), daily routes to identify high-traffic corridors, times when no freight deliveries) for two cohorts: 50% e-bike deliveries and 50% vehicle deliveries.
- Conduct surveys with study participants to understand gross earnings and work hours, dollars earned per delivery, number of deliveries made per shift, delivery distance, dwell time, and times when no deliveries are made.
- Analyze and synthesize results and recommendations for scaling up future incentive programs.

Why in SF? San Francisco is a pioneer in shared mobility services, such as car share, TNCs, bike share, and scooters. For years, there have been major concerns with the increase in daily ride-share and delivery trips in the City. This concern has been exacerbated by the COVID-19 pandemic, as food deliveries have increased dramatically via app-based programs. According to research firm, Second Measure, national spending on meal delivery services was up 158% year-over-year in August 2020. Food delivery has become a lifeline for restaurants and critical for residents. A prolonged pandemic and shifting consumer habits indicate that app-based delivery services will continue to grow. At the same time, it is imperative to reduce the number of vehicle trips and shift to sustainable modes. It is the responsibility of local governments to understand this phenomenon and develop solutions that ensure positive outcomes for residents, restaurants,

workers, and the environment, but there is limited data to support these efforts. Fortunately, the first-of-its-kind study commissioned by LAFCo, and conducted by UC Santa Cruz, finds that the industry is primed for mode shifting and electrification.

Performance measures linked to Project Objective E include:

h. Recruit two cohorts of program participants: 50% e-bike and 50% vehicle drivers.
i. Provide e-bikes, orientation, safety training and equipment, and test period for participants.
j. Launch data collection period; conduct surveys.
k. Complete final project report and case study.

6. How the proposed project(s) will be transformative to addressing ZEV adoption barriers.

Many studies substantiate that a lack of public charging is a primary barrier to EV-adoption. With nearly ninety petroleum stations in San Francisco, petroleum-powered vehicles have myriad convenient fueling options. These vehicles embark on trips outside of the Bay Area and beyond, knowing that fueling infrastructure is available and accessible. As noted, 2/3 of San Francisco residents live in MUDs and the lack of public fast charging is more acute. For electricity to become the dominant fuel for motor vehicles by 2030, EV charging stations must be the new petroleum stations of the future.

EV charging plazas will be transformative to addressing ZEV adoption barriers because it makes operating an EV convenient and secure, especially for MUD residents. From the Blueprint Mapping Tool to the EV-Ombudsperson, the increase in visible charging sites will change the mindset of the everyday drivers. Their presence signals that access to electricity as a source of vehicle fuel is equivalent to petroleum, and the security of a full tank of gas is just a few miles away for those without home or workplace charging.

Separately, e-bikes' innovations and practicality are accelerating their adoption across the world. Yet, their potential for use in local, app-based deliveries remains unknown. The proposed mode-shift pilot will gather operational and survey data and analyze the applicability of e-bikes in this growing sector. The pilot will assess motivations and incentives for app-based delivery workers to shift from vehicles to e-bikes. It will uncover an entirely new market-sector for e-bikes, which can improve worker satisfaction and earnings while reducing automobile VMT and emissions. Data from this pilot program can also help make the case to public agencies and CCAs to include e-bikes in incentive programs such as Clean Vehicle Rebate Program.

7. Describe how the proposed project(s) may be replicated in other regions and/or communities.

The Blueprint Mapping Tool and ombudsperson will provide the technology and approach for other regions and/or communities to build public EV charging plazas, as well as identify under-used sites for single chargers. The manner of replication will be similar to that used to deploy Google's EIE GHG accounting and rooftop solar potential. Once the San Francisco version of the Blueprint Mapping Tool, with its additional datasets and features, moves into beta in EIE Labs, other jurisdictions and municipalities can sign up to develop a similar mapping tool.

In addition, as California continues to invest in transit-oriented development, models for streamlining the installation of charging plazas to serve these developments will be vital. Replicating the ombudsperson function is replicable to that end, as well as supporting general EV adoption and infrastructure creation.

The team will update the Phase I "Playbook" with Root Cause Analysis, detailing the challenges and solutions implemented to inform other jurisdictions. The update will also include findings to inform new sites for EV charging plazas. The methodology will assist other regions and communities in considering

land-use and environmental policies. Notably, other cities with similar density and land-use limitations can consider taking a similar approach to finding new sites and site-hosts.

The e-bike pilot will provide much needed data and best practice recommendations to jurisdictional authorities and CCAs to develop their own mode shift, emissions reduction, and load building programs that are necessary to meeting California climate goals. Finally, this pilot has the potential to increase worker earnings, which is particularly important as data shows these are primarily low-income wage earners. The project may increase worker satisfaction, and safety in communities with high congestion and pedestrian safety concerns.

8. Project schedule.

Component	Activity Description	Milestone	Duration	Lead	Support
Task 2 Blueprint Mapping Tool	Project initiation	Project kick-off meeting	M 1	SFE	Google
	Add new datasets; develop and establish new functionalities	Identify datasets, compile and integrate	M 2	SFE	Google
	Establish open data-sourcing model to bridge connection with EV charging providers	Finalize Agreements	M 5	Google	SFE
	Move Blueprint Mapping Tool from prototype to Google Platform and Tools	Announcement on EIE Labs site	M 9	Google	
	Scale Blueprint Mapping Tool to select California/U.S. cities	Mass-market Adoption of the Blueprint Mapping Tool	M 12	SFE	Google
Task 3 Ombuds-person	Create job description, interview, hire, and onboard new staff member	Staff hired	M 1 – 3	SFE	
	Create a baseline summary report of EV charging installation challenges	Challenges Summary Report	M 4	SFE	DBI/CPC /EVSE/Utilities
	Establish monthly check-ins with utility providers, agencies, and EV charging providers	Root Cause Analysis Report	M 6	SFE	DBI/DPW /EVSE/Utilities
	Develop a system to track public EV charging installation projects	Quarterly Project Tracking Report	M 7 - 8	SFE	DBI/EVSE
	Apply new processes to Charging Plaza Expansion Task; iterate and improve	One-stop-shop website	M 9 - 24	SFE	EVSE
Task 4	Conduct stakeholder engagement prior to project	3 community meetings	M 1 - 6	SFE	-

Component	Activity Description	Milestone	Duration	Lead	Support
EV Charging Plaza Expansion	development and incorporate feedback into planning				
	Use processes and products from Tasks 2 and 3 to expedite permitting, zoning, interconnection processes	Sites identified and developed	M 6 - 36	SFE	EVSE
Task 5 E-bike Pilot for App-Based Delivery Workers	Finalize pilot design and implementation plan with key partners	Final Implementation Plan	M 1-3	SFE	GRID, DSC, LAFCo
	Conduct project initiation meeting with project partners, app-based delivery companies, and other relevant stakeholders	Agenda and list of participants	M 4	SFE	GRID, DSC, LAFCo
	Recruit participants	Outreach list from LAFCo study	M 4	SFE	DSC, GRID, LAFCo
	Launch "Cohort #1 (15 participants) and begin data collection period	Kick off meeting for participants Safety Training	M 5	SFE	GRID, DSC, LAFCo
	Launch Cohort #2 (15 participants) and begin data collection period	Kick off meeting for participants Safety Training	M 8	SFE	GRID, DSC, LAFCo
	Administer participant surveys at 6 and 12 months milestones	Survey instruments	M 10-21	SFE	GRID, LAFCo
	Transfer e-bike titles of ownership to participants	Pilot completed	M 17-21	SFE	GRID
	Complete final project report and case study: • review, analyze, synthesize study results • identify challenges and best practices • recommend incentive levels for future e-bike programs	Final Report and Case Study	M 21-24	SFE	GRID, DSC, LAFCo
Task 6 Outreach/ Dissemina-tion	• Update Playbook • Organize webinars to share case studies and results	Present to 3 audiences	M 24-36	SFE	SFCCC,

9. Project partners, relationships and obligations

SF Environment is the project lead. Partners include the SFPUC, the SFMTA, EVgo, Google, LAFCo, Driver's Seat Cooperative, SF Bicycle Coalition, and GRID Alternatives. Support is also provided by other charging providers, SF Planning, the Mayor's Office, the SF Dept of Building Inspection, the Golden Gate Restaurant Association, Postmates, DoorDash, and UberEats.

Organization	Role	Relationship/Match
Driver's Seat Cooperative	Recruit program participants; develop, distribute, collect, and analyze operating data.	Subcontractor to the project.
EVgo	EV Charging Plaza projects development, construction, commissioning and operation. Provide consultation and support to operationalize the EV-ombudsperson.	Subcontractor to project and also committed to $634,390 match.
Google	Develop the Mapping Tool, co-lead engagement with regional partners, and integrate resident and commercial feedback into new iterations. Work with San Francisco to work out any issues with the tool and support dissemination	Committed to continuing public/private partnership with San Francisco. Committed to $150,000 match.
GRID Alternatives	E-bike Pilot Implementer: procurement and management of bikes and equipment, case management and worker support.	Subcontractor to the project. Long-term relationship to the City and SF Environment.
LAFCo	Consultation, coordination with UC Santa Cruz, update Commission and Board of Supervisors, support program design technical assistance and stakeholder coordination.	Providing in-kind staff time match of $13,500.
SF Bike Coalition	Safety training for e-bike pilot participants (in class and on e-bike).	Subcontractor to the project. Existing long-term relationship with the City.
SF Dept of Building Inspection	Operationalize the ombudsperson.	Committed partner. Long-term relationship in streamlining many permitting issues including for solar installations and green building/LEED certification. In-kind staff.
SF Planning Department	Operationalize the EV-ombudsperson.	Committed partner. Long-term relationship in code and policy development. In-kind staff.
SFMTA	Provide technical assistance and guidance on e-bike pilot design and implementation. Share research on transportation behavior changes.	Committed partner. Long-term collaborator to SF Environment on accelerating EV adoption. In-kind staff.
SFPUC	Provide consultation and support to operationalize the ombudsperson. Provide engineering support for construction of public charging plaza. Ensure that SFPUC's e-bike customer program aligns with and/or is complimentary to this project's e-bike pilot.	Committed partner. Long-term relationship grid-related technical assistance. In-kind staff support equivalent to $125,312.

10. Expected and new information

The City's Phase II will prove that a combination of technology enhancement, streamlined process, and comprehensive stakeholder engagement. Together, they will result in measurable advancement and acceleration of transportation electrification. It will enable the voice of the everyday citizen to guide future EV charging locations. Through a series of root cause analysis, Phase II will generate a comprehensive list of institutional barriers, and associated mitigation strategies. These outcomes will inform the creation, and operation, of a system that consolidates several different municipal processes to accelerate the development of charging infrastructure projects. The march to fueling parity will enable an acceleration in EV purchases in the City—particularly in neighborhoods where residents have limited access to mass transit, as well as limited funding for vehicle purchases. At the same time, this also readies the City for the 2030 EV goal. Overall, the project seeks to investigate:

Blueprint Mapping Tool

- Do siting recommendations from the Blueprint Mapping Tool ultimately result in more charging infrastructure in SF?
- Does the analysis of under-utilized lots and garages lead to new policy pathways for charging requirements (i.e. gas stations?)?
- Does it result in civic engagement from residents on charger placement preferences?
- Is the Blueprint Mapping Tool useful as a siting tool for commercial partners, like EV charging providers, TNC companies, and fleet operators?
- Do interconnection features produce accurate grid analyses that result in siting time savings?

Ombudsperson

- Does expedited permitting and clear processes result in faster installation times, reduced costs, and ultimately more installations in SF?
- Do more efficient processes and increased coordination among City departments result in reduced staff time and resources processing applications?
- Does a single-point-of-contact and increased process transparency simplify communication for both City department staff and station developers?

EV Charging Plaza Expansion

- How many EVs are served per charger?
- What are the charging utilization considerations? (for example, average length of a charging session, patterns of time of day when charging sessions are initiated. These considerations help us understand how these charging plazas are being used: as destination charging, as workplace charging alternatives, or as home charging alternatives)
- What are the grid impacts of fast charging plazas?
- What pricing schemes are most effective?
- What are the impacts on surrounding business? Does charging, as an amenity, lead to increase in sales, customer-traffic, and even future developments?
- What are the impacts on the surrounding community?
- Does the establishment of a charging plaza increase purchase of EVs in DACs?
- Which user segments are the most frequent users of the charging plaza: residents who live in the neighborhoods surrounding the plaza, visitor to San Francisco, or other San Francisco residents?
- Besides maintenance and/or software updates, when a charger goes off-line, what are the causes and how long does it take to repair?

E-bike Pilot for App-Based Delivery Workers - New information will not only inform future e-bike programs, but also last-mile delivery models. This pilot unifies the intersectionality between mode-shift and transportation electrification, and seeks to investigate the following:

- How does scaling the pilot contribute to San Francisco's Transit First and sustainable trips goals?
- Do e-bike deliveries increase wages for app-based delivery workers as compared to vehicle deliveries?
- Can e-bike deliveries significantly reduce GHG, VMT, and even vehicle congestion?
- Can e-bike deliveries improve delivery times, number of deliveries made, and worker safety?
- Can e-bikes create new careers and opportunities? There are several community-based organizations in San Francisco providing workforce and youth development opportunities in bike repair. The project team will engage them to discuss the potential for integrating e-bike mechanic training.
- Do e-bike deliveries reduce demand on the curb, decrease double-parking, improve bicycle safety?
- Is the data gathered useful in planning future bicycle safety protocol and traffic-safety management?
- Beyond e-bike procurement incentives, what other incentive mechanisms would incentivize livery and cargo drivers to switch from cars to e-bikes?
- Does providing bike safety training reduce minor accidents and increase driver (sense of) safety?
- Do delivery workers report feeling safer while biking? Or a more concrete metric around number of minor accidents?
- If not, what are the recommendations to improve safety?

11. Method to Track activities and evaluate factors influencing outcomes.

SF Environment will track and evaluate each task based on the timeline indicated in the Scope of Work. It will assess activities by collecting and analyzing information about the task or pilot program while it is undertaken. Using the information, SF Environment staff will conduct ongoing internal evaluations and provide assessment of the activities, tasks and pilot program outcomes to inform course corrections.

For the tracking process, SF Environment will:

- reassess key performance indicators (as described in the Scope of Work) and conduct any necessary revisions in order to focus on key issues, driving forces, and questions.
- identify who needs to be involved, identify the information critical to informing key performance indicators and how to collect them and by when.

All critical information will be stored in the SF Environment's existing database, modified specifically for Phase II activities. Information will be separated into categories: quantitative, qualitative and general information and a different approach for tracking each of these will be taken. The process will include regular evaluation for SF Environment, stakeholders, and the CEC to make course corrections to influence outcomes.

B. Team Qualifications and Experience

1. Key personnel and responsibility

Key Personnel	Role	Qualifications
Lowell Chu SF Environment, Energy Program Manager	*Project Manager: Interact with CAM, ensure contract compliance, and monitor budget and lead overall administration of grant*	*17 years experience in mechanical and software engineering, energy efficiency, and clean transportation; LEED AP, CEM, LC. BS in Mechanical Engineering*
Suzanne Loosen,	Manage e-bike pilot project, Coordinate outreach and education	10 years experience in EVs and alt fuels, including managing or co-

SF Environment, Clean Transportation Specialist	with Ombudsperson, Coordinate dissemination through CCC	managing six CEC grants and two DOE grants.
Tessa Sanchez, SF Environment, Clean Transportation Specialist	Lead tracking and monitoring of Blueprint Mapping Tool enhancement, coordinate with EV Ombudsperson, dissemination, reporting, coordinate update of Playbook	8 years experience in technology, energy efficiency, and clean transportation. BA/Env Policy
Andrew Bevington, SFPUC, Utility Analyst	Tech support for e-bike pilot	10 years experience in sustainability and energy. BA/poly sci, MS/sustainability
Sandy Carter, SFPUC, Utility Analyst	General coordination on all aspects of project—grid, e-bikes, ombudsperson	5 years experience in energy, conservation, and water issues, Extensive project management experience for non-profits and public agencies. MS/Env Sci
David Christopher, SFPUC Utility Specialist	Work with Google on Blueprint Mapping Tool and data integration	8+ years of experience in economic and environmental consulting, litigation, and policy analysis. MPA, BS/Geo
Nicole Lombardo, Google, Business Development & Partnerships, Google - Environmental Insights,	Project Manager for enhancing Mapping Tool	10 years experience in renewable energy and software technologies. BS/Marketing
Linda Khamoushian, GRID Alternatives, Director of Shared Mobility	Program Manager of e-bike pilot	10 years experience in mobility and planning and community engagement BA/Poly, MS/Planning
Justin Dawe, Mobility Executive, GRID Alternatives	Procurement, management, storage, distribution of e-bikes and equipment.	Experienced at building high-performing organizations, leading complex partnership processes in the US/ internationally. BS/MS/Eng, MBA
Cynthia Ibarra, GRID Alternatives	Pilot and participant support	Provides support for clean mobility and solar programs. BS/Env Sci
Vanessa Morelan, GRID Alternatives	Pilot and participant support	Provides case management services in English and Spanish to Clean Cars for All program. BS/Env Policy
Matt Schumwinger	Manage e-bike program data analytics and reporting	7 years experience providing data analytics solutions, graduate-level training in data mining and applications. BS/Ind Rel, Certificate/Data Mining
Jeremy Whaling, EVgo, EV Systems Engineer	Technical expert for charging plazas	10 years experience mobility and EVs BS/EE

Lars Peters, EVgoSr Director of Business Development	Primary point of contact for Phase II charging plazas, and project developer	15 years of experience in Technology, Management Consulting, EV and alt fuels. MBA and MS/Economics
Paul Dinh, EVgo, Field Operations Manager	Manage and improve user experience at charging plazas	18 years of renewable energy project management. BS/ME
Sami Ghantous, EVgo, Vice President, Engineering & Construction	Oversight of development of charging plaza in DAC. Manage relationships with site development, utilities, contractors, and project managers	20 years experience in renewable energy and software technologies. BA/ME, MBA
Bryan Goebel, LAFCo	Provide technical assistance on program design, connect with key stakeholders and participants, and provide ongoing research.	Adviser to the SF Board of Supervisors and supervises labor research
Eliana Marcu-Tyler, SF Bike Coalition, Program Coordinator	Develop and implement e-bike safety training program	Program Management and implementation of bike safety programs. BA/Soc
Hays Witt, Co-Founder Driver's Seat Cooperative	Manage e-bike data collection program	21 years of experience facilitating the direct engagement of low-wage workers in policy changes that raise industry standards.
TBD, SF Environment, EV Ombudsperson	Establish, operationalize and document EV permit streamlining processes, lead stakeholder coordination, develop and implement one-stop-shop website, primary point of contact for Phase II charging plazas.	Successful candidate will have a baccalaureate degree in public administration, business administration, environmental sciences, or a related field and 4 years experience in EVs and public policy.

2. Qualifications and Relevance to Project.

San Francisco is among the leading cities nationally in providing publicly accessible charging stations and has one of the largest EV markets in the country.[3] It established one of the first Clean Cities Coalitions in 1994, was a founding board member of Bay Area EV Coordinating Council, and is recognized globally as a leader in clean transportation initiatives.

San Francisco Department of the Environment – SF Environment will lead the Team and has the ultimate responsibility for implementing the project. Created by voter mandate in 1996, it is responsible for tracking and meeting the City's GHG reduction goals, designing and implementing its advanced energy and green building policies, delivering energy efficiency programs, launching innovative financing solutions, and advancing the use of distributed energy resources including solar, storage, and clean transportation. Since 2015, SF Environment has co-led the City's EV Working Group (EVWG) representing thirteen City departments, workforce development and community organizations, industry partners, and state and regional government agencies. The EVWG has identified actions and policies to accelerate EV adoption and ensure that EVs are available and affordable to all residents. SF

[3] https://theicct.org/publications/surge-EVs-US-cities-2019

Environment led the process of creating Phase I and was instrumental in crafting two pioneering ordinances. The 2017 Municipal Fleet ZEV Ordinance requires all light-duty passenger vehicles in the City's fleet to be ZEVs by 2022. The 2017 EV Readiness Ordinance (in collaboration with Oakland and Fremont, through CEC funding) mandates sufficient electrical infrastructure in new residential, commercial, and municipal buildings, and major renovations.[4] From co-leading the EVWG to leading the City's Green Building Task Force, SF Environment has ample experience creating and implementing a range of policies and direct programs. It spearheads the City's EV initiatives and has demonstrated experience in developing dynamic plans to accelerate EV-adoption and has facilitated a range of vehicle electrification projects.

San Francisco Public Utilities Commission (SFPUC) – The SFPUC is the City's primary electricity provider and operates two distinct services: 1) Hetch Hetchy Power, a publicly owned utility that has been providing GHG-free hydroelectric power to municipal operations, the school district, and select businesses, residents, and wholesale customers for over 100 years; and, 2) CleanPowerSF, the City's CCA, which has been providing residents and businesses clean energy at competitive rates since 2016 and currently serves over 375,000 customers. Through these two programs, SFPUC provides more than 70% of the overall electricity use in San Francisco.

EVgo – Founded in 2010, EVgo is leading the way on transportation electrification. With almost 2000 Level 2 and fast chargers in 66 metropolitan areas across 34 states, EVgo has the largest public fast EV charging network in the US. EVgo partners with automakers, fleets and rideshare operators, retail hosts like hotels, shopping centers, gas stations, and parking lot operators, and other stakeholders to make it easier for all Americans to take advantage of the benefits of driving an EV. Most recently EVgo has committed to working with General Motors to triple the size of the nation's largest public fast charging network over the next five years.

Google – The Environmental Insights Explorer (EIE), an online tool created by Google in collaboration with the Global Covenant of Mayors for Climate & Energy, is designed to help level the playing field for smaller cities, amplify the emissions insights of big cities, and ultimately accelerate the transition to a low-carbon future. Developed by the Google Earth Outreach team, EIE analyzes Google Maps data to provide rich insights into our surroundings. EIE pairs this information with third-party data and standard greenhouse gas (GHG) emissions factors, deriving carbon estimates and reduction potential for cities around the world. With EIE, data sets that once required on-site measurements can now be assessed virtually, reducing the barriers that prevent cities from taking action.

GRID Alternatives Bay Area – GRID Alternatives is the national leader in making renewable energy technologies accessible to low-income families and communities of color. GRID Alternatives Bay Area has a 17-year track record of providing access to clean energy and clean mobility solutions to environmental justice communities in San Francisco and throughout the Bay Area, with measurable results. GRID Alternatives Bay Area has an established track record of providing clean mobility program and case management support for local income-qualified households. For example, in 2018 GRID Bay Area was selected by Bay Area Air Quality Management District to serve as the exclusive case manager for their Clean Cars 4 All "scrap and replace" vehicle replacement program throughout the San Francisco Bay Area. GRID Alternatives' multilingual, multicultural community outreach staff work directly with qualifying program participants to access up to $9,500 in funding to replace their older polluting vehicle with a hybrid vehicle, plug-in hybrid vehicle, battery EV, fuel cell vehicle, e-bike, or public transit voucher. GRID Alternatives' case managers support low-income consumers from diverse backgrounds through all aspects of the client journey, including application paperwork, income verification, vehicle scrapping, vehicle purchasing, and access to charging infrastructure.

[4] https://sfbos.org/sites/default/files/o0092-17.pdf

SF Municipal Transportation Agency (SFMTA) – The SFMTA oversees the Municipal Railway (Muni) public transit, as well as bicycling, paratransit, parking, traffic, walking, and taxis. Established by voter mandate in 1999, the SFMTA aggregated multiple San Francisco city agencies, including the Department of Parking and Traffic, Muni, and since 2007, the Taxi Commission. It is one of the first municipal transit agencies in the US to outline goals and objectives for "Transit Equity" to ensure that all San Franciscan's have the resources to traverse the City. Its staff includes subject-matter experts in shared mobility, bike safety, slow streets, and curb management.

3. Meeting deadlines, milestones and controlling costs.

Project team leads have extensive experience managing projects and budgets of this size and scope. They have successfully managed numerous projects of similar size and scope, including several for the CEC (see attachment 10). The bulk of the expenditures for each component are known quantities, so there should be no unanticipated costs.

4. Team function and partner interactions

Upon project initiation, the team will enter into a standard project charter describing roles, responsibilities, timelines and agreements. The Project Manager will flesh of the Scope of Work even further using best practices for project management, including and extensive communications and risk management plans. The team will have clearly articulated roles and communications processes and mechanisms for solving any problems that may arise.

C. Project Budget

1. Project budget, scope of work and overhead costs.

For Phase II Community EV Implementation, the team will leverage its ongoing relationships with city departments, which, even if they have not identified a specific match for this project, will be contributing significant staff time. SF Environment will use its position as the SFCCC representative to deepen the team's ability to provide outreach and dissemination about the project. It will access GreenStacks, its formal decade-long collaboration with the SF Public Library System to engage the public on EVs generally, while also using this relationship to engage residents on the Blueprint Mapping Tool. It has already performed much of the upfront research for various components of the project. The City's overhead and admin are in keeping with similar projects.

2. Maximizing Benefit-cost score of the proposed project

For Phase II Community EV Implementation, SF Environment used the Transportation Fund for Clean Air cost-effectiveness calculator to determine the rbenefit-cost score. The assumptions are that enhancing the Blueprint Mapping Tool (Task 2) and recruiting and hiring the EV-Ombudsperson (Task 3) could directly contribute to a 25% increase in the number of publicly-accessible Level 2 chargers installed, and a 100% increase in the number of public-accessible DCFC installed. In total, these could contribute to the installation of 200 publicly-accessible Level 2 chargers, and 54 DCFCs. Additionally, building a new charging plaza in or near a DAC (Task 4) adds eight more DCFCs for a total of 62 DCFCs to Phase II.

Using the following calculation and assumptions for annual DCFC power draw: .2*365*24*80*62 = 8,689,920-kWh (62 chargers at 20% utilization average charge rate of 80 kW). Each kwh should power an EV over three miles for a total of 3,363,840 electric miles annually. Further, the following calculation and assumptions for annual Level 2 power-draw: .2*365*24*.24*200 = 84,096-kWh (200 chargers at the same 20% utilization average charge rate of 0.240-kW). Using these assumptions and including admin, the cost effectiveness of combined Tasks 1, 2, 3, and 4 are:

Cost-Effectiveness	Annual	Lifetime	Units
1. ROG Emissions Reduced	4.3648	17.4590	Tons
2. NOx Emissions Reduced	3.3878	13.5511	Tons
3. PM Emissions Reduced	0.0651	0.2606	Tons
4. Weighted PM Emissions Reduced	1.3030	5.2120	Weighted Tons
5. CO2 Emissions Reduced	9,930.0901	39,720.3604	Tons
6. Total Criterial Emission Reductions	7.8177	31.2707	Tons
7. TFCA Unweighted Cost Effectiveness		$ 54,340	/ton
8. TFCA Weighted Cost Effectiveness		**$ 46,912**	**/Weighted Ton**

The e-bike pilot proposes to shift up to 35 app-based delivery persons from automobiles to e-bikes. Using the US EPA GHG Equivalencies Calculator, the mode-shift will remove 162 tons of carbon annually, resulting in 243 tons of carbon abated over the course of the pilot project (18 months). The cost-effectiveness is $2,378.50 per ton of carbon reduced. In 2016, CleanPowerSF's Green Program generated 84.52 g/kWh of GHG emissions. Using this value we can estimate that the GHG. emissions generated by charging an e-bike are approximately 2.60 g/mi, compared to an average of 404 g/mi for a standard passenger vehicle, according to the EPA. If 30 participants switch to an e-bike and deliver full-time for a year, they will generate a total of 2.46 metric tons of CO2 instead of 383.44 metric tons generated by 30 passenger vehicles delivering the same number of hours, an abatement of 380.97 tons.

3. Discuss how proposed expenditures are reasonable and necessary for the proposed project.

Project costs are based on San Francisco and its partners experience operating programs of similar size and scope. Confirmed match is approximately 30% of total project. Informal commitments of staff time constitute and even greater match, making the project cost effective for the CEC. In addition, the team has performed extensive upfront planning and community outreach, which reduces project soft costs.

4. Provide a description of the type and source of match – cash and in-kind.

Organization	Match	Source of Funds
EVgo- capital for EV charging plazas	$634,390/in-kind	EVgo
Google Blueprint Mapping Tool	$150,000/in-kind	Google
SF Public Utilities Commission (SFPUC)	$125,312/in-kind	SFPUC
SF Clean Cities Coalition via SF Environment	$90,000/in-kind	US Department of Energy
SF Local Agency Formation Commission (LAFCo)	$13,500/in-kind	LAFCo

5. Tracking expenditures (including administration and overhead expenditures)

The City requires stringent and transparent fiscal management systems. SF Environment abides by these requirements and uses standard and accepted accounting practices. It has successfully managed similar CEC and DOE-funded projects.

6. Explain how the project will demonstrably maximize electric vehicle deployments.

This project will demonstrably maximize EV deployments by successfully enhancing advanced mapping technology and removing institutional barriers to siting EV charging assets. Together, they result in more convenient and ubiquitous EV charging. Also, the project also aims to uncover ways to effectuate mode-shift from cars and light-duty trucks to e-bikes to reduce charging demands and thus the number of chargers required.

Enhancement to the Blueprint Mapping Tool, ombudsperson and charging plazas dramatically increases charging infrastructure in the City leading to increase EV purchases. First, the integration of the ICA map into the Blueprint Mapping Tool simplifies initial feasibility assessment. Allowing crowd-sourcing of EV charging locations democratizes the process of charger-siting, making finding site-hosts easier and projecting utilization rates more accurate. Second, by establishing an ombudsperson as a single point-of-contact for all EV-related topics in the City, EV charging providers have a convenient and accessible liaison to facilitate permit and planning streamlining. Combining enhancements, ombudsperson with the three charging plazas, and the decreasing costs of buying and owning an EV, this project will maximize EV deployments

Mode-shifting app-based delivery workers to e-bikes also contribute to maximizing EV deployments. This is because as more workers switch from cars to e-bikes, the demand on charging, from grid to the number of chargers, also decrease. Therefore, the City needs less charging to meet the future EV charging needs.

7. Best value in terms of economic, environmental and technical performance.

This project's combination of technology and human interventions represents best value in terms of economics to accelerate EV adoption and climate initiatives. Prior to launching Phase 2, the team and stakeholders met multiple times to assess which parts of the EV Community Blueprint would result in the most "bang of for the buck". The technologies, enhancements to the Blueprint Mapping Tool, EV-chargers and e-bikes deployment, are built upon existing technology—much of which is being provided as a match. Moreover, equipment prices for EV chargers and e-bikes have dropped dramatically as material and battery technologies have improved. City departments such as SFMTA, SFPUC, DBI, and Planning are enthusiastic and ready to trouble-shoot EV permitting and construction issues. The team has conducted robust research and market characterization studies with ICCT, Harvard, LAFCo, and UC Santa Cruz. It has gathered feedback from stakeholder engagement activities, such as CCC's EV101 workshops and Listening Sessions. In sum, vast pre-work was completed in anticipation of Phase II.

This combination also represents best value in terms of environmental and technical performance. The *direct* environmental benefits, expressed in tons of emissions removed, are described in the cost-effectiveness Section C.2. The *indirect* environmental benefits, from the cleaner air, is reduced exposure to asthma causing pollutants, particularly to children and your adults living in the City's DACs. EVs are also quieter, reducing noise pollutions, and the siting EV charging on underutilized or vacant lots could improve community environment. As for performance, this project represents best value because it brings together a group of experienced, passionate, and capable individuals with excellent performance records. This outstanding team composition will result in a fully realized project.

D. Project Benefits

1. Benefits and Impact of each project included in the application to the selected region.

For more than 20 years, SF Environment's Environmental Justice program has served neighborhoods impacted by environmental stressors such as toxic dumping, air pollution, food insecurity, Superfund sites and brownfields. They are all low-income and many have been designed by CalEnviroScreen as disadvantaged communities. As a trusted institution in these neighborhoods, SF Environment has robust relationships and has worked with well over a hundred CBOs through its EJ, toxics reduction, urban greening, and energy efficiency programs. It is also involved in resiliency planning in the City's DACs.

Among its many collaborations, it is currently working with GRID Alternatives on its "Clean Cars 4 All" and "Clean Vehicle Assistance Program" that provides access to EVs for underserved populations. In parallel with creating an EV charging plaza to serve these communities, it is actively involved in helping residents understand the availability and benefits of having an EV. As noted, one of the charging plazas will be installed in or adjacent to San Francisco's Bayview Hunters Point (DAC). Access to transit was identified by the community as a huge need in the 2018 Bayview Community Based Transportation Plan. Despite a comparatively high number of transit lines, the layout and geographical constraints of Bayview Hunters Point limit the utility and effectiveness of fixed-route transit. This is reflected in Bayview Hunters Point having a far higher single-occupancy-vehicle commute mode than San Francisco as a whole (49% vs 35%) and a lower transit commute mode (34% vs 28%).

In addition, because many residents are low-wage workers, they rely on older, more polluting vehicles. Promoting EVs, in conjunction with developing the charging plaza promises huge community benefits. Low-wage workers that were once profoundly impacted by the expense of car repairs, or even had barriers to employment due to transportation challenges will benefit from access to vehicles that have lower operational costs. The benefit of having these additional funds to spend in the neighborhood may seem small, but over the long run are the kinds of things that strengthen families and communities.

2. Metrics and Methods for verification of benefits.

For the Blueprint Mapping Tool enhancements, ombudsperson and charging plaza metrics, SF Environment will use are the number of Level 2 and DCFC installed in DACs, the average reduction in time and cost of those charging installations, and the increase in the number of EVs registered in SF, particularly in those communities, and the resultant reduction in GHG emissions. Furthermore, SF Environment and EVgo will gather anonymous charging data from each charged vehicle served by the DAC plaza to inform future charging investments in nearby or adjacent neighborhoods. The methods SF Environment will use to verify benefits include: 1) requesting DMV data semi-annually to update the of EVs registered in SF, particularly in the DACs, 2) calculate resultant GHG reductions, 3) conduct stakeholder engagement, "Listening Sessions" with DAC residents who have purchased EVs to verify the EV benefits.

3. Support of state goals to reduce GHG and to increase ZEV adoption.

San Francisco's transportation electrification goals dovetail with California's goals. The City is committed to a range of options to meets these goals. Congestion management and mode shift are both critical, as replacing petroleum-fueled vehicles one-to-one with ZEVs will not go far enough to achieving emissions reduction goals. As a leader in active transportation, San Francisco must shift about 25% of vehicle trips to sustainable modes such as walking, biking, and public transportation to meet its share of the State's emission reduction goals. E-bikes are an important component to mode shift but are not readily available to lower income workers. By documenting their applicability to local deliveries and developing best practices for incentive programs, San Francisco will help other municipalities as they consider how to achieve their climate goals, while ensuring jobs and an equitable distribution of benefits.

Several recent landmark announcements have changed the transportation electrification landscape. The Governor's recent announcement that all car sales must be electric by 2035 underscores the previous orders for 5 million EVs on the road by 2025 with 250,000 charging stations. Cities must accelerate siting and permitting of EV charging to meet these goals and support public adoption of ZEVs. The Clean Miles Standard requires TNCs to electrify fleets, and both Uber and Lyft have committed to going 100% electric by 2030. CARB's Advanced Clean Truck Rule to accelerate a large-scale transition of zero-emission MD/HD vehicles. These announcements signal the imminent arrival of mainstream electrified ride-hailing vehicles and MD/HD trucks on city streets. As noted, municipalities must consider "co-development" in which a single location serves multiple vehicle types. This project provides the base for this co-development in San Francisco, which will further accelerate EV adoption and ensure that infrastructure being created is dynamic and multi-purpose.

E. Local Government Participation

1. Describe how the community provided input and its needs were considered in the project design.

As noted in Section D.1, gaps in public transit has been identified by the Bayview Hunters Point community in multiple public processes including the most recent Bayview Community Based Transportation Plan. The SFMTA is committed to a more equitable system, by extending and adding bus routes in some areas, based on community planning. However, in other areas, it is more difficult to invest is this additional transit infrastructure. Residents of those areas are reliant on petroleum-fueled vehicles for transportation and are prime candidates to purchase EVs for getting to work, school and shopping.

In addition, as part of creating Phase I, EV Ready Community Blueprint, the team engaged several communities and that work is informing the implementation plan. One of the other communities engaged in providing input on project design were potential participants in the e-bike pilot. As noted, the LAFCo study was one of the largest of app-based delivery drivers. Both the drivers and businesses have been engaged on preliminary outline of that implementation component. Finally, many studies have shown that "range anxiety" continues to be a concern. By creating highly visual charging infrastructure, residents will begin to find that EVs are not the "risky" option of 10 years ago.

2) Participation from a wide variety of local city or county governments, etc.

As noted, project stakeholders include staff from many city and county departments that have been engaged in the process of accelerating EV adoption in San Francisco for more than a decade. In addition to local stakeholders, the City has been highly active at the regional and state level to coordinate with other counties.

3) Community engagements

It is understood that any crowdsourcing tool is only as good as the number of people contributing to it, therefore, the project team plans robust outreach to promote citizen use of the Blueprint Mapping Tool. Over the years SF Environment and CCC have worked with the SF Public Library System to provide EV 101 workshops and promote EVs to the 50% of San Franciscans with a library card. It will build on this relationship and promote both the Blueprint Mapping Tool and EVs in general through the SFPL Greenstacks website and webinars. As appropriate, and in accordance with COVID-19 safety requirements, it may also provide face-to-face engagement activities. In keeping with its equity goals, SF Environment has budgeted project funds to provide grants to local community-based organizations to provide community engagement as well, particularly for siting the DAC charging plaza. In closing, SF Environment will build on its ongoing relations from creating Phase I, EV Ready Community Blueprint, as well as its Environmental Justice work.