

**Application by the City and County of San Francisco to the California Energy Commission to Develop
the *San Francisco Alt Fuel Readiness Project***

1. Application Form	A1
2. Table of Contents	1
3. Executive Summary	3
4. Project Narrative	5
4.1. Applicant Eligibility	5
4.2. Project Eligibility	5
4.3. The San Francisco Project Area, Project Goals and Objectives, and Need for the Plan	5
4.4. Project Purpose, Scope of Work, and Work Products/Outcomes	7
4.4.1. Administrative Tasks 1.1 – 1.8 – Meetings, Reports, Matching Funds, Permits, and Subcontracts	7
4.4.2. Technical Task 2.1: Inventory and Assessment of AFV and AFI utilization	7
4.4.3. Technical Task 2.2: AFV Readiness Task Force	7
4.4.4. Technical Task 2.3: Best Practices Development	7
4.4.5. Technical Task 2.4: Training and Outreach	8
4.4.6. Technical Task 2.5: Alternative Fuel Readiness Plan and Data Collection/Analysis	9
4.5. Collaboration and Coordination with Applicable Stakeholders	9
4.6. Alternative Fuel Readiness Efforts in San Francisco	9
4.7. Analytic Approach to Potential Policies, Incentives, and Financing Options to Foster Increased Usage Of Alternative Fuels	11
4.8. Potential Challenges and Best Practices for Planning, Permitting, Deployment, Maintenance, and Inspection Of Alternative Fuel Infrastructure (AFI)	11
4.9. Potential Training Materials Or Classes for Fleet Operators, Planners, First Responders, and Decision-Makers Regarding AFI Development	11
4.10. Potential Strategies and Best Practices to Increase Procurement and Commercialization of Alternative Transportation Fuels	12
4.11. Approach To Marketing Analysis, Materials, and Outreach Strategies to Communicate the Benefits of Alternative Fuel Usage to Targeted Groups Such as Fleet Owners/Operators	13
4.12. Potential Strategies to Assist Alternative Fuel Wholesalers/Retailers to Market Alternative Fuels	13
4.13. Summary of Significant Factors that Enhance the Value of the Proposed Project	14
5. Scope of Work	15
6. Schedule of Products and Due Dates (Attachment 4)	26
7. Budget (Attachment 5)	29
7.1. Task Summary (Attachment 5, B-1)	29
7.2. Category Summary (Attachment 5, B-2)	30
7.3. Prime Labor Rates (Attachment 5, B-3)	31
7.4. Labor Rates for Each Subcontractor (Attachment 5, B-3a-o)	32

7.5. Prime Non-Labor Rates (Attachment 5, B-4)	33
7.6. Non-Labor Rates for Each Subcontractor (Attachment 5, B-4a-o)	35
7.7. Direct Operating Expenses (Attachment 5, B-5)	37
7.8. Match Funding (Attachment 5, B-6)	38
8. Contacts (Attachment 6)	39
9. Third-Party Match Share Commitments	40
9.1. City of San Francisco	41
10. ARVTP Funding Restrictions Certification (Attachment 11)	44

Executive Summary

The San Francisco Alternative Fuel Readiness Project is an initiative of the City and County of San Francisco's Department of the Environment (SF Environment) in collaboration with the San Francisco Clean Cities Coalition (which is housed within SF Environment).

The Project goal is to accelerate the adoption of Alternative Fuel Vehicles (AFV) and promote the use of Alternative Fuel Infrastructure (AFI) in the City and County of San Francisco, and to provide a model for regionwide adoption in the Greater San Francisco Bay Area.

Measurable objectives include: increased AFV sales, decreased GHG, criteria pollutants, and fuel use; and increased jobs and economic activity.

Key activities over a 24 month period include:

- 1) Development of comprehensive data on AFV/AFI utilization;
- 2) Preparation of a San Francisco AFV Readiness Plan addressing AFI permitting, deployment, maintenance, and inspection, and promotion of AFV-friendly public policies and incentives;
- 3) Development of comprehensive AFV outreach activities, including:
 - a) four training sessions on AFI and vehicles for fleet operators, planners, first responders, and decision makers;
 - b) two AFV educational workshops for consumers;
 - c) two Green Vehicle showcases (AltCar Expos) in the region targeting at least 20,000 attendees; and
 - d) two "Ride and Drive" events providing at least 500 individual driving experiences to spur AFV sales and awareness (in cooperation with the Metropolitan Transportation Commission, the Bay Area EV Strategic Council, Charge Across Town, Plug-in America, and EV Communities Alliance). Ride and Drive events will bring diverse AFVs to community events, major employers, and other prominent locations. Events will be distributed across the City, and be completed within the 24-month project period, which is proposed to begin October 1, 2014. The following is a summary of the Project's key Technical Tasks.

Inventory and Assessment of Existing AFV Utilization and Barriers to Utilization (Task 2.1): Existing and prospective AFV and AFI users will be comprehensively surveyed regarding their current fleet inventory, prospective purchasing, and views on barriers and opportunities for deployment of different types of AFVs, including PEVs, CNG and propane vehicles, biofuels, and hydrogen Fuel Cell Vehicles (FCVs). Existing databases maintained by the San Francisco, East Bay, and Silicon Valley Clean Cities Coalitions and the Bay Area Air Quality Management District (BAAQMD) will be used to identify, cultivate, and track current and prospective AFV users, including but not limited to fleet customers.

AFV Readiness Task Force Convening (Task 2.2): The San Francisco AFV Readiness Task Force will be comprised of key members of SF Environment, the San Francisco Clean Cities Coalition (SFCCC), as well as key fleet managers with AFV experience, industry representatives, and interested stakeholder groups. The Task Force will meet quarterly and help guide input and review of the AFV Readiness Plan.

Best Practices Development (Task 2.3): The AFV Readiness Task Force will identify best practices in policies, incentives, and financing options to promote AFV and AFI adoption. Emerging group procurement practices, creative vehicle and infrastructure financing, and forms of support for fuel wholesalers and retailers will be evaluated for regional deployment. Final recommendations will be incorporated in the AFV Readiness Plan and communicated broadly to stakeholders. In addition, innovative and effective approaches to AFI planning, permitting, deployment, maintenance, and inspection will be identified in relationship to the full spectrum of AFV facilities, including EV charging, CNG and biofuel facilities, and hydrogen fueling; and recommendations included in the Readiness Plan. The AFV Readiness Task Force will

assess stakeholder interest in specific training modalities and thematic foci, to inform at least four training workshops over the two year AFV Readiness program. The AFV Readiness Task Force will also work closely with leading AFV resource centers to identify best marketing approaches, materials, and outreach strategies. The Task Force has identified promising results of targeted Ride and Drive events co-sponsored by Plug-in America and the California Center for Sustainable Energy, and its OEM and employer partners in the Bay Area. In a recent Ride and Drive at Google, for example, forty (40) Nissan Leaf sales were generated from a single day event. The many high technology firms now located in San Francisco, such as Genentech, Twitter, Salesforce, and others, provide a range of ideal venues for AFV Ride and Drive events. Likewise, the many commercial fleet operators, including taxis and shuttles, that operate in and around the City are prime candidates for AFV fleet expansion or conversion. For the medium and heavy-duty vehicle segments, and transit vehicles, the Readiness Task Force will recommend approaches specific to targeted fleet owners, operators, and use cases, including municipal public works, transit agencies, taxi companies, and delivery fleets, among others.

Training and Outreach (Task 2.4): As part of its survey of fleet operators and AFV stakeholders, the Task Force will identify highest-priority training needs and deliver stakeholder-preferred training via at least four training workshops in the City, targeting fleet operators, first responders, planners, and decision-makers. These training events will build on the extensive experience of the San Francisco Clean Cities Coalition in developing effective training for AFV fleet operators. AFV/AFI marketing activities will build on best practices in PEV and other AFV deployment contexts. The AFV Task Force will employ peer-to-peer outreach and innovative, non-dealer settings for “ride and drive” events that can introduce large numbers of highly targeted customers to the full spectrum of AFV types. The initial marketing and outreach workplan calls for a total of two Green Car Shows in the region that can reach more than 20,000 attendees with diverse AFV displays, two Ride and Drive events targeting employers in high-wage industries, and three additional workshops targeting specific consumer/vehicle segments (in addition to the four training oriented events focused on fleet managers.)

Alternative Fuels Readiness Plan (Task 2.5): A San Francisco Alternative Fuel Readiness Plan will be drafted with all required CEC elements. It will be made available for public review and comment. This Plan will build on the region’s existing PEV and clean transportation leadership effort by: 1) broadening the City’s sustainable mobility strategy to include the full spectrum of AFVs; 2) developing a full range of AFV-friendly policy recommendations based on best practices; and, 3) delivering a targeted outreach campaign that will bring diverse AFVs directly to the right demographics in the right settings, including high-tech, high-wage, and socially conscious workplaces, high-profile community events, and leading fleet operations. Robust data collection will enable continuous program fine-tuning, and a strong Task Force structure will accelerate deployment of the Plan’s AFV-friendly policy recommendations.

In the context of the Final Report (Task 1.5), the SFCCC will also collect and analyze operational data from the project as related to new AFVs and AFI that may be installed in conjunction with regional market development activities. In addition to the mandated data analysis components related to emissions and fuel reduction, and use of renewable energy and efficiency measures in conjunction with Alt Fueling facilities, the data analysis and Final Report will address local economic impacts (including economic multipliers) related to the re-localization of fuel purchases, among other economic factors. Innovative analysis of this dimension of the impact of PEVs and locally sourced biofuels and natural gas have been utilized in other regions (e.g., Cleveland) to enable local policy makers and business leaders to understand the full economic and environmental potential of fuel re-localization and the AFV transition.

4.1. Applicant Eligibility

The SF Environment is a public agency serving the City’s 837,000 residents. The City and County of San Francisco is the financial and cultural hub for the Bay Area’s 8.5 million residents and a qualified lead

agency per the requirements of the Alternative Fuel Readiness Plan program of the California Energy Commission (PON-13-603). The City has been very intensively involved in fostering alternative fuels infrastructure (AFI) and alternative fuel vehicle (AFV) deployment since the early 1990's through grant programs, technical assistance, outreach, and regional leadership roles, aggressive fleet greening requirements for the municipal fleet and San Francisco taxis, and through the City's aggressive Climate Action Plan. The City's leadership roles include the engagement of Mayor Ed Lee as a founding board member of the Greater Bay Area EV Strategic Council, which is the formally established PEV Coordinating Council for the 12 County Greater Bay Area. The City has also been a leader on the technical advisory group for the greater Bay Area EV Readiness planning process led by BAAQMD and the Bay Area EV Strategic Council (represented by Bob Hayden, SFE's manager of clean vehicle and transportation programs). The City of San Francisco and the San Francisco Clean Cities Coalition has on-the-ground experience in funding, outreach, and education related to the full spectrum of AFVs, holds key leadership roles, and possesses relevant California Energy Commission grant experience.

4.2. Project Eligibility

The San Francisco Alternative Fuel Readiness Project is an eligible project under PON-13-603, as it will develop a *San Francisco Alternative Fuel Readiness Plan* that includes all elements required under the Alternative Fuel Readiness Plan solicitation. Specifically, the *San Francisco Alternative Fuels Readiness Plan* will: a) Analyze existing and potential incentives for increased usage of alternative fuels; b) Identify challenges and sharing best practices for planning, permitting, deployment, maintenance, and inspection of AFI; c) Develop training materials or classes for fleet operators, planners, first responders, and decision-makers regarding AFI development; d) Develop strategies and best practices to increase procurement and commercialization of alternative fuels; e) Develop marketing analysis, materials, and outreach strategies that communicate the benefits of alternative fuel usage to targeted groups including fleet owners/operators; and, f) Develop strategies to assist alternative fuel wholesalers/retailers, with the intent of increasing the availability and/or reducing the cost of alternative fuels. In the process of developing and implementing the Plan, the City of San Francisco and the San Francisco Clean Cities Coalition will bring together appropriate stakeholders to provide feedback on the most effective pathways to accelerated market growth for alternative fuel vehicles. The entire project will be completed within 24 months of execution of the CEC funding agreement.

4.3. The San Francisco Alternative Fuel Readiness Planning Area, Project Goals and Objectives, and Need for the Plan

4.3.1. Regional Characteristics: The only consolidated city-county in California, San Francisco encompasses a land area of about 46.9 square miles, giving it a density of about 17,867 people per square mile. It is the most densely settled large city in the state of California and the second-most densely populated major city in the United States after New York City. San Francisco is the 14th most populous city in the United States and the financial and cultural hub of the larger San Jose-San Francisco-Oakland combined statistical area, with a population of 8.5 million. As such, the City of San Francisco is also the transportation hub of the region, with a daytime population that increases by several hundred thousand commuters arriving by both public transportation and car. With 16.9 million visitors per year, San Francisco attracts the fifth-highest number of foreign tourists of any city in the U.S. and ranks 43rd out of the 100 most visited cities worldwide. As an early and strong proponent of coordinated urban and regional climate action across jurisdictional and national borders, including aggressive efforts to decarbonize both the transportation and energy sectors, San Francisco has been globally influential in transportation, clean energy, and climate planning. With its history of active involvement in region-wide EV readiness and progressive transportation policy, San Francisco is ideally positioned to develop a regionally-influential AFV-ready infrastructure and to

implement best AFV market development practices with broad and deep impact.

4.3.2. Project Goal and Objectives: The goal of this Project is to accelerate the adoption of Alternative Fuel Vehicles (AFVs) and promote the deployment and use of Alternative Fuel Infrastructure (AFI) in the City and County of San Francisco and to influence fleet practices and market development throughout the nine-county region. The objectives of the Project are to: 1) increase AFV sales as a percentage of vehicles on the road, while also working to reduce total vehicle miles traveled (especially by conventional vehicles) through the City's Transit First policies; 2) decrease GHG emissions, criteria pollutants, and fuel use in San Francisco; and, 3) to positively impact jobs and economic activity. Measures used to assess success of the project include use of DMV and CVRP databases to assess AFV sales, and use of CARB Emfac and regional air quality measures to assess fuel use and emissions impacts. In addition, economic impacts from AFV market acceleration will be assessed with respect to both sales of AFVs and Alternative Fuel Infrastructure deployment and use.

Need for the Plan: The growth of Alternative Fuel Vehicles and infrastructure in the greater San Francisco region has been strong by national standards but lagging relative to the imperative of global climate change and the aggressive statewide CARB goal to achieve 80% penetration of electric drive vehicles by 2050, driving an 80% reduction in transportation emissions. While the City has invested substantial resources in AFV adoption via the City's own investments, as well as DOE, BAAQMD, and CEC grant programs, and consumer participation in federal and state incentive programs (notably the federal PEV tax incentives and the state Clean Fuel Vehicle Rebate program), alternative fuel vehicles still comprise less than 1% of the total fleet and approximately 3% of new vehicle sales, according to CVRP data. To accelerate the AFV transition, regional leaders have begun to address the need for increased AFI infrastructure and AFV-friendly policies, with an initial emphasis on Plug-in Electric Vehicles (PEVs). This effort has been led by the Greater Bay Area PEV Coordinating Council, which was formed to develop and implement the Bay Area PEV Readiness Plan, funded by the California Energy Commission (CEC) as a sub-award to BAAQMD in support of the Bay Area EV Strategic Council planning process. The PEV Readiness Plan is now at a crucial transitional phase, insofar as City and regional stakeholders must now be mobilized to *implement* the Plan going forward -- via education, outreach, and market development activities, PEV-friendly policy development, and PEV infrastructure development.

The CEC AFV Readiness Plan development and implementation process will dovetail with the ongoing Bay Area PEV Readiness Plan development and implementation process, thereby enabling the region to advance the full spectrum of AFVs as part of an integrated regional sustainable mobility strategy. This integrated approach to AFVs is a much-needed development, as prior efforts in Alt Fuel development have been fragmented by agency and by fuel and vehicle type. Within the City and in surrounding areas, there is an urgent need to scale up and integrate planning around AFV fleet growth to identify synergies in infrastructure location, and to ensure that fleet operators are fully apprised of the opportunities for fuel and cost savings, and environmental benefits, of shifting to the lowest-carbon, most environmentally sustainable, and most economically efficient AFVs.

San Francisco has been a leader across AFV fuel types, with a significant emphasis on use of locally sourced and sustainable biodiesel. The City used more than 5 million gallons of biodiesel in 2013. In addition to using B20, all diesel buses in the city's fleet are being transitioned to hybrid technology. San Francisco also has the nation's largest fully-electric transit bus fleet, with more than 100 overhead-electric full-size buses. For more than a decade, light duty vehicles purchased by the city departments must be from an approved "green vehicle" list (primarily CNG, hybrid, or PEV) unless for-need waivers are justified. Finally, the San Francisco green taxi policy has resulted in a fleet comprised almost entirely of CNG and hybrid cabs. In light of varied evidence of their environmental impact, hydrogen and CNG will be subject to further analysis of their environmental and economic benefit in the context of the new AFV Readiness Plan

In summary, there is an urgent need and a timely opportunity to build on current work in the PEV domain to include all fuel types in a comprehensive San Francisco Alternative Fuels Readiness Planning and market development process. CEC funds will leverage significant local resources and stakeholder leadership to ensure that “alternative” fuels are a mainstream option in the region, and support accomplishment of state and local AB 32 and SB 375 GHG and emissions reduction goals.

4.4. Project Purpose, Scope of Work, and Work Products/Outcomes

As noted in the Executive Summary, the purpose of the San Francisco Alternative Fuel Readiness Project is to accelerate the adoption of Alternative Fuel Vehicles (AFVs) and promote the deployment and use of Alternative Fuel Infrastructure (AFI) in the City and County of San Francisco, and to positively impact the surrounding nine-county region. Notably, San Francisco serves as the hub for no less than six urban transit districts, 23 intra-city and inter-city public and private shuttle bus and jitney providers that move tens of thousands of passengers daily from all parts of the Bay Area to San Francisco, especially down the Peninsula to the airport and Silicon Valley. In addition, the wholesale produce market, as well as other distribution centers in San Francisco, are high-potential targets for significant GHG reduction via AFV fleet deployment. These initiatives will have significant regionwide impact well beyond City limits. The Scope of Work in Section 5 describes Project Tasks and Products in summary form. The following review of Tasks describes select qualitative dimensions of the Project and contextual factors.

4.4.1. Administrative Tasks 1.1 – 1.8 – Meetings, Reports, Matching Funds, Permits, and Subcontracts

Background on Key Partners: The City and County of San Francisco Department of the Environment is the lead administrative entity for the San Francisco Alternative Fuel Readiness Project. In the preparation and development of this project, the City has been assisted by EV Communities Alliance, a nonprofit organization with extensive experience in EV and Alt Fuels planning efforts, including leadership of the CEC-funded Monterey Bay area and Central Coast Alternative fuels planning processes, leadership of the technical review committee of the Bay Area EV Readiness Plan, as well ongoing co-facilitation of the Bay Area EV Strategic Council, the Monterey Bay EV Alliance, and Plug-in Central Coast. Match funding includes \$5,000 from MBEVA, \$60,000 from the City and County of San Francisco, with a substantial portion of the match coming from funding by U.S. DOE to the San Francisco Clean Cities Coalition.

4.4.2. Technical Task 2.1: Inventory and Assessment: A comprehensive data collection instrument will be developed to survey existing and prospective AFV and AFI users regarding their current fleet inventory, prospective purchasing, and views on barriers and opportunities for deployment of different types of AFVs, including PEVs, CNG and propane vehicles, biofuels, and hydrogen. To identify survey participants, the databases maintained by the San Francisco, East Bay, and Silicon Valley Clean Cities Coalitions and BAAQMD will be utilized.

4.4.3. Technical Task 2.2: AFV Readiness Task Force Convening: The San Francisco AFV Readiness Task Force will be comprised of members of the existing San Francisco Clean Cities Coalition, as well as key fleet managers, industry representatives, and interested stakeholder groups, as well as transportation and environment agency staff. The Task Force will meet quarterly and help guide input and review of the AFV Readiness Plan.

4.4.4. Technical Task 2.3: Best Practices Development: The AFV Readiness Task Force will conduct a thorough literature search to identify best practices in policies, incentives, and financing options to foster increased procurement and commercialization of AFVs and AFI. Lessons learned from recent state and federal PEV and PEV charger incentive practices and AB 2766 funding, among other mechanisms, will be evaluated to determine how these incentives can best be communicated and streamlined to accelerate AFV adoption. Emerging group procurement practices, such as recent PEV group purchases in the Bay Area (facilitated by the Bay Area Climate Collaborative and EV Communities Alliance) will be assessed for

deployment in the region. Infrastructure innovations, including creative financing approaches for fueling facilities (such as more affordable longer-term leases) will also be investigated, among many other options. Forms of support for fuel wholesalers and retailers, such as siting accommodations and other approaches will also be evaluated for regional deployment. Final recommendations will be incorporated in the AFV Readiness Plan and communicated to stakeholders through workshops, relevant media, and targeted outreach.

A literature and best practice search will also be conducted to identify innovative and effective approaches to AFI planning, permitting, deployment, maintenance, and inspection. In addition to practices recently identified in the context of regional PEV readiness planning, the AFV Readiness Task Force will assess practices in developing and sustaining CNG and biofuel facilities. In addition, longer-range plans for a hydrogen fueling infrastructure will be integrated into the regional AFV planning process.

The AFV Readiness Task Force and San Francisco Clean Cities Coalition will also work closely with experienced AFV resource centers to identify state-of-the-art marketing approaches, materials, and outreach strategies. For example, the Task Force has already assessed the strong success of highly targeted Ride and Drive events co-sponsored by Plug-in America, CCSE, Charge Across Town, and their OEM and employer partners. In a series of recent Bay Area Ride and Drive events, carefully tracked workplace Ride and Drive participants were found to purchase PEVs at a high rate. A single Ride and Drive event at Google, for example, generated forty (40) Nissan Leaf sales. Local stakeholders have identified a range of large employer sites where PEV and other AFV demographics are strong. In the medium and heavy-duty vehicle segments, and in transit vehicles, the Alt Fuel Readiness Task Force will research, analyze, and recommend marketing approaches that are specific to these targeted fleet owners and operators.

Training and Outreach (Task 2.4): Following the Task Force survey of fleet operators and AFV stakeholders, highest-priority training needs will be identified, and the Clean Cities Coalition will deliver stakeholder-preferred training via at least four training workshops targeting each of the four CEC-specified groups: fleet operators, first responders, planners, and decision-makers. Workshop locations will be selected based on requirements for display and inspection of Alt Fuel Vehicles, and will include existing public agency and/or private fleet facilities, and will leverage resources in the Alt Fuels program at the City College of San Francisco, which is a long-time partner of the City in alt fuels education and training. Training activities for fleet operators, planners, and decision-makers will address available vehicle types, economic factors, total cost of ownership analysis, financing strategies, infrastructure requirements, operating and maintenance characteristics, emissions and fuel use, incentives, and integration into existing fleet management strategies and systems. Training for planners and decision makers will also address policy options for promoting AFV deployment, including infrastructure policies, permitting, incentives, and market development/AFV promotion strategies. Training activities for first responders will address vehicle types, operating characteristics, safety issues, fueling systems, infrastructure, hazardous materials handling, and emergency response protocols.

The San Francisco Clean Cities Coalition will provide at least four training workshops over the course of the two year AFV Readiness program period. The Coalition is a recognized leader in alternative fuels training and education. The Coalition has provided workshops and seminars to fleets, consumers, and public officials on alternative fuel infrastructure and vehicle deployment, and has produced a Clean Fleets Tool Kit which will provide valuable background for this project. The Coalition offers trainings tailored to address the barriers to AFV adoption by fleets. Topics that will be covered include: Vehicle technology selection based on emissions reduction potential- linkages to clean air and climate action plans and corporate sustainability policies; return on investment and financing options for fleets; and infrastructure deployment best practices. The Coalition will also coordinate with expert presenters in

first responder safety, AFV technician training, and facility modifications for AFVs, as appropriate to meet stakeholder needs based on survey results.

With respect to outreach (as distinct from training), AFV/AFI marketing activities will build on best practices in PEV and other AFV deployment contexts. For both general consumers and fleet operators, it has been observed that low-stress contexts that include multiple vehicle types – and do not involve high-pressure sales -- are most effective in introducing new vehicles and fuel choices. Further, peer-to-peer “ambassadors” with real-world AFV/AFI experience, rather than salesmen, are often the most effective in explaining the virtues of AFVs with unfamiliar operating characteristics. This is also true in fleet as well as general consumer contexts, where fleet managers who possess operating experience with AFVs are regarded as highly credible, whereas manufacturer’s representatives are viewed as potentially biased. The preliminary marketing and outreach workplan calls for leveraging of AFV fleet Green Vehicles Showcases currently sponsored by BAAQMD to reach more than 20,000 attendees with diverse AFV displays. In addition to the Green Car Shows, the City will collaborate with the Experience Electric campaign, funded by \$1 million dollars from the Metropolitan Transportation Commission, to provide a total of two Ride and Drive events (further defined below), as well as two AFV 101 workshops targeted to consumers. (This is in addition to the four technical trainings focused especially on fleet operators referenced above).

The two consumer focused AFV 101 workshops will last approximately three hours each, and will address the full spectrum of AFV and AFI issues, including the types of AFVs and alternative fuels now in the marketplace and forthcoming soon; the operating characteristics and advantages of alternative fuel types; the economics of AFV/AFI ownership; fueling infrastructure; and safety and environmental risks and benefits. These workshops will also promote and link directly to the two Ride and Drive events referenced above (which are co-hosted by Plug-in America and the California Center for Sustainable Energy), to *specifically include and highlight ALL AFV types*.

Alternative Fuels Readiness Plan (Task 2.5): The AFV Readiness Task Force will be developed with the assistance of EV Communities Alliance, which is developing Alt Fuel Readiness Plans for the Central Coast and Monterey regions, and has led the technical review committee for the Bay Area EV Readiness Plan, as well as developing the *Ready, Set, Charge California!* guidelines for PEV community readiness. This Plan will build on the region’s existing PEV and clean transportation leadership effort by: 1) broadening the City’s sustainable mobility strategy to include the full spectrum of AFVs; 2) developing a full range of AFV-friendly policy recommendations based on best practices; and, 3) delivering a targeted outreach campaign that will bring diverse AFVs directly to the right demographics in the right settings, including high-tech, high-wage, and socially conscious workplaces, high-profile community events, and leading fleet operations. Robust data collection will enable continuous program fine-tuning, and a strong Task Force structure will accelerate deployment of the Plan’s AFV-friendly policy recommendations.

4.5. Collaboration and Coordination with Applicable Stakeholders: The San Francisco Alternative Fuels Readiness Plan builds on the substantial work conducted in the Bay Area PEV Readiness Plan. The SFCCC will be the hub of work on the project, and has close relationships with the other Clean Cities Coalitions in the region, as well as the Bay Area EV Strategic Council. These relationships will extend the impact of the AFV planning process, particularly because of the regional footprint of fleets that serve the City.

4.6. Alternative Fuel Readiness Efforts in San Francisco: San Francisco has been one of the strongest early adopter regions for alternative fuels, with many businesses and individuals choosing AFVs and a growing alternative fuel infrastructure. While CNG and biofuels have been the most popular alternative fuel over a 10-20 year timeframe, in the last two years PEVs and charging stations have proliferated to become the dominant alternative fuel option. SF Environment and the Clean Cities Coalition have been working to increase the use of alternative fuels for many years. Below is a snapshot of past and current

alternative fuel readiness efforts on the San Francisco, which reflect the efforts of all the relevant agencies and stakeholders. In terms of fueling stations, San Francisco has the following outlets: Biodiesel (B20 and above): 1; Natural Gas: 6; Ethanol (E85): 1; Electric: 310 public charging stations. Through these fueling outlets and associated AFVs, the San Francisco Clean Cities Coalition estimates that annual Greenhouse Gas Emissions avoided equal 173,723 tons of CO₂, and annual petroleum savings amount to 21,003,894 gasoline gallon equivalents.

Electricity: The City of San Francisco, under then-Mayor Gavin Newsom and then-City Administrator Ed Lee, was instrumental in launching Greater Bay Area EV Strategic Council in 2011, timed with the introduction of the first mass-market EVs. The City was instrumental in bringing public and private stakeholders to the table to obtain the first large public and private investments in EV charging infrastructure, and launching the Bay Area EV Corridor grant program, which was developed by the Association of Bay Area Governments in collaboration with the EV Communities Alliance. In collaboration with nearly two dozen EV Strategic Council members (representing 12 counties, the largest cities, and many large businesses in the San Francisco region), the Council has helped bring more than 1400 Level 2 EV charging stations to the region, including more than 300 in San Francisco proper. According to the latest data from the California EV Rebate Project, there are approximately 1,200 PEVs in San Francisco (and more than 21,000 in the Bay Area), and this vehicle population is growing very fast, as reflected by intensive utilization of the City's Level 2 and DC Fast Charger network.

Biodiesel: In 2006 the City of San Francisco, under then-Mayor Gavin Newsom and then City Administrator Ed Lee, was instrumental in launching an initiative to convert the City's diesel powered fleet to B20 Biodiesel. Use has grown substantially; today nearly 80% of the diesel used by the City's diesel fleet uses B20.

Ethanol: While most gasoline cars on San Francisco use a 10% ethanol blend, the market for E85 is limited. There are likely several thousand flex fuel vehicles in San Francisco, but like owners across the nation, most owners are not aware they own a flex fuel vehicle and the price of E85 on an energy content basis is more expensive than gasoline. E85 is not available to the public within the city limits of San Francisco.

Propane: There is one propane fueling center at the U-Haul rental center in San Francisco. There are records for less than 100 propane vehicles in the City.

Hydrogen: There is currently no hydrogen fueling infrastructure in San Francisco, although there is a hydrogen fueling station in the East Bay operated by the AC Transit District in Richmond. The San Francisco Municipal Transportation Authority (SFMTA) purchased a Fuel Cell bus approximately two years ago and is currently planning a hydrogen fueling station.

CNG: The City and County of San Francisco was an early pioneer with CNG, starting in the early 1990s. With BAAQMD and other grant support, the City has purchased more than 200 CNG vehicles for the municipal fleet.

4.7. Analytic Approach to Potential Policies, Incentives, and Financing Options to Foster

Increased Usage Of Alternative Fuels: The analytic approach that will be taken by the AFV Task Force and relevant consultants consists of four elements: 1) **Comprehensive research into best practices** via both literature review and extensive networking among AFV subject matter experts in California and beyond. This research will address the policy and program frameworks and *results* achieved by other AFV market development efforts both domestically and internationally. 2) **Rigorous deployment of cost-effectiveness criteria** to determine the ROI on incentives or other investments of public dollars. Criteria include \$ per ton of GHG reduction as well as other market development impact criteria, such as media impressions in the

case of a media-focused outreach strategy. 3) **Careful surveys of stakeholders** to assess their response to various incentive structures and policy approaches; and 4) **Data collection to inform continuous improvement and mid-course strategic correction**: Because large-scale AFV market development efforts are very new, it is imperative that initially developed strategies, particularly in the outreach and market development domain, be rigorously assessed in real-time to determine their impact on AFV and AFI adoption. To that end, each major segment of the Outreach Campaign Plan – including media outreach, Ride and Drive events, and progress through the sales cycle – will be assessed to refine strategies for the next iteration of Campaign activities.

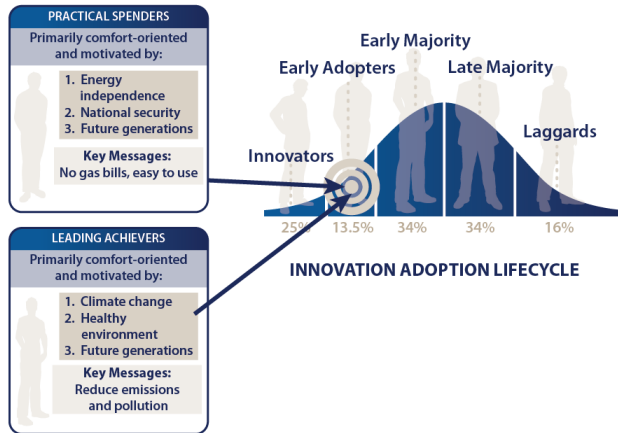
4.8. Potential Challenges and Best Practices for Planning, Permitting, Deployment, Maintenance, and Inspection Of Alternative Fuel Infrastructure (AFI): The Greater Bay Area EV Strategic Council has developed a substantial body of analysis and recommendations relative to planning, permitting, deployment, and inspection of PEV charging infrastructure. Key recommendations have been vetted with City leaders and other PEV stakeholders. These include mandated PEV charger stub-outs in new construction and major remodels, accelerated permitting via online and phone-based scheduling systems, lowered permit fees, and higher thresholds for plan checks and onsite inspections. Workplace, commercial, and multi-unit residential charging network development will also be promoted soon through targeted engagement of prospective site hosts and vendors with attractive value propositions (e.g., “no money down” deals and other favorable lease terms, for example). Many of these policy and marketing innovations are portable to other AFV types and will be assessed in the context of our AFV Readiness Plan. Of course, CNG, hydrogen, and propane are much more expensive than PEV charging stations, and impose significant safety requirements. Therefore, for each of these higher-cost technologies, the AFV Task Force will look critically and analytically at both the near-term per station and per use subsidy where public funds are involved, while balancing this perspective against the long-term goal of building out all environmentally and economically sustainable AFV fueling technologies over time. Through close inter-agency coordination, the Task Force will seek out cost-efficient opportunities for installation of AFV fueling when new public works, “complete street” projects, and other related initiatives are initiated, since trenching and electrical costs can often be mitigated through concurrent installation of new infrastructure. In addition, opportunities will be assessed for locating AFV infrastructure in fleet settings that also enable public access. This can create a “tipping point” for fleet operators and public agencies that would otherwise have difficulty justifying AFV fueling infrastructure for exclusive use by fleets.

In the inspection domain, the Task Force will assess the least burdensome permitting requirements, and consult with local code councils and City building officials to develop a deployment pathway. Relationships established with planning and building officials in the course of the PEV Readiness Plan process will be helpful in advancing any proposed streamlining of permitting and inspection strategies.

4.9. Potential Training Materials Or Classes for Fleet Operators, Planners, First Responders, and Decision-Makers Regarding AFI Development: As noted above, the AFV Readiness Task Force will utilize the SFCCC as a training provider on AFV technologies. It will be developing a customized training program addressing all Alt fuels and vehicles in response to training needs identified in a survey of AFV/AFI fleet users. Among other resources, the SFCCC will draw from a curricular database of more than twenty courses developed by the DOE-supported National Alternative Fuels Training Center (NAFTC), including the foundational course, *An Introduction to Alternative Fuels and Advanced Technology Vehicles*. The training program will also draw from the *Introduction to Battery-Powered Electric Vehicles* course booklet, which explains the technology, components, safety considerations, and environmental impact of PEVs, and from the *Introduction to Natural Gas Vehicles*, which addresses the pros and cons of CNG and LNG fuel types and vehicles, infrastructure, economics, and operating characteristics; and from the *Introduction to Biodiesel Vehicles*, the *Introduction to Ethanol Vehicles*; and the *Introduction to Hydrogen-Powered Vehicles* – and from

California Fuel Cell Partnership materials to describe plans for California’s Hydrogen Highway.

4.10. Potential Strategies and Best Practices to Increase Procurement and Commercialization of Alternative Transportation Fuels: The AFV Readiness Task Force will also reach out to California’s leading AFV experts, including sister Clean Cities Coalitions, UC Davis ITS, the California Center for Sustainable Energy, and their AFV industry networks, to identify best marketing approaches in a metrics-driven effort to inform further investments in AFV promotion within the region. Recognizing where potential AFV adopters sit on the early adoption curve for these technologies is an important aspect of innovative marketing.



As we refine our understanding of audience segments and related best practice marketing, the Task Force will promote the City as a center for AFV and related clean technologies and provide physical events, online outreach, and organic promotion about AFV options through the Clean Cities network of interested individuals, partner organizations, and PR networks. This approach to building awareness is by far the most cost-effective approach to reach the target demographics. A key element of our proposed AFV/AFI marketing & outreach work will be a series of two major Green Vehicle Showcases hosted by BAAQMD, as well as two Ride and Drive events coordinated by the MTC *Experience Electric* Campaign and local partners represented on our AFV Task Force. The Northern California Alt Car Expo (held in May 2014) is the model for subsequent annual events to be held in 2015 and 2016. (<http://altcarexponorcal.com>). The exhibitors at the 2014 event (held in Richmond’s historic Craneway Pavilion – a short ferry ride from the City) included Honda, the California Fuel Cell Partnership, Carbon Blu, the California Center for Sustainable Energy, Clean Fuel Connection, Coast 2 Coast, East Bay Clean Cities, ELV Motors, Ford, Hyundai, Mercedes Benz, Nissan, PG&E, Propane Exceptional Energy, Roush, San Francisco Bay LEAFs, San Francisco Clean Cities, Schneider Electric, Smart, SunPower, Toyota, the UC Berkeley Transportation Sustainability Research Center, Via Motors, and Zero Truck. The 2015 event is expected to be even larger. These events will provide fleet managers and consumers the opportunity to directly experience the benefits of AFVs through exhibits and actual AFV driving experiences. By leveraging existing OEM relationships and expertise, these fleet showcases and consumer-oriented campaigns will deliver AFV education and test drives at very little incremental cost to the CEC and City-funded portions of this initiative.

In addition to the AltCar Expos, below is an outline of the planned Ride and Drive effort in the City (via the Experience Electric campaign).

AFV Ride and Drive Event Strategy		
Event Siting – Audience Focus	Strategic Approach	# of Events per Focus Area
Workplace and Larger-Scale Public Events Larger employers, high-tech, socially responsible, e.g. health, software, higher education	<ul style="list-style-type: none"> Leverage success of previous Plug In @ Work outreach with high participation and test drive conversion. Develop Workplace AFV ambassadors as example for other employers in the region. 	1 Estimated test drives: 300 average per event
Leveraged / In-Kind AFV Events	<ul style="list-style-type: none"> National Plug In Day Other established events developed by Charge Across Town 	1 Estimated test drives: 200
	Total Proposed Events	2
	Projected Test Drives	~500+

4.11. Approach To Marketing Analysis, Materials, and Outreach Strategies to Communicate the Benefits of Alternative Fuel Usage to Targeted Groups Such as Fleet Owners/Operator: Through the Clean Cities Coalitions, the San Francisco AFV Task Force already has a dense network of relationships with major fleets in the region. From these relationships, we know that most fleet managers are acquainted with the high-level information on AFVs and Green Fleets that has been available through DOE, Clean Cities, CalStart, and industry conferences. However, many fleet managers still have not had the chance to ride and drive many of the most innovative new models. Therefore, the Task Force will use its existing communication networks and fleet manager relationships to publicize the much more robust Ride and Drive opportunities that will be available in the 2014-2016 period. In addition to segments targeted for Ride and Drive events described above, the Task Force will outreach to fleet operators to attend smaller-scale, fleet-focused events within the larger Ride and Drive context. These will feature the most fleet-relevant CNG, biodiesel, and niche PEVs in light, medium, and heavy duty segments and transit buses. We believe that most fleet managers will also be engaged by the diversity and innovation in the mainstream consumer AFV light duty segment – and that the excitement of seeing so many diverse AFVs in one location will catalyze interest and sales across segments.

4.12. Potential Strategies to Assist Alternative Fuel Wholesalers/Retailers to Market Alternative Fuels: Each fuel type within the AFV universe has unique opportunities and challenges, and each must be approached as a unique market development challenge. However, as a general proposition, stronger connections between AFV dealers, AFV consumer organizations (especially in the PEV class), and fuel providers (especially charging network vendors) can enhance the customer experience and better integrate the supply chain for vehicles and fueling. For example, payment processing, network interoperability, and charging status notification are emerging issues in the PEV charging system that need the focused attention of all stakeholders at once. Accordingly, the AFV Task Force will convene consumers and EV Service Providers (EVSPs) to surface issues and explore approaches to interoperability now being advanced by emerging interoperability initiatives, such as the GreenLots open source initiative, CollaboratEV, and others.

In the CNG space, we will also use our survey to determine how NGV customers are experiencing fueling system gaps and challenges, and convene customers and suppliers to assess potential obstacles and solutions, including potentially increased public investment where there are clear fueling bottlenecks and strong value propositions for new fueling outlets. In the biofuels space, there have been market failures for biodiesel vendors in several instances within the region due in part to regulatory and other factors. Therefore, it will be imperative to better understand the commercial and technical viability of the biodiesel supply chain and business case in order to properly evaluate new public or private investments. We believe that solutions that emerge directly from our survey work with AFI stakeholders and customers will likely yield the most promising solutions, rather than imposing generic strategies or large-scale investments that may not be commercially viable over time.

4.13. Summary of Significant Factors that Enhance the Value of the Proposed Project: The AFV Readiness Project described above benefits from these value-enhancing elements: 1) The Project builds on an existing robust PEV Council structure that also includes a large cross-section of broader AFV stakeholders, including BAAQMD, regional Clean Cities Coalitions, other consumer focused AFV coalitions, and local government and industry leadership; 2) It builds on a mature PEV Readiness Plan that will soon be operationalized, moving the Bay Area EV Strategic Council into a robust phase of stakeholder outreach, education, and engagement -- at the fleet, consumer, employer, and public policy levels. Much of this outreach can and will appropriately (and cost-effectively) include other AFV types. 3) The City will be engaging deeply and directly via surveys and dialogue with AFV stakeholders to ensure that outreach and training activities are customized to serve their highest-priority needs. 4) The City is investing in a proven model for building unprecedented fleet manager and consumer excitement via the AltCar Expo and the Experience Electric Ride and Drive events that feature a large and diverse array of AFVs. Based on experience in the greater Bay Area, we believe that Ride and Drive and related social media and word of mouth impacts can spark significant incremental sales jumps in the PEV segment in particular. This will help create a “halo effect” and larger exposure for niche AFVs in other fuels beyond electricity -- and other segments beyond light-duty. Finally, this proposal brings together a team of leaders that have worked successfully together for two years to build an AFV-friendly ecosystem – and has in place the structures, leadership, and expertise to advance the full range of promising AFV technologies.

5. SCOPE OF WORK -- Attachment 2 Exhibit A

TECHNICAL TASK LIST

Task #	Task Name
1.1 – 1.8.	Administration – secure funding, execute contracts, report progress, Final Report
2.1.	Inventory and Assessment -- of AFV ecosystem characteristics and needs
2.2.	Readiness Task Force -- convening and facilitation
2.3.	Best Practices – identification and development of best practices in AFV policies, incentives, financing, permitting, training, marketing
2.4.	Training and Outreach – for fleet operators, planners, first responders, decision makers, consumers
2.5.	Alternative Fuel Readiness Plan

KEY NAME LIST

Task #	Key Personnel	Key Subcontractor(s)	Key Partner(s)
1.	Bob Hayden , Manager, Transportation and Clean Vehicle Programs, SF Environment Bill Zeller , Director, San Francisco Clean Cities Coalition, SF Environment Sharon Hoff , Environmental Assistant, SF Environment Clean Transportation Programs		San Francisco Clean Cities Coalition (SFCCC)
2.1.	Bob Hayden Bill Zeller Sharon Hoff		SFCCC
2.2.	Bob Hayden Bill Zeller Sharon Hoff		SFCCC
2.3.	Bob Hayden Bill Zeller Sharon Hoff Krute Singa , Senior Clean Transportation Program Coordinator, SF Dep't of Environment		SFCCC
2.4.	Bob Hayden Bill Zeller Sharon Hoff Krute Singa		SFCCC
2.5.	Bob Hayden Bill Zeller Sharon Hoff Richard Schorske (Exec. Director, EV Alliance)	EV Communities Alliance	SFCCC

GLOSSARY: Specific terms and acronyms used throughout this scope of work are defined as follows: ARFVTP: *Alternative and Renewable Vehicle and Technology Program*; CAM: *Commission Agreement Manager*; CPR: *Critical Project Review*; FTD: *Fuels and Transportation Division*.

Problem Statement: The Alternative Fuel Readiness Project is designed to accelerate the deployment of Alternative Fuel Vehicles (AFV) and Alternative Fuel Infrastructure (AFI) in the San Francisco region. The principal barriers to broader use of AFVs are: market barriers, including inadequate consumer knowledge of the benefits and capabilities of AFVs; technological barriers, including inadequate refueling infrastructure that limits the range or convenience of AFVs; and institutional barriers to the cost-effective and widespread deployment of AFV infrastructure, including challenges in zoning, permitting, and installation of AFV fueling equipment. Finally, there are cost hurdles for both AFVs and associated fueling infrastructure.

To date, these barriers have not been adequately addressed in part because consumer demand for AFV products has been relatively limited, due to the challenging price/performance attributes of some AFVs, and the “chicken vs. egg” problem that infrastructure has been inadequate to support more AFVs and limited AFV deployment poses a barrier to profitable fueling infrastructure. Thanks to the emergence of lower-cost, higher-performance AFVs and public incentives for both vehicles and infrastructure, there is now a unique opportunity to break through many of these barriers to more widespread AFV adoption.

The proposed AFV Readiness planning and market development process outlined in this proposal will unite all of the City’s AFV stakeholders in a common AFV Readiness Task Force to ensure the strategic alignment of federal, state, regional, and local incentives, policies, and outreach approaches for accelerated deployment of AFVs, building on the existing work of the Bay Area EV Strategic Council and the PEV Readiness Plan now being operationalized. We believe that by integrating best practices in AFV market acceleration and AFV-friendly policy development, the AFV Readiness Plan development and implementation process can produce measurable gains in AFV deployment and market growth.

Goals of the Agreement: The goal of this Agreement is to accelerate the adoption of Alternative Fuel Vehicles (AFVs) and promote the deployment and use of Alternative Fuel Infrastructure (AFI) in the City and County of San Francisco and immediately surrounding areas.

Objectives of the Agreement: The objectives of this Agreement are: 1) to increase AFV sales; 2) to decrease GHG emissions, criteria pollutants, and fuel use in the San Francisco area; and, 3) to positively impact jobs and economic activity. Measures used to assess success of the project include use of DMV and CVRP databases to assess AFV sales, and use of CARB Emfac and regional air quality measures to assess fuel use and emissions impacts. In addition, economic impacts from AFV market acceleration will be assessed with respect to Alternative Fuel Infrastructure deployment and use.

Problem Statement: The State of California has set ambitious goals to reduce greenhouse gas (GHG) emissions. However, the alternative fuel infrastructure (AFI) and markets necessary to achieve GHG reductions must be developed in a way that recognizes local and regional geography, as well as, the opportunities and challenges of different alternative fuel (AF) pathways. In the City of San Francisco, existing challenges include the lack of fuel infrastructure, knowledge gaps surrounding AF, regulatory hurdles, and AFI costs. *Public investment into regional and local planning is required to assist market adoption of alternative fuel vehicles (AFV) and increased usage of Alt Fuels.*

Goals of the Agreement: *The goal of this project is to create an alternative fuel readiness plan (Plan) through coordinated efforts in the City and County of San Francisco. The Plan will include a strategic assessment of the challenges and opportunities for the adoption of alternative fuels and implementation of targeted outreach programs. The alternative fuel types that will be addressed in the Plan include electricity, natural gas, hydrogen, and biofuels.*

Objectives of the Agreement: *The objectives of this Agreement are to:*

- *Produce the Plan.*
- *Assess the potential challenges and opportunities to AFI deployment.*
- *Develop training and outreach materials and strategies that coordinate and engage stakeholders.*
- *Promote and sustain AF usage.*

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 Energy Commission and the Recipient. The goal of this task is to determine if the project should continue to receive Energy Commission 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) lead, other Energy Commission staff and Management as well as other individuals selected by the CAM to provide support to the Energy Commission.

The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient. These meetings generally take place at the Energy Commission, 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 Energy Commission 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 Energy Commission funds (options)
 - Energy Commission'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 Energy Commission 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 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 Energy Commission 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 Energy Commission 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 Energy Commission 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)

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 Energy Commission 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

TECHNICAL TASKS**TASK 2.1 Inventory and Assessment**

The goal of this task is to develop a region-wide inventory and assessment of AFV and AFI utilization.

The Recipient shall:

- Survey current AFV trends from all vehicle and user sectors, including CNG, biofuels, hydrogen, electric, and propane. Survey municipal and private fleet operators regarding current fleet inventories and prospective fleet procurement of all types of AFVs indicated above. Information resources on fleet operators include existing databases maintained by the Bay Area Air Quality Management District and the San Francisco Clean Cities Coalition.
- Survey future AFV trends from all vehicle and user sectors. Regional projections of consumer adoption of AFV types will be developed based on a literature review of historic data on AFV sales in the region and government and industry projections of future sales per each AFV type. This review will be supplemented by the fleet survey data referenced above.
- Consult with AFV stakeholders and partner entities on current and future AFV trends, and challenges and opportunities to accelerate AFV/AFI deployment. Partners to be consulted include the California Center for Sustainable Energy, California PEV Collaborative, California Fuel Cell Collaborative, California Natural Gas Vehicle Coalition, and the California Biodiesel Alliance, and regional Clean Cities Coalitions, among others. Prepare document on findings to identify effective, regionally actionable strategies to accelerate deployment of economically and environmentally sustainable AFVs.
- Utilize document on findings to inform recommendations on AFV/AFI readiness policies and incentives development, and effective outreach, education, and training activities.

Products:

- Progress report with findings
- Final Report with task recommendations

TASK 2.2. AFV Readiness Task Force

The goal of this task is to convene an AFV Readiness Task Force. The AFV Readiness Task Force is comprised of key stakeholders in the project region that will provide input and guidance on the development of the Plan.

The Recipient shall:

- Recruit diverse stakeholders to serve on the AFV Readiness Task Force.
- Prepare and conduct eight (8) AFV Readiness Task Force meetings.
- Prepare and distribute publicly available AFV Readiness Task Force meeting notices, schedule, agendas, and meeting summaries

Products:

- List of AFV Readiness Task Force members with affiliations
- Progress Reports that include meeting notices, agendas, and summaries

TASK 2.3 Best Practices Development

The goal of this task is to identify best practices in the areas of AFV/AFI policy, finance, deployment, and marketing and outreach. Best practices will be incorporated into the Plan and used in communications with stakeholders.

The Recipient shall:

- Identify regional, state, national, and international best practices.
- Incorporate best practices into the Plan and related documents and initiatives.

Products:

- Progress Report that lists all best practices and source(s) of information

TASK 2.4 Training and Outreach

The goal of this task is to provide training and outreach to stakeholders that will impact increased AF awareness, usage, and vehicle adoption.

The Recipient shall:

- Incorporate best practices findings into training and outreach initiatives.
- Develop training presentations and materials for fleet operators, planners, first responders, and decision makers regarding AFI and AFV's.
- Conduct one training session per targeted group (fleet operators, planners, first responders, and decision makers) for a total of four (4) trainings.
- Develop marketing and outreach plan and materials for the following targeted stakeholders: public and private fleet owners/operators, employers, local governments, and other key market groups.
- Implement marketing and outreach plan throughout the region utilizing print and electronic media, social media, targeted community events, workplaces, and fleet operator meetings/events.
- Conduct two (2) consumer-oriented "AFV 101" workshops (in addition to the fleet focused training activities described above.) AFV 101 events will be led by the San Francisco Clean Cities Coalition and will last approximately three hours each, and will address the full spectrum of AFV and AFI issues, including the types of AFVs and alternative fuels now in the marketplace and forthcoming soon; the operating characteristics and advantages of alternative fuel types; the economics of AFV/AFI ownership; fueling infrastructure; and safety and environmental risks and benefits. These workshops will also promote and link directly to the two Ride and Drive events developed by the MTC-funded Experience Electric Campaign, to *specifically include and highlight ALL AFV types*. These workshops will target the general public (not fleet operators), and will likely be held at City offices at the Department of Environment on Market Street.
- Conduct two (2) Green Vehicle shows (AltCar Expos) with AFV's in cooperation with the Bay Area Air Quality Management District and other stakeholders. The likely venue is the Richmond Craneway Pavilion, located just a short ferry ride from downtown San Francisco.

- Conduct two (2) alternative fuel rides and drive events enabling consumers and fleet operators to experience the benefits and operating capabilities of AFV's, in cooperation with the MTC Experience Electric Campaign. Ride and Drive events will be held at targeted large employers in the City, likely near ATT Park.

Products:

- Progress Report(s) that contain all training and outreach materials
- Progress Reports(s) that contain list(s) of training participants
- Training presentation content
- Print advertisements, articles, and online posting materials marketing the Green Car Shows with AFV's, the alternative fuel rides and drives events, and the AFV workshops
- Participant sign-in/sign-up documents for the two Green Car Shows with AFV's, the two alternative fuel rides and drives events, and two AFV consumer workshops
- Presentations to elected officials, public/private entities, and employers

TASK 2.5: ALTERNATIVE FUELS READINESS PLAN

The goal of this task is to create the Plan based in part on activities conducted in tasks 2.1 through 2.4.

The Recipient shall:

- Create outline of Plan and send to the Energy Commission.
- Create the Draft Plan with all the required elements as they are developed and approved and send to the Energy Commission, including references to ongoing data collection and analysis elements
- Make the Plan available for public review and comment.
- Address comments to the Draft Plan received through the public review process.
- Present Plan to the City's Chief Administrative Officer
- Publish accepted Plan on the SF Department of Environment website

Products:

- Draft Plan
- Final Plan