

# Driving to Net Zero

*Decarbonizing Transportation in Silicon Valley*

**STRATEGIC GROWTH COUNCIL/DEPARTMENT OF CONSERVATION – SUSTAINABLE COMMUNITIES PLANNING GRANT**



# DRIVING TO NET ZERO - PROJECT WORK PLAN

## STRATEGIC GROWTH COUNCIL/Department of Conservation – Sustainable Communities Planning Grant Award

**Grantee:** Santa Clara County – Office of Sustainability and Climate Action **Grant Number:** XXXXXXXXX **Jurisdiction:** Santa Clara County and Project Partners: Cities of Cupertino, Mountain View, Palo Alto, Sunnyvale, and Morgan Hill; Joint Venture Silicon Valley; and the Bay Area Climate Collaborative (the Project Team)

**Department/Office:** Office of Sustainability and Climate Action

**Project Title:** Driving to Net Zero – Decarbonizing Transportation in Silicon Valley

### EXHIBIT A: SCOPE OF WORK

High Level Activities/Milestones (with Deliverables)	Responsible Parties	Timetable in months Soft Launch 2014 (Start year: 2015)
<p><b>TASK 1. Alternative Fuel Vehicle<sup>1</sup>/Infrastructure Partner Jurisdiction Capacity Building</b></p> <p>Task 1 will provide partner jurisdiction staff and elected officials with a common baseline level of knowledge about alternative fuel vehicles. The task will focus on educating the jurisdictions about the importance of AFVs toward achieving regional greenhouse gas and air quality goals and protecting public health. This will allow a shared framework of understanding amongst the partners and facilitate implementation of the other tasks.</p> <p><u><i>Sub-Task A – Alternative Fuel Infrastructure Best Practices Review</i></u></p> <p>The Project Team will prepare a compendium that summarizes best practices related to local jurisdiction implementation of alternative fuel vehicle/infrastructure initiatives. The project team will collect global best practices and collaborate with regional and State experts from BAAQMD, CARB, OPR, and other organizations to ensure the compendium is comprehensive and relevant to the local context. Precedents from other jurisdictions will be described when feasible. The compendium will be utilized as a desktop resource for local partners.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>Local Jurisdiction AFV/I Best Practices Compendium</li> </ul>	<p>The Project Team</p> <p>Consultant(s)</p> <p><i>RFP refer to regulatory, technical and other necessary components to the consultancy</i></p>	<p>Months 1 –5</p>

<sup>1</sup> Please note that, while the Project will address “alternative” or non-combustion-engine vehicles, compressed natural gas (CNG) has embedded emissions and other limitations that contain its feasibility to medium- and large-scaled (work/industrial) vehicles. As a result, electric vehicles will be a key focus of the Project.

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<p><u><b>Sub-Task B – Alternative Fuel Vehicle &amp; Infrastructure Study Session</b></u>  The Project Team will facilitate a mutual presentation for the Cities/County Association (comprised of elected officials from all jurisdictions in Santa Clara County) to ensure awareness and understanding of the context and importance of AFV/I initiatives, and to introduce the potential strategies Silicon Valley jurisdictions could implement. The study/presentation project will encourage the Cities/County Association to adopt a resolution of commitment to pursue feasible implementation of AFV/I initiatives. The Project Team will also invite representatives from relevant regional/state agencies to underscore the contributions of the city initiatives to regional and State goals.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• AFV/I Cities/County Association Presentations, and Meeting Notes &amp; Materials</li> <li>• White Paper for Cities/County Association</li> </ul> <p><u><b>Sub-Task C – Staff Alternative Fuel Vehicle &amp; Infrastructure Workshops</b></u>  The Project Team will conduct department-specific workshops for key planning, building, public works and other relevant staff. The workshops will provide an overview of regional AFV/I initiatives and outline departmental implementation roles. The workshops will also allow the Project Team to ascertain the level of existing capacity within partner jurisdictions. When feasible, the workshops will combine staff from different cities. Combining staff will help build inter-jurisdiction collaboration improve project cost-effectiveness and could also serve as an environment to establish implementation partnerships and leveraged procurement opportunities.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• Jurisdiction Staff AFV/I Workshops, Presentations, and Meeting Notes (2)</li> </ul> <p><b>TASK 1 MEETINGS:</b></p> <ul style="list-style-type: none"> <li>• Project Partners Meeting (1)</li> </ul>		
<p><b>TASK 2. Community EV/Alternative Fuel Infrastructure Planning</b></p> <p>Task 2 will help partner jurisdictions develop plans related to the deployment of publically accessible alternative fuel infrastructure within their communities. The plans will focus on development of EV charging stations and municipal CNG fueling stations. As part of this task, the Project Team will conduct demand analyses and feasibility studies. Working with jurisdiction staff, the Project Team will prioritize deployment investments and develop implementation framework(s). While the plans will primarily emphasize deployment within individual jurisdictions, the planning process will consider development</p>	<p>The Project Team  Consultant(s)  Committee(s):  Planning and Building AF/I Technical Advisory Committee</p> <p>Clean Fleet Technical Advisory</p>	<p>Months 3 – 9</p>

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<p>of a regional multi-jurisdiction alternative fuel infrastructure network.</p> <p><u><i>Sub-Task A – Community-wide EV Charging Station Siting Methodology, Toolkit, and Reference Guide</i></u></p> <p>Working with cities and county staff, the Project Team will facilitate the development of electric vehicle charging station siting methodology and toolkit. This would include, without limitation, development and initial application of a methodology for on-going identification and prioritization of potential public and private locations; an assessment model to determine higher- or highest-value deployment locations; menu of key variables including but not limited to: type of charging demand and likely utilization, a compendium of deployment and zoning principles, competing parking requirements and layered regulation (e.g., ADA requirements), and cost projections. This approach allows flexibility and scalability for adoption either directly, through a siting plan, or integrated with other governing plans, e.g., transportation master plans, general plans, or SB 375-based plans that identify priority areas.</p> <p>In addition, the Toolkit will address appropriate locations for Level 1 (slow charge), Level 2 (fast charge), and Level 3 and DC (rapid charge) charging stations in the community including : A) locations that are anticipated to have a high demand from existing land uses (e.g., high density residential (especially multifamily), commercial core areas, business parks) and B) areas that could facilitate regional EV travel (e.g., near freeway exits and areas planned for future high-density mixed-use development). Further, it will consider deployment timelines and identify where jurisdiction investment in public charging stations is needed to catalyze early adoption and where private sector development and/or public-private development or mutual-use planning may result in a more effective outcomes. .</p> <p>Also, this Task will provide a Reference Guide to available station ownership and management options, ideally with examples that describe/detail associated economics and risks.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• Electric Vehicle Charging Station Siting Plan Toolkit</li> <li>• Electric Vehicle Charging Station Reference Guide</li> </ul> <p><u><i>Sub-Task B – Compressed Natural Gas Fueling Stations Plans</i></u></p> <p>Many Bay Area jurisdictions are transitioning (or considering a transition) to the use of compressed natural gas in a portion of their municipal fleets. This fuel is more appropriate for heavy- and medium-duty vehicles, resulting in reductions to operation and maintenance costs – although recent studies suggest that carbon and particulate emissions reductions (taking into account both upstream and downstream impacts) may be lower than previously suggested. As the SGC Round 3 grant awards were uniformly reduced to allow for an additional Economic/Environmental Justice Project, and given</p>	<p>Committee</p>	

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<p>the specialized application of CNG, this Task has been telescoped from the application work plan to focus on mutual-use strategies and market feasibility/potential for public-use of local government fueling stations and public-private partnerships. Subject to available budget, the Project Team may generate a study of relevant private sector actors in the region (with corporate fleets that deploy heavy- and medium-duty vehicles). Certain actors, e.g., PG&amp;E may be targeted for potential mutual uses and to streamline the processes for mutual use.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• Updated analysis of carbon emissions reductions potential associated with CNG</li> <li>• CNG Regional Sites Map (Public and Private)</li> </ul> <p><b>TASK 2 MEETINGS</b></p> <ul style="list-style-type: none"> <li>• Project Partners Meeting (1)</li> <li>• Public Works, Zoning Code, and Building Technical Advisory Committee Meetings (2)</li> </ul>		
<p><b>TASK 3. Alternative Fuel Vehicle/Infrastructure Policy Development and Support</b></p> <p>The foundation of Task 3 will be a Gaps Analysis/Needs Assessment that serves as a central resource for the rapidly-evolving policy in this area. Task 3 will then help partner jurisdictions make revisions of their policies, regulations, and standards that are necessary to facilitate EV-AFV/I adoption within the community, e.g., EV readiness in existing construction.. These revisions will help reduce regulatory, transactional, structural, and financial barriers to EV-AFV/I adoption. Ultimately, the goal is that these tools will be used to foster standard, consistent, and uniform policies and ordinances across the region.</p> <p><u><i>Sub-Task A – Public Infrastructure Standards (e.g., street, electrical, etc.)</i></u></p> <p>Effective deployment of public EV charging stations will require revisions to city and utility infrastructure standards. The Project Team will help jurisdiction staff identify and draft model updates to design guidelines, standard drawings, specifications, and details for public works projects, to facilitate on-street and off-street EV infrastructure readiness and deployment. Additionally, the Project Team and city staff will coordinate with the local utility (PG&amp;E or Muni) to ensure that utility upgrades to existing municipal electrical supply infrastructure (e.g., street lighting infrastructure) and City-wide utility service plans are being developed and regularly updated to accommodate future EV charging stations, and growth in overall electricity demand from EV charging.</p> <p>.</p> <p><b>Deliverables:</b></p>	<p>The Project Team Consultant(s)</p> <p>Planning and Building AF/I Technical Advisory Committee</p>	<p>Month 5 – 11</p>

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<ul style="list-style-type: none"> <li>• Gaps Analysis/Needs Assessment</li> <li>• Public Infrastructure Standards Evaluation and Recommendations Guide</li> <li>• Public Infrastructure Standards Revisions Template</li> </ul> <p><b><u>Sub-Task B – Building Code and Zoning Code Revisions</u></b></p> <p>Jurisdiction building codes and zoning codes will need to be revised to facilitate the integration of EV charging facilities into development projects. The Project Team will work with jurisdictions to evaluate existing code and develop new code that reflects electric vehicle supply equipment (EVSE) requirements. Revisions will include (but will not be limited to) the adoption of rewiring requirements in new single-family and multi-family residential development, charging station requirements for new or renovated multi-family and commercial development, preferential parking requirements for new commercial development, compliance with other regulation (e.g., Americans With Disabilities Act), etc.. The Project Team will also work with jurisdiction to develop expedited permitting processes for EVSE integration in new and existing development.</p> <p><b><u>Deliverables:</u></b></p> <ul style="list-style-type: none"> <li>• Building Code and Zoning Code Evaluation and Recommendations Memorandum</li> <li>• Building Code and Zoning Code Revisions Template</li> </ul> <p><b><u>Sub-Task C – EV-Alternative Fuel Vehicle/Infrastructure Incentives/Partnerships/Funding Mechanisms</u></b></p> <p>Jurisdictions can provide incentives that facilitate community AFV adoption. Many of these incentives could be applied in early stages of the adoption curve and then be sunsetted after AFVs have achieved market momentum. The Project Team will work with staff to evaluate and adopt appropriate local incentives, e.g., <u>public</u> parking policies that provide preferential or free parking for AFVs; reduced parking requirements for <u>private</u> developments that implement shared-parking and car-sharing systems in tandem with EVSE integration; reduced on-street parking permit fees for AFVs (where applicable). The Project Team will also assist jurisdictions by evaluating the potential for reduced price EV charging and CNG fueling and direct local jurisdiction financial incentives (related to mitigation mechanism described below in Sub-task D) for AFV purchase by residents and businesses. In addition, the Project Team will explore potential funding mechanisms that potential incentivize expansion of charging stations and “opening up” access to private infrastructure.</p>		

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<p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>EV-Alternative Fuel Vehicle/Infrastructure Incentives Recommendations Memorandum, including potential public-private funding Mitmechanisms</li> <li>EV-Alternative Fuel Vehicle/Infrastructure Incentives Template</li> </ul> <p><b><u>Sub-Task D - Development Project Air Quality &amp; Carbon Emission Mitigation Mechanism</u></b></p> <p>New development projects often generate additional vehicle trips, significant impacts to local air quality, and considerable amounts of transportation-related greenhouse gas emissions. The California Environmental Quality Acts requires lead agencies to require development project to mitigate these impacts to the extent feasible. While onsite mitigation through smart growth techniques (e.g., mixed use, higher density, and transit provision) should be used first to reduce these impacts, these techniques are often incapable of mitigating the full impact. Local jurisdictions could establish project-level mitigation mechanisms that facilitate community adoption and deployment of AFV/I. The Project Team will work with jurisdiction staff and relevant regional and State agencies (e.g., BAAQMD, ABAG, CARB, and OPR) to evaluate and develop appropriate AFV/I mitigation mechanisms. The Protect Team would define a clear and reasonable nexus between the generated impacts and the required mitigation and establish mitigation fee rates that are proportional to a project’s anticipated impacts. The Project Team would also develop template mitigation language and mitigation monitoring, and reporting programs for use by jurisdictions.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>Mitigation Development Workshops (2)</li> <li>Mitigation Mechanism Template</li> <li>Mitigation Mechanism Nexus and Proportionality Study</li> </ul> <p><b>TASK 3 MEETINGS:</b></p> <ul style="list-style-type: none"> <li>Project Partners Meeting (1)</li> <li>Public Workshops, Zoning Code, and Building Technical Advisory Committee Meetings (2)</li> </ul>		
<p><b>TASK 4. Local Jurisdiction Procurement, Installation, and Guidelines Element; Building, Zoning, Permitting/Inspection Staff Training; and Procurement Options</b></p> <p>A key municipal barrier for successful deployment and market support for EVSE is “how to start”. In particular, review and inspection of EVSE can be time consuming for jurisdiction building permitting and inspection staff less familiar with the technologies and systems involved. An EVSE training program and standardized Toolkit for relevant staff will help expedite these processes and remove transactional</p>	<p>Project Team Consultant(s)</p> <p>Committee: Planning and Building AF/I</p>	<p>Month 9 – 12</p>

<b>High Level Activities/Milestones (with Deliverables)</b>	<b>Responsible Parties</b>	<b>Timetable in months Soft Launch 2014 (Start year: 2015)</b>
<p>barriers for installation contractors. The Toolkit is identified by the Project Team as a key resource for successful expansion of Alternative Fuel Vehicle market uptake and strategic infrastructure-building. The Toolkit will include government- as well as developer-facing resources, checklists, templates, and guides. In addition, this Task will offer proposals for streamlining and optimizing procurement, including potential benefits from joint/consolidated procurement.</p> <p><u>Sub-Task A - EVSE Training for Partner Jurisdiction Building Permitting/Inspection Staff</u></p> <p>The project will provide technical EVSE training for key jurisdiction building permitting/inspection staff training. The training will combine staff from partner jurisdictions for cost savings and collaboration/knowledge sharing purposes.</p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• EVSE-AF/I Government Staff Training Module (either live session or video-based)</li> </ul> <p><u>Sub-Task B – EVSE Toolkit</u></p> <p><b>Deliverables:</b></p> <p>EVSE-AF/I Government- and Developer-Facing Toolkit</p>	<p>Technical Advisory Committee</p>	
<p><b>TASK 5. Outreach &amp; Marketing – Preliminary Phase</b></p> <p>Building upon the Project Deliverables and leveraging existing marketing resources (e.g., MTC’s Experience Electric campaign), the Project Partners will engage public access delivery channels and programs (e.g., the extensive County-Municipal Green Business Program) to message and promote EV market uptake. In addition, the Project Team and consultant(s) will collaborate in developing further marketing, outreach, education, and incentives recommendations that can form the basis of future marketing and implementation programs.</p> <p><u>Sub-Task A. – Marketing Outreach &amp; Expanded Implementation Framework</u></p> <p><b>Deliverables:</b></p> <ul style="list-style-type: none"> <li>• Public marketing campaign and tactics (e.g., web-based, market segmentation analysis, outreach tactics and events)</li> <li>• Executive Implementation Framework for future marketing and/or incentives programs</li> </ul>	<p>Project Team Consultant(s)</p>	<p>Month 12 - 14</p>
<p><b>TASK 6. Municipal Clean Fleet Planning</b></p>	<p>Project Team</p>	<p>Month 6 – 14</p>

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<p>Many of the partner jurisdictions have implemented (or plan to implement) a variety of clean fleet initiatives, but most lack formal policies to direct the transition. This task would help the partner jurisdictions develop formal guidelines, targets, and implementation plans.</p> <p><b><u>Sub-Task A - Municipal Clean Fleet Implementation Plan</u></b>  The Project Team will work with jurisdiction staff to review clean fleet goals, establish vehicle procurement policies, and develop municipal clean fleet and alternative fuel infrastructure development plans. As part of this task, the Project Team will perform comparisons of lifecycle cost analyses for clean vehicle vs conventional vehicles. The team will evaluate future market conditions that are likely to change AFV feasibility. Assuming acceptable financial performance is found to exist, the Project Team and staff will use this data and current fleet lifecycle data to develop short-term and medium-term clean fleet implementation plans. The plans would be based on a standard template for all partner jurisdiction, though implementation details would vary. These plans would ideally be adopted by jurisdiction elected officials.</p> <p><b><i>Deliverables:</i></b></p> <ul style="list-style-type: none"> <li>• Clean Fleet Lifecycle Cost Analysis</li> <li>• Municipal Clean Fleet Implementation Plans</li> <li>• Clean Fleet Lifecycle Cost Analysis and Methodology Memorandum</li> <li>• Optional Deliverable (subject to budget) - Clean Fleet Lifecycle Cost Analysis Calculator</li> </ul> <p><b><i>TASK 6 MEETINGS:</i></b></p> <ul style="list-style-type: none"> <li>• Project Partners Meeting (1)</li> <li>• Municipal Fleet Operator Technical Advisory Committee Meetings (2)</li> </ul>	<p>Consultant</p> <p>Committee(s):</p> <p>Clean Fleet Technical Advisory Committee</p>	
<p><b>TASK 7. Overall Project Management &amp; Coordination</b></p> <p>Overall Project and Grant Management and Co-ordination</p> <p><b><u>Sub-Task A - Project Initiation (Including Project Partner Initiation Meeting)</u></b>  Santa Clara County staff and consultant will schedule and facilitate a project initiation meeting with the Project Partners to introduce the purpose and objectives of the Clean Vehicles Project, indicators and desired outcomes, work plan and schedule, Project Partner roles and responsibilities, required information from the Project Partners, and other particulars of the project.</p>	<p>Santa Clara County</p> <p>Consultant</p>	<p>Month 1 – 15</p>

<b>High Level Activities/Milestones (with Deliverables)</b>	<b>Responsible Parties</b>	<b>Timetable in months Soft Launch 2014 (Start year: 2015)</b>
<p><u><i>Sub-Task B - Bi-Monthly Project Status Meetings/Conference Calls</i></u>  Santa Clara County staff and consultant will conduct bi-monthly project status meetings, either in person or be conference call, to review project status and schedule, including upcoming tasks, milestones, meetings, and deliverables, and resolve any issues or concerns regarding project performance.</p> <p><u><i>Sub-Task C - Quarterly Reporting to Strategic Growth Council</i></u>  Santa Clara County staff and consultant will prepare quarterly reports to the Strategic Growth Council, in a format approved by Council staff, as required by the SGC Planning Grant programs.</p> <p><u><i>Sub-Task D - Ongoing Management/Coordination</i></u>  County staff will coordinate Project tasks, deliverables, meetings, and performance throughout the 15-month Project schedule.</p>		