REGIONAL ZERO EMISSION FLEET TRANSITION & INFRASTRUCTURE PLAN

HUMBOLDT COUNTY ASSOCIATION OF GOVERNMENTS

AUGUST 16, 2024

DKS

SHAPING A SMARTER
TRANSPORTATION EXPERIENCE™

AUGUST 16, 2024

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ASSOCIATE REGIONAL PLANNER
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REQUEST FOR PROPOSAL: HUMBOLDT COUNTY REGIONAL ZERO EMISSION FLEET TRANSITION AND INFRASTRUCTURE PLAN

Dear Mr. Luther and Members of the Selection Committee,

Humboldt County Association of Governments (HCAOG) is committed to decarbonizing its member's fleet operations by planning vehicle transition and their respective charging or hydrogen fueling needs of one county fleet, seven city fleets, and three tribal fleets. Doing so together will both ensure compliance with Advanced Clean Fleets requirements and potentially facilitate shared use of charging and hydrogen fueling investments by multiple agencies. A well-planned transition to zero emission vehicles and infrastructure is paramount in supporting HCAOG's vision for improving connectivity, mobility, equity, and accessibility. To accomplish this, HCAOG must rely on the expertise of reputable consultants who can effectively function as an extension of the HCAOG staff.

We are proud to have a trusted team, led by DKS Associates (DKS) and supported by Frontier Energy (Frontier), who share this vision. Our team brings the following benefits:

DEMONSTRATED FLEET ELECTRIFICATION PLANNING EXPERTISE The DKS/Frontier team has worked in the electromobility ecosystem since the 1990s. We understand the current and upcoming EV models, charging hardware and software, business model options for chargers, regulations, and funding opportunities. We are planning fleet electrification for the following California counties: Alameda, Calaveras, Nevada, Inyo, and Shasta; as well as King and Snohomish counties in Washington. Our experience includes planning electrification for city fleets in areas ranging from large municipalities like Seattle, San Jose, and Oakland to small rural communities. Our team has developed effective tools and methodologies for fleet electrification, including experts in electromobility planning, data analysis, and fleet operations.

AN INNOVATIVE AND CREATIVE SOLUTIONS-DRIVEN TEAM Project Manager Gurbir Antaal, with over a decade of experience in regional transportation planning and expertise in EV charging infrastructure, collaborates with teams to explore the best zero-emission options for clients. Supported by a team of zero emission experts overseen by Principal-in-Charge Mike Usen, the DKS/Frontier team has delivered more than 70 fleet electrification plans for over 50 counties and cities. They are planning charging infrastructure for the public and agency fleet electrification in compliance with CARB's Advanced Clean Fleets (ACF) rule. Leveraging the DKS/Frontier team's vast experience, our team helps clients secure charging grants, promote collaboration with stakeholders, and analyze bus fleet options through solid infrastructure planning—all with a robust implementation timeline.

PROVEN STRATEGIC APPROACH We've been entrusted by numerous agencies to evaluate, plan, and design EV charging infrastructure and numerous types of facilities. This is demonstrated through our work for Nevada and Calaveras counties, King County (Washington), East Bay Municipal Utility District, and other large, diverse fleets, where we have demonstrated how charging hubs or opportunity charging facilities can be sited strategically for multiple users. Depending on location, parking, and electrical capacity, several county-owned fleet facilities could potentially host multi-port high-powered DC fast chargers (DCFCs) to provide convenience, redundancy, and resilience for EVs operated by the county, cities, and tribes and potentially for other fleets such as the U.S. Forest Service, BLM, and Caltrans and CalFire. This would allow Humboldt County to optimize charging infrastructure investments, recover a portion of investments through

charging and Low Carbon Fuel Standard (LCFS) revenue, and increase eligibility for third-party funding. For duty cycles best served by fuel cell electric vehicles (FCEVs), the purchase of hydrogen from Humboldt Transit Authority presents another opportunity for significant cost savings.

THIS PROPOSAL OUTLINES DKS/FRONTIER'S COMPREHENSIVE APPROACH TO FOUR KEY TASKS AS DESCRIBED IN THE RFP:

STAKEHOLDER AND PROJECT ADVISORY COMMITTEE: Consensus matters. Our team is poised to facilitate an inclusive stakeholder engagement process that will inform the plan and prepare stakeholders for the plan's implementation.

FLEET TRANSITION ANALYSIS: Applying our team's collective knowledge of industry trends and best practices, our team will evaluate the needs, barriers, and opportunities for transitioning vehicle fleets to zero emissions. This will include a thorough review of fleet duty cycle analysis and cost/benefit analysis for both battery and fuel cell electric technologies.

INFRASTRUCTURE PLAN: The DKS/Frontier team will build a strategic and actionable roadmap for an ACF-compliant ZEV transition that allows it to happen more quickly, easily, and cost-effectively.

IMPLEMENTATION PLAN: Our financial analysis will offer ideas to maximize the allocated plan budget, provide practical recommendations for funding programs, and provide a timeline for customized implementation at each fleet facility. DKS will assess the 11 fleets (counties, cities, and tribes) to recommend EV and/or hydrogen fuel options for the HCAOG jurisdictions and tribes.

This proposal is a firm offer for 60 days. John Bosket is authorized to negotiate a contract with HCAOG. Mike Usen will serve as the Principal-in-Charge for this project, directing and overseeing the Quality Assurance/Quality Control (QA/QC) measures, including conducting technical reviews of all deliverables. Gurbir Antaal will serve as the Project Manager and the primary point of contact throughout the consultant selection process.

Please contact **Gurbir Antaal at 415.996.7419** or gurbir.antaal@dksassociates.com with any questions or for further information. The address of the DKS office point of contact is listed on the top of the proposal's cover letter. We look forward to partnering with HCAOG to support the transition to a sustainable, zero-emission fleets. Thank you for considering our proposal. We value developing long-standing partnerships with the clients we serve. We look forward to this opportunity and growing our relationship with you.

Sincerely,

Mike Usen, AICP
Principal-in-Charge, DKS Associates
Cell: 206.288.3174
Email: mike.usen@dksassociates.com

John Bosket, PE
Vice President, DKS Associates
Cell: 971.235.9166
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Gurbir Antaal, PE
Project Manager, DKS Associates
Cell: 415.996.7419
Email: gurbir.antaal@dksassociates.com

GLOSSARY

TERM OR ACRONYM	DESCRIPTION
ACF	Advanced Clean Fleet Rule
BEV	Battery Electric Vehicle
CAPEX	Capital Expenditure
CEC	California Energy Commission
DCFC	Dial Current Fast Charger
DOE	Department of Energy
EPTO	Electric Power Takeoff
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
FCEV	Fuel Cell Electric Vehicle
FLEELET	DKS Fleet Electrification Tool
GHG	Greenhouse Gas
HD	Heavy Duty
ICEV	Internal Combustion Engine Vehicle
L2	Level 2 (Charger)
LD	Light-Duty

GLOSSARY

TERM OR ACRONYM	DESCRIPTION
MD	Medium Duty
OPEX	Operational and Maintenance Expenses
PG&E	Pacific Gas & Electric Company
PHEV	Plug-in Hybrid Electric Vehicle
RFP	Request for Proposals
ZEV	Zero-Emission Vehicle

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UNDERSTANDING OF PROJECT

PROJECT GOALS

To be successful, this project must facilitate transition of fleets operated by Humboldt County, local cities and tribes to ZEV in compliance with ACF by developing an actionable roadmap to replace existing fleet assets and install the most appropriate charging or fueling infrastructure at fleet facilities. Our understanding of this project is based on careful review of HCAOG's scope of work and other components of the RFP as well as lessons we have learned from having completed many similar projects for counties and cities. During each of these projects, we work closely with fleet managers from departments operating large fleets such as Public Works, Sheriffs and Police, Parks and Recreation, as well as small ones like Assessors, Health and Human Services, and Libraries because understanding their unique vehicle operations is critical to developing a fleet transition plan that meets each fleet's needs. We also work with facilities managers and in-house engineers and electricians to inform recommendations on infrastructure upgrades at each future ZEV charging or fueling facility. We partner with staff responsible for budgets to ensure that our recommended capital investments can be implemented consistent with the timeframes of annual or biennial budgets and hopefully underwritten by grants and utility incentives. On this project, these stakeholders will comprise the PAC and TAC, providing a formal mechanism to ensure that this consultant team considers stakeholder input and feedback.

The project will consist of the following actions:

- Evaluate needs, barriers and opportunities for ZEV fleet transition.
- Review each fleet to determine ZEV replacement options and recommend detailed timeframes.
- Model energy requirements for EV charging at all fleet facilities based on duty cycles.
- Evaluate charging or hydrogen fueling strategies and provide specific infrastructure recommendations in coordination with PG&E.
- Recommend ZEV fleet management system upgrades and prepare guidance for charging operations and infrastructure maintenance.
- Identify opportunities for shared use of ZEV fueling between fleet vehicles, county, city, and tribal staff, and/or the public.
- Estimate planning-level total costs of ownership of ZEV transition options for the next 20 years.
- Evaluate the feasibility of existing fleet facilities to support new charging and/or hydrogen fueling infrastructure.
- Develop conceptual charging infrastructure designs for 10 sites and sites prioritized by jurisdictions.
- Assess the viability of co-siting of joint charging/fueling facilities in collaboration with land owned by Caltrans, CalFire, and the U.S. Forest Service and cross-jurisdictional facility sharing.
- Review of potential solar and battery storage needs and opportunities.
- Identify key personnel, agency responsibilities, policies and decision-making processes, and necessary administrative actions to implement recommendations.
- Prepare timeframes for project implementation including ACF compliance actions, grants, permits, and ZEV infrastructure deployment.
- Document potential funding sources and financing options.

DEPTH OF INDUSTRY KNOWLEDGE

DKS will draw from its extensive professional network of EV charging vendors and networks to recommend solutions that best fit public and fleet charging, respectively. As part of our multiple ongoing electromobility projects, DKS is in frequent contact with EV charging networks including EVGo, Electrify America, Tesla, ChargePoint, Blink, Rivian, Volta, Flo, and others. **Frontier Energy is the operator of the Hydrogen Fuel Cell Partnership** and has unparalleled access to and knowledge of the hydrogen market. Frontier is part of three of the U.S. DOE Hydrogen Hub awards.

Both DKS and Frontier Energy, have extensive experience planning ZEV transitions addressing both EVs and FCEVs, as well as planning EV charging and hydrogen fueling infrastructure for both types of ZEVs. Based on this experience, which includes extensive evaluation of ZEV operations for nearly every imaginable fleet duty cycle, the relative economics and availability of BEV and FCEV models, electricity, hydrogen, and industry trends, we expect that BEV technology will continue to dominate light-duty and most medium-duty ZEV applications due to more favorable economics, supply chain and other logistical advantages. The most suitable role for hydrogen is powering fleet vehicles with extreme duty cycles, especially heavy-duty mission-critical assets such as fire apparatus and snow plows.

Some of the major challenges of hydrogen fueling is availability of hydrogen and the high cost of fueling infrastructure. Fortunately, Humboldt Transit Authority (HTA) will be investing in a hydrogen fueling station at its fleet depot Eureka funded by the California State Transportation Agency's Transit and Intercity Rail Capital Program. Collaborating with HTA for fueling of hydrogen-powered trucks and other ZEVs with extreme duty cycles could benefit Humboldt County and other agencies by not having to make their own investments in hydrogen fueling infrastructure.

GRANTS AND INCENTIVES

Humboldt County and its constituent jurisdictions need a comprehensive and actionable plan to guide the installation of EV chargers for use by fleet vehicles. Along with serving as a decision support tool, this plan should position HCAOG to be competitive for current and upcoming funding opportunities. DKS has had repeated success securing additional project funding on EV projects. For example, our South San Francisco EV Charging Masterplan helped the City win $1.5 million of in-kind contributions from multiple third-party EV charger providers allowing the City to achieve its vehicle electrification goals for a fraction of the infrastructure investment and realize a return equal to 15 times its investment in consulting services and infrastructure costs. An even more relevant example is the Sacramento EV Implementation Blueprint which directly led to the City of Sacramento winning $2 million in Phase 2 funding from the California Energy Commission (CEC) to implement the EV Blueprint, one of only four projects statewide that were funded. Most recently, after completion and adoption of the San Joaquin COG Alternative Fuels Vision Plan (AFVP) by the DKS/Frontier team, San Joaquin COG was one of a limited number of agencies to be awarded a federal Charging and Fueling Infrastructure (CFI) program grant in the amount of $15 million. This grant, called "Expanding Electrification for All in San Joaquin County", will utilize the awarded funding to provide charging infrastructure for traditionally underserved communities in San Joaquin County.

Many of these projects are focused on the rural and remote areas of California. Based on these experiences, coupled with expectations for more state funding in support of California's Executive Order N-79-20, Surface Transportation Block Grant Program (STBG), Congestion Mitigation and Air Quality Improvement (CMAQ), and other future grants supported by the federal Infrastructure Investments and Jobs Act, we believe Humboldt County and its jurisdictions should prepare for these opportunities that could fund the design and construction of portions of this planning project.

EV CHARGING SITE PRIORITIZATION TOOLS

As shown in Figure 1, DKS has developed a comprehensive tool to systematically assess the suitability of different sites for fleet vehicle electrification and charger deployment. The figure visualizes the main result produced by this tool:

weighted scores assigned to each site, according to various criteria, which can be customized to each fleet's goals and other considerations such as cost-effectiveness. Each criterion can be weighted to reflect each fleet's unique set of priorities. More details on the various possible prioritization criteria that can be included are in Section 4 under Subtask 2.3. Given the focus of this study, which spans multiple fleets and many facilities, the proven application of our site optimization tool will be particularly instrumental for project success.

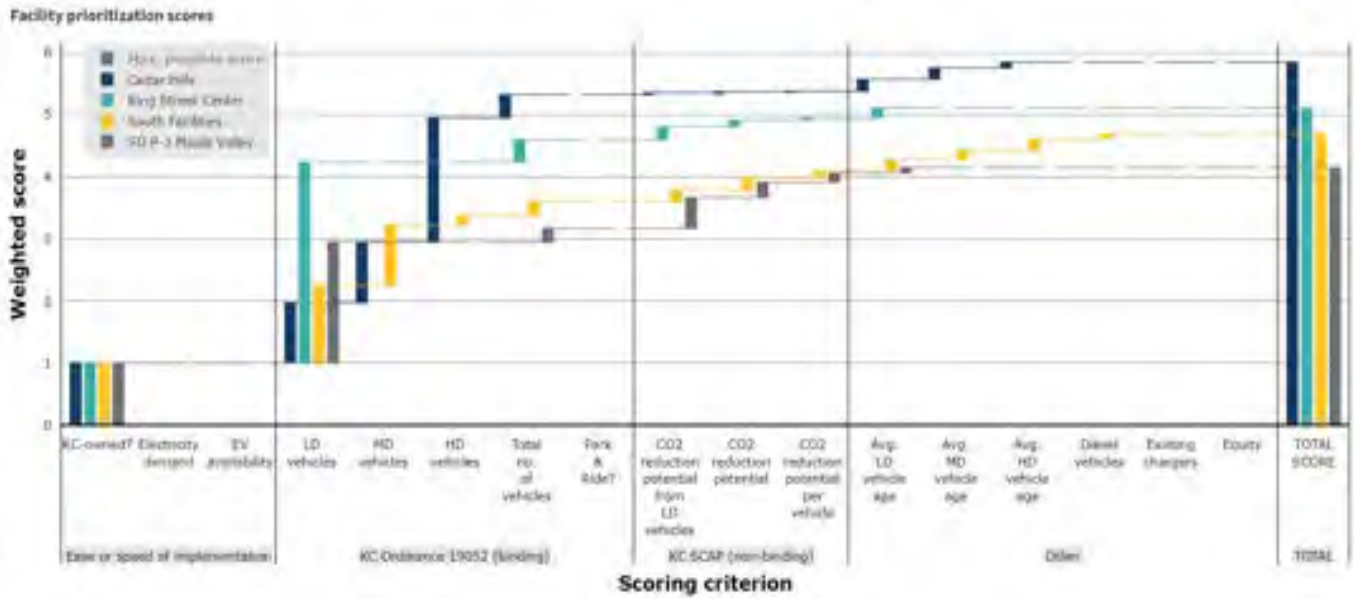


Figure 1: Visualization of DKS's Facility Charger Siting Prioritization Tool

DKS has ample experience analyzing multiple fleets within one project and to both prioritize sites with the greatest suitability and need for near-term EV charging infrastructure installations as well as maximizing co-benefits between different fleet's charging locations, such as through cross-jurisdictional opportunity charging. This is illustrated in Figure 2 below for different fleet domicile locations and cities across Alameda County, CA. Drive time analyses like these inform the feasibility of opportunity charging fleet vehicles at different facilities within a city as well as in neighboring jurisdictions.

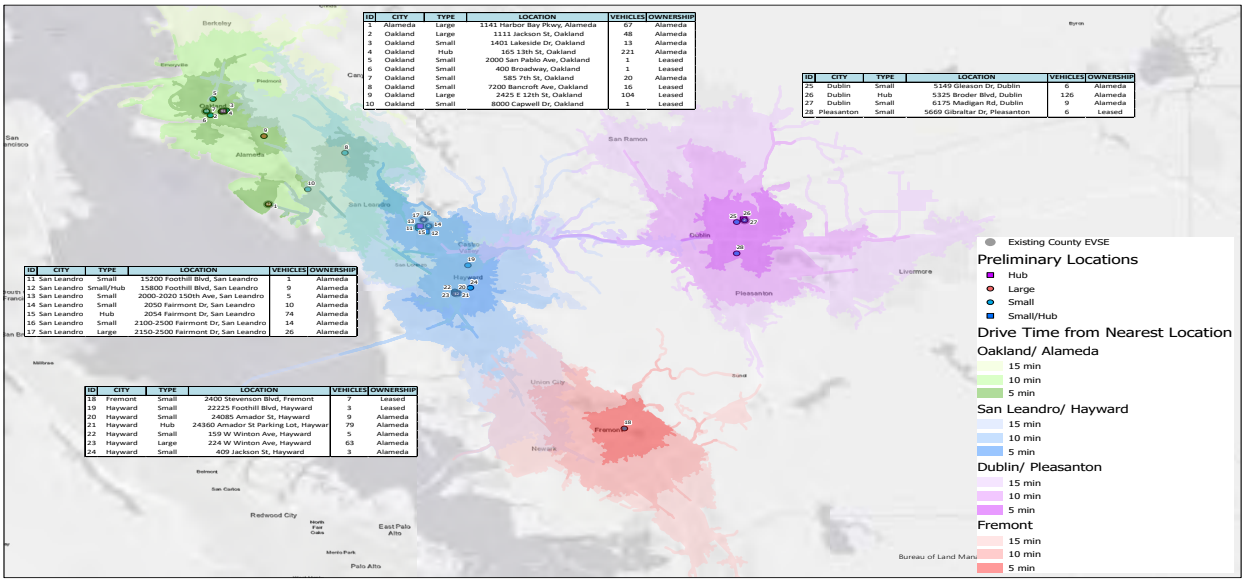


Figure 2: Drive Time Analysis of Fleet EV Charging Locations, Alameda County, CA

Figure 3, below shows an example of DKS' work for King County, WA, which includes the Greater Seattle Area. The County's fleet comprises more than 3,000 vehicles domiciled at more than 100 different facilities. DKS has proven to King County and other jurisdictions that an enterprise-wide charging strategy creates immense opportunities for fleets with facilities that could benefit from co-use of fleet charging infrastructure. We will leverage our experience with these issues to help Humboldt County and all fleets addressed in this project.

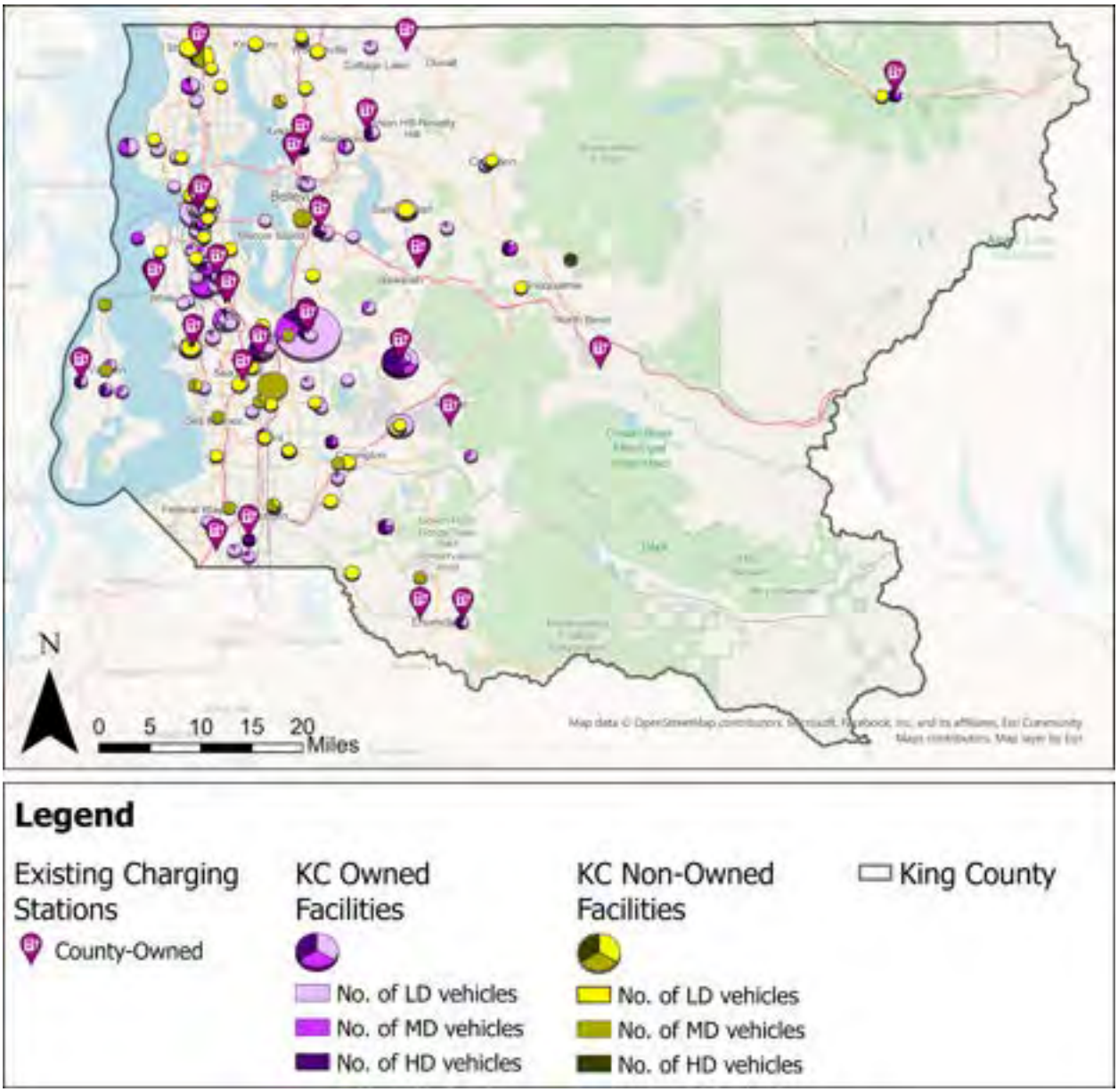


Figure 3: GIS Map of King County Fleet Domicile Locations, Including Light, Medium and Heavy Duty Fleet Vehicles and Existing Chargers

DKS FLEELET (DKS FLEET ELECTRIFICATION TOOL)

Leveraging the experience and best practices gained over the course of dozens of fleet transition plans, DKS developed an in-house, cloud-based tool called **FLEELET** (Figure 04) that streamlines in-depth assessments of municipal and other vehicle fleets for electrification. The tool allows us to efficiently develop recommendations on appropriate fleet charging infrastructure and transition phasing based on vehicle data including odometer readings, VINs, model years, typical daily dwell times, and more. The tool is flexible with respect to its inputs and has proven successful in supporting the creation of multiple different fleet electrification plans by DKS. The tool's scope covers a multitude of vehicle types and operational needs, including light-, medium-, and heavy-duty ZEVs and off-road equipment.

CHARGING INFRASTRUCTURE COST ESTIMATING TOOL

DKS has developed tools and best practices to efficiently and accurately estimate both capital expenses (CAPEX) as well as operational and maintenance expenses (OPEX) for charging infrastructure. Integrated with DKS's FLEELET workstream, our cost estimation tools generate reliable planning level estimates of EV charging infrastructure capital and operating costs. Due to specific site conditions and varying need for electrical capacity upgrades, the cost of installing and operating charging infrastructure can vary wildly between fleet depots. As part of our charging analysis, we consider the per-EV cost of installed chargers and recommend the most cost-effective charging strategies that meet each fleet's operational needs. As illustrated by the following images from similar fleet electrification plans performed by DKS, we work with fleet and facilities managers to recommend the best locations for charging at each site, especially at facilities selected to serve as charging hubs in the future.

DKS assesses not only facility-level capital costs for fleet charging infrastructure, but will also provide valuable insights to each jurisdiction, such as costs on a per-charger or per-EV basis, that can inform decision-making and prioritization of different sites.

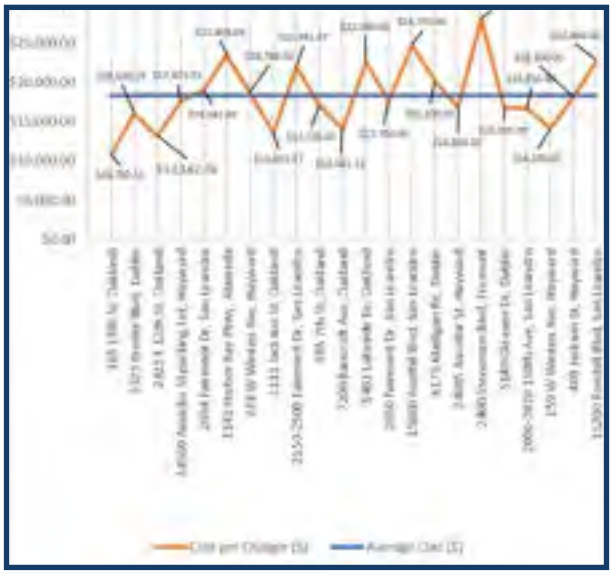


Figure 05: Comparative Charger Cost Analysis for Alameda County Fleet Facilities

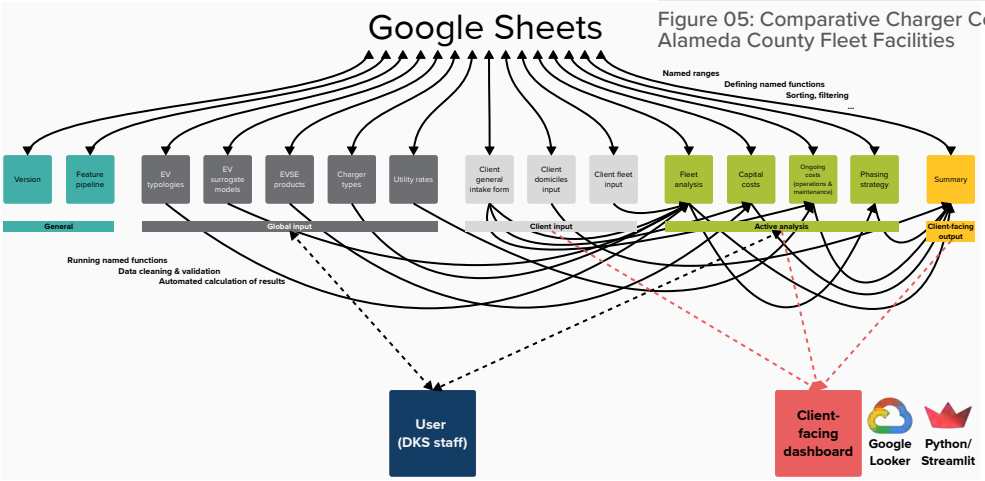


Figure 04: Schematic Diagram of FLEELET, DKS's Proprietary Fleet Electrification Modeling Tool

EFFICIENCY AND OPTIMIZATION

As Humboldt County is about to discover, **transitioning to a ZEV fleet can be more expensive than continuing to operate a fleet of gas and diesel vehicles in the near term.** This is largely due to the costs associated with purchasing and installing charging infrastructure, especially the facility-specific electrical infrastructure upgrades needed to power the chargers. Obsessed with a common desire for efficiency, both DKS and Frontier are committed to identifying and recommending ways to minimize capital investments that will make this transition as easy and inexpensive as possible. Ten examples of methods we employ to optimize cost-effectiveness include:

- Careful analysis of fleet fueling operations in close collaboration with fleet and facility managers.
- Identifying the most cost-effective fleet facilities for charging infrastructure installation by evaluating per-EV charging costs.
- Detailed operational analysis of vehicle energy use patterns to determine optimal charging strategies.
- Use of load management technology to reduce peak power demand to reduce cost of electrical upgrades and PG&E demand charges.
- Evaluation of multiple alternative charging strategies including shared use of charging infrastructure based on fleet vehicle energy demands.
- Detailed fleet energy analysis to determine specific EV charger speeds most appropriate to each vehicle duty cycle.
- Strategic siting of charging hubs to reduce cost and maximize charging convenience.
- Use of lower-cost expandable modular, charging infrastructure architecture.
- Use of bidirectional DC chargers for resiliency and cost-effective HD EV charging.
- ACF-compliant implementation phasing to spread investments over time and delay purchase of ZEVs until more cost effective and mission-suitable ZEVs are available.

FIRM OVERVIEW

DKS ASSOCIATES OVERVIEW

Founded in 1979, DKS provides specialized transportation planning, design, and engineering services to public agencies across the country. Firmwide, our staff includes more than 160 professionals with offices in Sacramento, Oakland, Pasadena, and Anaheim, CA; Portland (Headquarters) and Salem, OR; Seattle, WA; and Austin, TX. In addition to the more traditional transportation planning and engineering services we have been successfully providing clients for 45 years, DKS provides a wide range of cutting-edge smart mobility services. One of the most measurable ways we help clients reduce greenhouse gas emissions is through our comprehensive suite of electromobility services. Our electromobility service line includes planning for municipal-scale zero emissions vehicle (ZEV) charging programs, designing site-scale charging infrastructure for installation, and assisting clients with grants, rebates, and other incentives as well as project financing. We also support project implementation with project phasing, utility coordination, permitting, and installation oversite.

FRONTIER ENERGY OVERVIEW

Frontier Energy has more than 40 years of experience in delivering programs that address energy efficiency and environmentally responsible transportation. Their 200 staff in offices nationwide have the skills, experience, and resources to support ZEV infrastructure planning. Frontier's experience with electric vehicles started in the early 1990s when they established and operated the first EV charger testing center in the United States. Frontier Energy has been the operator of Hydrogen Fuel Cell Partnership since 1999, and was among the first to work with cities and counties on infrastructure master plans to support zero-emission cars, trucks, and buses. Frontier brings a strong focus on equity to all their projects and is committed to pioneering the intelligent use of energy.

1979
Year Founded

160+
Employees Firmwide

45
Years in Business

S Corp
Form of Organization

FIRM QUESTIONS

Include a detailed description of any litigation regarding the provision of services equivalent to those set forth in this RFP that have been brought by or against the Proposer, including the nature and result of such litigation, if applicable.

In 2018, DKS Associates was involved in a lawsuit filed against the Tri-County Metropolitan Transportation District of Oregon, City of Portland et al involving a bicyclist colliding with a bus. DKS was a subconsultant on a project implicated in the collision. The case was settled in mediation in 2019.

Lawsuit: Edward Gorman v. Tri-County Metropolitan Transportation District of Oregon, aka TriMet, City of Portland et al.; Multnomah County (OR) Case No. 17CV41797.

Brief Summary of Cause(s) of Action: Plaintiff crashed into a TriMet bus on his bicycle at the SE Milwaukie Avenue/SE Tilikum Way/SE Clinton Street intersection in Portland, Oregon on December 1, 2015.

Define Charges Explicitly: The bicycle signal indications designed by the defendant (DKS Associates) as part of the Portland to Milwaukie Light Rail Project, were claimed to not meet the standards set out by the Manual on Uniform Trac Control Devices for Streets and Highways (MUTCD).

DKS Role: As a sub to David Evans Associates (DEA), DKS Associates was responsible for the Trac Analysis, Trac Signal and Trac Signal Interconnect Design, Roadway Signing/Striping Design, and design of Atgrade Rail Crossings for the East Segment of the Portland – Milwaukie Light Rail Transit Project.

Outcome: The case was settled in mediation 2019; DKS Associates paid $50,000.

Include a detailed description of any fraud convictions related to public contracts, if applicable.

DKS has not been involved in fraud convictions related to public contracts.

Include a detailed description of any current or prior debarments, suspensions or other ineligibility to participate in public contracts, if applicable.

DKS does not have any current or prior debarments, suspensions or other ineligibility to participate in public contracts.

Include a detailed description of any violations of local, state and/or federal industry or regulatory requirements, if applicable.

DKS does not have any violations of local, state, and/or federal industry or regulatory requirements.

Include a detailed description of any controlling or financial interest the Proposer has in any other firms or organizations, or whether the Proposer's firm is owned or controlled by any other firm or organization. If the Proposer does not hold a controlling or financial interest in any other firms or organizations, that must be stated.

DKS does not have any controlling or financial interest in any other firms or organizations. DKS is not owned or controlled by any other firm or organization. DKS does not hold a controlling or financial interest in any other firm or organization. DKS and Frontier do not have any conflict of interest as requested on page 6 of the RFP.

EXTENSIVE FLEET ELECTRIFICATION EXPERIENCE

DKS and Frontier have been assisting counties, cities and other fleet operators transition to ZEV fleets since 2018, long before the ACF regulation mandated the transition of medium-and heavy-duty vehicles. Since then, we have completed or are currently working electrification plans for about 70 fleets, of which at least 50 are joint DKS/Frontier efforts. Several examples of projects with scope of work similar to HCAOG's are summarized below, including brief project descriptions, details, and client reference and contact information.

FIRM QUALIFICATIONS & REFERENCES

CALAVERAS COUNTY COUNCIL OF GOVERNMENTS (CCOG) ELECTRIC VEHICLE CHARGING INFRASTRUCTURE (EVCI) IMPLEMENTATION PLAN

DKS and Frontier are preparing this plan to guide deployment of EV charging stations for the City of Angels Camp, County of Calaveras, the County's public transit system, as well as chargers for public use. DKS is identifying electric vehicle charging infrastructure charging sites for each of these user groups, documenting recommendations in a roadmap for charger installation to facilitate fleet electrification and electrification of mobility throughout Calaveras County.

DKS Role: *Prime (Frontier sub to DKS)*
Contract Value: *$131,000*
Project Timeline: *Early 2024 - Mid 2024*
Project Location: *Angels Camp, CA*
Project Owner: *Calaveras County Council of Governments*
Reference: *Erin E. Kelly, 444 East St. Charles St/Highway 49 P.O. Box 280, San Andreas, CA 95249*
Contact: *209.754.2094, ekelly@calacog.org*
Key Staff: *Gurbir Antaal, Mike Usen, Steffen Coenen, Sheida Carugati*

NEVADA COUNTY ZERO EMISSION VEHICLE TRANSITION PLAN

DKS and Frontier prepared this fleet zero emission vehicle transition plan to address the charging needs at 23 Nevada County facilities for fleets including the Sheriff's office, roads, sanitation, motor pool, and transit. In addition to the County itself, we planned electrification for Grass Valley, Nevada City, and the Town of Truckee. This plan addresses the infrastructure needs for power delivery and charging, hydrogen storage and distribution, maintenance needs, and capital replacement considerations for each fleet. Our analysis and recommendations also include evaluating County-owned facilities for public charging needs.

DKS Role: *Sub (to Frontier)*
Contract Value: *$228,252*
Project Timeline: *Early 2023-Mid 2024*
Project Location: *Nevada County, CA*
Project Owner: *Nevada County Transportation Commission*
Reference: *Kena Sannar, 101 Providence Mine Road, Suite 102 Nevada City, CA 95959*
Contact: *530.265.3202, ksannar@nccn.net*
Key Staff: *Gurbir Antaal, Mike Usen, Steffen Coenen, Owen Wang, Sheida Carugati*

SHASTA COUNTY FLEET ELECTRIFICATION TRANSITION PLAN

The goal of this project is to develop a long-term master plan to transition Shasta County's large, diverse vehicle fleet to battery, plug-in hybrid, and fuel cell electric vehicles. A key challenge is that many Shasta County buildings are old and leased, and cannot be upgraded to meet the power demands of EVs. Another barrier is that numerous County vehicles travel hundreds of miles daily. DKS's role on this Frontier Energy-led team is to evaluate charging strategies for fleet vehicles at each domicile and to determine opportunities for the fleet to use public charging; develop an EV charging strategy at each domicile location that included take- home fleet vehicles, and provide conceptual layouts for EV charging stations at fleet domiciles with a phased approach to implementation.

DKS Role: *Sub (to Frontier)*
Contract Value: *$126,000*
Project Timeline: *Early 2024-Ongoing*
Project County: *Shasta County, CA*
Project Owner: *Shasta County*
Reference: *Ken Cristobal, 1855 Placer Street, Redding 96001*
Contact: *kcristobal@co.shasta.ca.gov, 530-225-567*
Key Staff: *Gurbir Antaal, Steffen Coenen, Mike Usen*

CITY OF REDDING FLEET ELECTRIFICATION PLAN

The goal of this project was to develop a long-term master plan to transition the City 0f Redding's fleet vehicles to battery and fuel cell electric vehicles. The plan needed to meet Redding's needs to be fiscally prudent, enable Redding Electric Utility (REU) to meet projected electricity demand, and to comply with California's Advanced Clean Fleets regulation. DKS' role on this Frontier Energy-led team is to evaluate charging strategies for fleet vehicles at each domicile as well as opportunities for the fleet to use public charging. DKS also developed EV charging strategies for each domicile location that included take-home fleet vehicles, and provided conceptual layouts for EV charging stations with identified implementation phasing.

DKS Role: *Sub (to Frontier)*
Contract Value: *$126,000*
Project Timeline: *2023-Mid 2024*
Project County: *Shasta County, CA*
Project Owner: *City of Redding*
Reference: *Lisa Casner, 3611 Avtech Pkwy, Redding, CA 96002*
Contact: *lcasner@cityofredding.org*
Key Staff: *Gurbir Antaal, Steffen Coenen, Owen Wang, Mike Usen*

INYO COUNTY PUBLIC WORKS, ELECTRIC VEHICLE CHARGING INFRASTRUCTURE NETWORK PLAN, PLANNING SERVICES

DKS and Frontier Energy are preparing a fleet transition plan for Inyo County's fleet. This includes determining a viable fleet charging strategy and feasibility evaluation of each County-owned facility's electrical system to accommodate charging infrastructure to ensure that electrical system upgrades are sized to meet the needs of future fleet EVs. In addition, we are identifying potential barriers to feet electrification, determining which ICE powered vehicles can be replaced within the project timeframe by EVs or FCEVs, prepare a plan to comply with the ACF regulation, and determine each ZEV's anticipated electrical energy needs and each feet facility where these vehicles are domiciled. The resulting plan will provide actionable guidance for project implementation and identify the timeline for EV replacement for each vehicle class and charger installation by the facility, including the number, type, and location of EV charging stations needed to support full feet electrification by the implementation phase.

DKS Role: *Prime (Frontier sub to DKS)*
Contract Value: *$199,393*
Project Timeline: *Mid 2024-Ongoing*
Project County: *Inyo County, CA*
Project Owner: *City of Redding*
Reference: *Justin Kokx, 168 N. Edwards Street / PO Box Drawer Q, Independence, CA 93526*
Contact: *jkokx@inyocounty.us, 760.876.0074*
Key Staff: *Dave Tokarski, Mike Usen, Steve Phillips, Steffen Coenen, Kendall Flint*

AVA COMMUNITY ENERGY FLEET ELECTRIFICATION

Helped determine the vehicle energy requirements and charging needs for the municipal fleets for Alameda County California as well as every city in Alameda County. During the first two phases of this project, we completed fleet electrification planning for Alameda County and cities of Oakland, Berkeley, Dublin and Albany, Hayward, Emeryville, Livermore, Newark, Piedmont, Pleasanton, Tracy, Union City, and San Leandro. Following adoption by CARB of the Advanced Clean Fleets (ACF) Rule, We were re-hired and are currently completing work on fleet analysis and facilities electrification planning for medium and heavy duty vehicles. Tasks include estimation of fleet electrical load calculations and associated charging infrastructure requirements, and cost evaluations for infrastructure upgrades at each fleet facility. This evaluation includes recommended innovations such as dynamic load management, public charger sharing, mobile chargers and other technologies.

DKS Role: *Sub (to Frontier)*
Contract Value: *$226,680*
Project Timeline: *Mid 2019-Ongoing*
Project County: *Alameda County*
Project Owner: *Ava Community Energy*
Reference: *Zac Thompson, 1999 Harrison St, Oakland, CA 94612*
Contact: *zthompson@ebce.org, 510.480.5061*
Key Staff: *Gurbir Antaal, Steffen Coenen, Owen Wang, Mike Usen, Dave Tokarski, Erin Vaca*

CITY OF ROSEVILLE FLEET ELECTRIFICATION

DKS and Frontier are helping the City of Roseville transition to an all-EV fleet by planning vehicle replacement and charger installation. This includes determining the fleet vehicle charging needs and resulting energy requirements in kWh. DKS modeled each of the City of Roseville's 661 light-, medium- and heavy-duty municipal fleet vehicles and determined the replacement schedule. DKS also performed site evaluation of all 13 fleet facilities including two large corporation yards and five fire stations to vet preliminary recommendations and recommend charger installation locations and estimate project costs by installation phase.

DKS Role: *Sub (to Frontier)*
Contract Value: *$99,447*
Project Timeline: *Mid 2022-Ongoing*
Project County: *Placer County*
Project Owner: *City of Roseville*
Reference: *Brandy LeBeau, 2005 Hilltop Circle Ste. 170, Rosevilla, CA 95747*
Contact: *blebeau@roseville.ca.us, 916.774.5531*
Key Staff: *Gurbir Antaal, Mike Usen, Owen Wang*

CITY OF SAN JOSE FLEET ELECTRIFICATION WORKPLACE & PUBLIC CHARGING PLAN

DKS and Frontier are planning EV charging infrastructure for the City's fleet, as well as the general public, including employees at prioritized sites around the city. As part of fleet electrification analysis, DKS is developing charging strategies and recommendations for each fleet site including the number and types of EV chargers needed at each facility and potential for stub-outs for future EVSE as well as identifying strategies to minimize electrical demand, and for back-up power and resiliency. DKS is also exploring opportunities to install public/employee charging at prioritized fleet facilities to optimize infrastructure investments.

DKS Role: *Sub (to Frontier)*
Contract Value: *$161,596*
Project Timeline: *Early 2024-Ongoing*
Project County: *Santa Clara County*
Project Owner: *City of San Jose*
Reference: *Kate Ziemba, 200 East Santa Clara Street, San Jose, CA 95113*
Contact: *kate.ziemba@sanjoseca.gov, 408.535.4889*
Key Staff: *Gurbir Antaal, Mike Usen, Steffen Coenen, Dave Tokarski*

KEY:
DKS TEAM
FRONTIER TEAM

SELECT DKS ELECTROMOBILITY PROJECT QUALIFICATIONS CHART

Client/Project Name	Key Staff Involved	Stakeholder Engagement	Assess Challenges & Opportunities	Charging Infrastructure Strategy	Implementation Straegy	Fleet Transition Analysis
Nevada County ZEV Transition Plan	Mike Usen, Gurbir Antaal, Steffen Coenen, Soria Adibi, Ari Sanjar	●	●	●	●	●
Shasta County Fleet Electrification Transition Plan	Mike Usen, Gurbir Antaal, Steffen Coenen, Soria Adibi, Ari Sanjar	●	●	●	●	●
INYO County Public Works, Electric Vehicle Charging InfrastructureNetwork Plan - Planning Services	Mike Usen, Gurbir Antaal, Steffen Coenen, Thomas Paddon, Dave Tokarski	●	●	●	●	●
Elk Grove Infrastructure Plan for Fleet Electrification	Mike Usen, Gurbir Antaal, Steffen Coenen, Thomas Paddon	●	●	●	●	●
City of Redding Fleet Electrification Transition Plan	Mike Usen, Gurbir Antaal, Steffen Coenen, Ari Sanjar	●	●	●	●	●
EV Transition Planning for King County Fleet Services Division	Mike Usen, Gurbir Antaal, Steffen Coenen, Owen Wang	●	●	●	●	●
Roseville Fleet Electrification	Gurbir Antaal, Mike Usen, Thomas Paddon	●	●	●	●	●
Calveras County Council of Governments/EV Charging Infrastructure (EVCI) Implementation Plan	Mike Usen, Gurbir Antaal, David Tokarski, Steffen Coenen, Soria Adibi	●	●	●	●	●
Lawrence Berkely National Lab Fleet Electrification Plan	Mike Usen, Steffen Coenen, Will McKenzie, Gurbir Antaal		●	●	●	●
Antioch ZEV Assessment	Thomas Paddon, Gurbir Antaal, Mike Usen	●	●	●	●	●
California State University, East Bay Fleet Electrification Plan	Mike Usen, Steffen Coenen, Will McKenzie		●	●	●	●
Ava Community Energy Fleet Electrification (15 public and up to 50 private fleets)	Thomas Paddon, Mike Usen, Gurbir Antaal, Owen Wang, Steffen Coenen	●	●		●	●
City of Davis/EV Charging Infrastructure	Thomas Paddon, Mike Usen, Gurbir Antaal, Dave Tokarski	●	●	●	●	●
City of Elk Grove Infrastructure Plan for Fleet Electrification	Mike Usen, Gurbir Antaal, Steffen Coenen, Thomas Paddon	●	●	●	●	●
Nevada County Transportation Commission/ZEV Transition Plan	Mike Usen, Gurbir Antaal, Steffen Coenen, Thomas Paddon	●		●	●	●
San Jose Fleet Electrification Workplace and Public Charging Plan	Mike Usen, David Tokarski, Gurbir Antaal, Steffen Coenen, Ari Sanjar, Thomas Paddon	●		●	●	●
City of South San Francisco EV Charging Station Masterplan	Mike Usen	●	●	●	●	●

KEY PERSONNEL & ORGANIZATIONAL CHART

The DKS and Frontier team are eager to collaborate on the HCAOG Regional Zero Emission Fleet Transition & Infrastructure Plan, leveraging their combined expertise in transportation planning and sustainable energy solutions. With a strong track record in fleet electrification projects, they are well-equipped to navigate the challenges and opportunities unique to HCAOG. Their commitment to innovation and project excellence ensures the successful delivery of sustainable outcomes for HCAOG.

Full team resumes highlighting our extensive EV fleet planning experience are attached in section 7 of the proposal response, as requested in the RFP.

KEY

DKS TEAM
FRONTIER TEAM
TASK LEAD ★

MIKE USEN, AICP
Principal-in-Charge

GURBIR ANTAAL, PE
Project Manager

STEFFEN COENEN
Deputy Project Manager

TASK 1: STAKHOLDER COORDINATION & PROJECT ADVISORY MEETINGS	TASK 2: FLEET ELECTRIFICAN ANALYSIS	TASK 3: INFRASTRUCTURE PLAN	TASK 4: IMPLEMENTATION PLAN
★ Gurbir Antaal	★ Thomas Paddon	★ Gurbir Antaal	★ Mike Usen
Mike Usen	Ari Sanjar	Mike Usen	Gurbir Antaal
Steffen Coenen	David Park	Steffen Coenen	Steffen Coenen
Thomas Paddon	Gurbir Antaal	Owen Wang	Owen Wang
David Park	Mike Usen	Thomas Paddon	Thomas Paddon
	Dave Tokarski	Ari Sanjar	David Park
	Steffen Coenen	David Park	

SUPPORT STAFF

Brian Cruz | Melissa Abadie | Elizabeth Aguilar | Ryan Moody

MIKE USEN | PRINCIPAL-IN-CHARGE

Master of Urban Planning, University of Washington
BA, Environmental Studies, University of Vermont

Mike leads DKS's company-wide electric vehicle charging infrastructure planning and design practice assisting sustainability directors, facilities managers, and fleet operators from multiple public agencies plan smart electric vehicle charging infrastructure. Mike's relevant expertise includes multiple aspects of electric vehicle charging infrastructure master planning for light, medium, and heavy-duty electric vehicles. Fleet electrification clients include municipalities, ports, electric utilities, transit systems, regional transportation agencies, school districts, and universities. Mike has led electrification planning for dozens of agencies and over 65 separate fleets, addressing thousands of vehicles at hundreds of facilities.

PUBLIC EV CHARGING EXPERIENCE

- Northern California Megaregion Heavy-Duty Freight ZEV Study
- San Joaquin Alternative Fuels Vision Plan (AFVP)
- California Central Coast Zero Emission Vehicle Strategy
- MCTC Madera County Zero Emission Vehicle Readiness and Implementation Plan

FLEET ELECTRIFICATION EXPERIENCE

- Ava Community Energy Fleet Electrification Study, Alameda County (CA)
- Elk Grove Infrastructure Plan for Fleet Electrification
- Antioch ZEV Assessment, Antioch
- City of Fremont Fleet Electrification Study

GURBIR ANTAAL, PE | PROJECT MANAGER

MS, Electrical & Computer Engineering, McMaster University, Canada
Bachelors in Electronics & Communication Engineering, Punjab Technical University, India

Gurbir is DKS's most experienced electromobility engineer, particularly with fleet electrification projects. Gurbir combines his electrical engineering background with his transportation operations expertise on every transportation electrification project and uses his wide variety of skills to analyze electric vehicle charging requirements for municipal fleets. Gurbir has served as a trusted advisor for EV-focused projects to public agencies throughout California and Washington State. He can promptly communicate with his public agency clients and truly understand their needs. His relevant project experience includes work for both power providers and public agencies. He can also convey technical information to a broad audience in an understandable, approachable manner.

FLEET ELECTRIFICATION EXPERIENCE

- City of Davis EV Charging Infrastructure Phase 1
- Elk Grove Infrastructure Plan for Fleet Electrification
- City of Roseville Fleet Electrification
- City of Bothell Fleet Electrification (WA)
- City of Hayward Employee Charging Analysis
- City of Redding Fleet Electrification
- Ava Community Energy Municipal Fleet Electrification Studies (CA)
- City of Fremont Fleet Electrification Study

STEFFEN COENEN | DEPUTY PROJECT MANAGER

B.Sc. & M.Sc., Physics, RWTH Aachen University
M.Sc., Transportation Engineering, University of Washington, Seattle

Steffen is a transportation electrification and decarbonization subject matter expert and data scientist. Steffen leads the development of DKS's analytical tools for EV charging, specializing in technically challenging electrification use cases such as charging large fleets of heavy-duty specialized EVs with on-site power constraints, developing models for predicting EV adoption, charger utilization, and charging site selection prioritization. He is experienced in data analysis, EV charging infrastructure planning, and carbon emission assessments, and is passionate about the overall need to decarbonize the transportation sector and how that challenge intersects with the energy sector.

PUBLIC EV CHARGING EXPERIENCE

- Encinitas Electric Vehicle Charging Station Master Plan
- Kern COG EV Charging Station Blueprint
- Northern California Megaregion Freight ZEV Study
- SJCOG Alternative Fuels Vision Plan

FLEET ELECTRIFICATION EXPERIENCE

- Fleet Electrification Phase 2 for King County Facilities Management Division (WA)
- City of San José Fleet Transition Plan
- Nevada County ZEV Transition Plans

OWEN WANG | ELECTROMOBILITY ENGINEERING/PLANNING ASSOCIATE

BS, Electrical Engineering, University of Washington

Owen applies his electrical engineering background and transportation design experience to fleet electrification projects. On most of DKS's fleet electrification projects, Owen takes the lead role in performing the charging analysis including evaluation of multiple potential charging strategies, evaluating fleet facilities for electrical capacity, conducting site visits, estimating project costs, and developing fleet implementation strategies for charging infrastructure deployment by phase. Owen also has experience coordinating with utility providers such as PSE, SCL, SnoPUD, and PG&E to provide electrical infrastructure needs and utility service upgrades.

FLEET ELECTRIFICATION EXPERIENCE

- East Bay Community Energy Municipal Fleet Electrification
- Redding ZEV Fleet Plan
- Snohomish County Public Utility District (SnoPUD) Fleet Transition Planning (WA)
- Tacoma Electric Vehicle Supply Equipment Siting Study (WA)
- Kirkland Fleet Electrification (WA)
- Bainbridge Island EVSE Evaluation (WA)

DAVE TOKARSKI | SENIOR TRANSPORTATION PLANNER

MS, Civil and Environmental Engineering, California Polytechnic State University, San Luis Obispo

BS, City and Regional Planning, California Polytechnic State University, San Luis Obispo

Dave is a senior transportation planner with 26 years of experience at DKS. He has managed a wide range of transportation planning projects. He specializes in Geographic Information Systems (GIS) applications, Electric Vehicle charger planning, environmental analysis, impact analyses, and travel demand forecasting. Dave led the development of DKS's EV charger siting optimizer model based on his extensive experience developing detailed GIS parcel maps linked to land use databases and his work updating travel demand models.

PUBLIC EV CHARGING EXPERIENCE

- UC Davis Campus Electric Vehicle Study
- EV Charging Infrastructure Study, Phase 1
- San Joaquin COG Alternative Fuels Vision Plan
- MCTC ZEV Readiness Plan, Madera County
- California Central Coast Zero Emission Vehicle Strategy
- Northern California Megaregion Freight ZEV Study
- City of Sacramento Electric Vehicle Blueprint, Sacramento
- Kern COG EV Charging Station

THOMAS PADDON | FLEET ELECTRIFICATION

MA, Management, University of Redlands

BA, French/International Business, University of South Florida

Thomas has been providing project management for clean transportation projects for over five years. Thomas joined Frontier Energy in 2021 to lead fleet transition planning and vehicle electrification efforts. He manages several multiyear fleet transition projects for utility clients, which includes managing schedules and deliverables from stakeholders, clients, subcontractors, and vendors. He has developed various economic and TCO models for different fleet and market segments, and visually presents results using Power BI digital dashboards and interactive planning tools for each client.

FLEET ELECTRIFICATION EXPERIENCE

- City of Davis Fleet Transition
- City of Elk Grove Fleet Transition
- City of Spokane Fleet Transition (WA)
- City of Duluth Fleet Transition (MN)
- City of Roseville Fleet Transition
- City of Hayward Fleet Transition
- City of Antioch Fleet Transition
- City of San Jose Fleet Transition
- East Bay Municipal Utility District Fleet Transition
- City of Oakland Fleet Transition

DAVID PARK | HYDROGEN SUBJECT MATTER EXPERT

David Park has a long record of supporting sustainable transportation to improve air quality and mitigate global climate change. As an expert on emerging advanced transportation infrastructure and drivetrains, David has a comprehensive understanding of the economic, technical, and environmental issues of diverse alternative transportation technologies. David is also the Industry Affairs Director of the Hydrogen Fuel Cell Partnership, where he works to align fuel cell electric vehicle rollout with hydrogen supply chain. It is the goal of the Partnership to remove friction in this rapidly evolving hydrogen economy.

RELEVANT EXPERIENCE

- Hydrogen Fuel Cell Partnership
- Air Pollution Specialist California Air Resources Board
- Director of Air Pollution Policy Practice

ARI SANJAR | SENIOR PROGRAM COORDINATOR

BS, Environmental Science & Policy,
University of Maryland

Ari brings a passion for sustainability and a background in policy analysis, community engagement, and data analysis to her work at Frontier, where she supports EV fleet transition planning, workforce training, and planning for public charging stations for multiple clients. Previously, she worked as an Energy Policy Analyst for INTEK in Virginia.

FLEET ELECTRIFICATION EXPERIENCE

- City of Redding EV Transition
- City of Angels Camp EV Fleet Transition
- City of San Ramon EV Fleet Transition
- AVA Community Energy EvFleet Technical Assistance Program
- Calaveras County EV Transition
- Anaheim Public Utilities EV Concierge Service

APPROACH

OVERVIEW OF APPROACH

Our approach to the scope of work is based on best practices and lessons learned from similar projects. We know that electrification is a daunting task that department staff must include in their already-overwhelmed schedules. The DKS/Frontier Team has a streamlined process to make the best use of time and to minimize the requirements and resources from department staff.

OUR STANDARD PROCESS:

- Collect data about current and planned vehicles, current and planned facilities, and other local policies and priorities.
- Clean and validate the data. If data is missing, we fill gaps by meeting with the department, using assumption data from other projects, and leveraging practical experience.
- Identify vehicles/vehicle classes that can be electrified within the next 10-20 years and deliver a year-by-year vehicle transition plan that aligns with HCAOG, County, and seven incorporated cities (or department) goals and current and pending regulations. If needed, we can identify vehicles that might be eliminated, shared, or rightsized. The transition plan will be based on the CARB Advanced Clean Fleets regulation compliance path.
- Assess each facility for its ability to support charging stations for fleet vehicles and if needed by employees, and/or the public.
- Evaluate projected electricity demand, including available electrical capacity and impacts on utility rates and determine if solar and energy storage are feasible.
- Identify the charging infrastructure needed to support fleet vehicles, including how charging will impact facility energy use and strategies to mitigate higher capital and energy costs. We deliver a plan for charging stations, distributed energy resources, charge management systems, and other recommended equipment or software.
- If desired, we can identify opportunities to leverage or invest in charging infrastructure that can support EV adoption by employees, including financial strategies.
- Prepare a Total Cost of Ownership (TCO) and greenhouse gas (GHG) emissions analysis and identify potential sources of funding for infrastructure and ZEVs.
- Identify software, services, training, policies, and tools that will smooth the transition to EVs, prepare staff to use and maintain, and help to collect and analyze EV and charging station data.
- Develop an interactive digital dashboard with year-by-year and department-by-department transition planning that can support budget decisions and procurement.
- Prepare a phased implementation plan that includes grants, funding, and other assistance.

We take a human-centered approach to all our electromobility projects. We expect and encourage input and interaction with employees, community-based organizations, business associations, residents, and businesses throughout the project.

Transitioning to a new transportation technology is both exhilarating and overwhelming and the people who will use these new vehicles and new stations need to be involved in the decisions, not informed about them later.

EXECUTIVE SUMMARY OF DKS PROPOSED SCOPE OF WORK

DKS proposes to divide our scope of work into the following five (5) tasks. While our proposed approach addresses every item in the RFP, some of our proposed subtasks are listed in a different order consistent with DKS's and Frontier's standard methodology we have refined, delivering numerous fleet transition plans. For example, we will evaluate "the feasibility of existing maintenance facilities/corp yards/suitable areas" not in Task 2 (Fleet Transition Analysis) but in Task 3 (Infrastructure Plan) when we evaluate prioritized facilities for installation of fleet charging infrastructure.

Task 0: Project Management

Task 1: Stakeholder Coordination and Project Advisory Committee Meetings

Task 2: Fleet Transition Analysis

Task 3: Infrastructure Plan

Task 4: Implementation Plan

Task 0: DKS prioritizes ensuring an effective client experience, based on on-going two-way communications. This includes keeping the project moving forward and within budget. To ensure sufficient resources are committed, DKS has added this separate project management task.

Task 1: DKS is committed to obtaining regular feedback from HCAOG and PAC members before completing Tasks 2-4. This will be achieved through check-in meetings, as outlined in Tasks 1 and 2, and detailed in the project schedule in Section 6. Specifically, the PAC will meet five times during the project to provide input and feedback to ensure the consultant team's recommendations are consistent with stakeholder needs.

Task 2: Frontier will estimate the energy demands for all fleet vehicles belonging to Humboldt County, seven (7) cities, and three (3) tribal governments. DKS will subsequently utilize the FLEELET tool (introduced in Tasks 2 and 3), to calculate the total number of chargers needed, considering both dedicated and shared charging strategies. This will enable us to determine the total quantity of chargers by charger type and power output recommended for transitioning each fleet to ZEV. DKS will meet with HCAOG and PAC members to select a minimum of ten (10) sites for detailed analysis after estimating the total number of chargers. Charging site selection will be guided by a site prioritization matrix and GIS mapping of all fleet domicile sites.

Task 3: DKS will review as-built documents and utility bills to calculate the available electrical capacity at each of the ten (10) selected charging sites. We will conduct site visits to verify the accuracy of the as-built documents and clarify the most suitable charger locations based on vehicle parking operations and charger installation cost-efficiency. Based on this assessment, DKS will recommend a phased approach for vehicle replacement and charger installation including electrical capacity upgrades. We will also calculate the capital expenditure (CAPEX) and operational expenditure (OPEX) for the recommended phasing. DKS will seek timely feedback from HCAOG and PAC members to agree on the phasing of vehicle replacement and charger installation at each site.

For each of the ten (10) selected charging sites, we will prepare conceptual plans showing the location, quantity, and type of charger by installation phase. DKS will also address resilience and backup power needs during emergency shutdowns, and to avoid peak load demands.

Task 4: Focuses on the implementation plan, guiding the county, cities, and three tribal governments on how to implement our recommendations. We will identify available grants, funding, and incentives for both ZEVs and charging infrastructure. We will also conduct a cost-benefit analysis based on total cost of ownership for fleet ZEVs and charging or fueling infrastructure and provide best proposed best practices and guidelines for charging and refueling of fleet vehicles. We will document findings and recommendations in a draft final report to HCAOG TAC members for review and incorporate all feedback into the final report. DKS will conclude the project by presenting findings and recommendations to city councils, boards of supervisors, and tribal councils.

Our approach to planning electrification of Humboldt County, and seven incorporated cities fleets seeks to respond to the Humboldt County Association of Governments (HCAOG) needs as articulated in the RFP's scope of work. Thanks to years of experience working on multiple projects together, helping dozens of county city fleets transition light, medium, and heavy-duty vehicles from gas and diesel to electric propulsion, DKS Associates and Frontier Energy have developed a proven framework for successfully planning fleet electrification.

Our approach to fleet electrification draws on more than six years of experience in similar efforts in California and across the United States. The DKS/Frontier team looks holistically at the fleet, the facilities, and the people that depend on their vehicles to do their jobs.

We've integrated many best practices based on lessons learned:

- The first duty of county and city employees is to effectively serve local residents and businesses. We aim to ensure that fleet EVs and charging stations will help them do their jobs as well or better, not reduce services or operating efficiency.
- Fleet vehicle replacement policies and processes vary by department and vehicle type. We work with each department so that the transition plan is compatible with their individual practices.
- Many fleet facilities are often at maximum electrical capacity. We take a comprehensive look to understand the impact of past and planned upgrades and the opportunities for building and vehicle electrification.
- A battery-electric vehicle may not be the perfect fit for every duty cycle and every vehicle. We explore other options like hydrogen fuel-cell that fit the fleet's needs and achieve net zero vehicle emissions.
- Every plan is as unique as the department, municipality, and staff. Attitudes and behavior shape our recommendations as much as data does.
- Collaboration with the HCAOG, county, and city's communications staff is vital to ensure that residents and stakeholders know about the plan. It increases the visibility as a leader in clean fleet management.
- Telematics software on vehicles is the exception, not the rule. We know how to find the duty cycle data we need and, when necessary, to use placeholder data from vehicles in similar fleets. We also have experience in comparing telematics systems for best fit.

THE PROJECT TEAM ADVANTAGE

DKS and Frontier Energy bring industry expertise, commitment, and motivation to prepare a cost-effective, realistic, and ambitious ZEV transition plan for the HCAOG. All team members have close relationships with the companies that manufacture and sell EVs, charging stations, software, and training services. We maintain a database of available and "coming soon" EVs and infrastructure, costs to buy and operate EVs, funding and incentives, and best practices for implementation.

Excerpt of DKS's database of EV models displaying less than 20% of all models DKS tracks. For each vehicle model in the database, information on battery capacity, range, energy consumption, vehicle weight, payload, charging acceptance rates and other information is available for use in this project's analysis. The database is integrated with DKS's proprietary FLEELET tool, which is described further below in Tasks 2.

DKS proposes an additional task (Task 0) as Project Management to track the overall progress and schedule of the project.

TASK O: PROJECT MANAGEMENT

Project Manager Gurbir Antaal will be responsible for implementing our Project Management Plan (PMP). He is passionate about helping clients reduce GHG emissions through our electromobility planning and design services. Gurbir will lead and coordinate all the work program tasks and deliverables, and be responsible for managing and reporting activities, controlling and communicating task assignments and deliverables. DKS uses technical and administrative tools to effectively manage projects by minimizing administrative time and maximizing our time to serve clients.

Our approach is key to meeting schedules and delivering a quality product within budget. The important elements of our approach that keep our projects on time include:

- Providing an experienced and effective project manager who fully understands the technical process.
- Using an internal online management tool to provide a constant view of the project's status and schedule.
- Maintaining a constant view of upcoming deliverables in a shared internal online calendar.

- Regular check-in meetings with the Project Team to report progress on short-term action items and upcoming deliverables to address issues early and maintain accountability to schedule. Short-term action lists will be continuously updated throughout the course of the plan's development for the bi-weekly or monthly check-in meetings based on HCAOG's project manager's preference platform (Google, Microsoft Teams, Zoom, etc.). The short-term action list will identify the agency responsible, the desired deadline, and any clarifying notes regarding the action item.
- Frequently communicating with the HCAOG project manager to understand needs and coordinate on the project approach.

Each month, DKS will issue invoices and progress reports with the level of detail requested by the client. DKS utilizes the Deltek accounting software and time/cost recording systems to accurately record and monitor labor and other costs for project performance.

DKS will coordinate with HCAOG project manager to schedule a virtual project kick-off meeting to discuss the scope and schedule of deliverables, resolve questions or concerns, and discuss future meeting schedule and to establish the operational and communication protocols. Development of a contact list will be initiated that will include contacts of Humboldt County, each of the seven (7) Cities, and three (3) Tribal government member staff and key stakeholder contacts. DKS will coordinate with HCAOG to identify key representatives.

DKS will prepare a meeting agenda for HCAOG review and approval. DKS will take meeting notes and will transcribe them into a short-term action list that will be used for future check-in meetings during the course of the project.

The short-term action list will be updated after each check-in meeting and will serve as both the agenda and minutes for check-in meetings with HCAOG and the project team.

TASK 0: SUBTASK

- Prepare project workplan and manage project progress
- Prepare for and conduct regularly scheduled project team meetings and provide meeting minutes
- Provide monthly invoices and progress reports

TASK 0: DELIVERABLES

- Short-term action lists
- Monthly invoicing and progress reports
- Meeting agendas and notes

TASK 1: STAKEHOLDER COORDINATION & PROJECT ADVISORY COMMITTEE MEETINGS

The purpose of this task is to help HCAOG and the consultant team to develop and implement an effective and inclusive stakeholder advisory process to ensure that the project benefits from multiple perspectives and the resources each brings to the effort.

The DKS Team will work closely with HCAOG and its member agencies. DKS will reach out to partner agencies, stakeholders and interested parties to form a Project Advisory Committee (PAC) to facilitate collaborative development of the ZEV Transition and Implementation Plan. This committee will be made up of fleet, facility and sustainability managers from Humboldt County, local cities, tribes and federal land agencies with expertise on fleet operations and municipal fleet facilities along with PG&E to provide direction and insight for the development of the Plan. The purpose of these meetings will be to provide input, select alternatives, evaluate preliminary recommendations, and prioritize implementation actions.

PAC members may include representatives from:

- Humboldt County
- Eureka
- Arcata
- Other Incorporated Cities (Blue Lake; Ferndale; Fortuna; and Trinidad)
- Participating Tribal Governments
- Caltrans
- Federal Land Management Agencies such as the U.S. Forest Service, CalFire, BLM, etc.
- PG&E

DKS wil plan and facilitate up to five virtual meetings over the course of the project with PAC members. These meetings will focus:

PAC MEETING #1 Will focus on the purpose of the plan and project outcomes. The first meeting will be scheduled during the first three months of the project kick-off for DKS to understand the project's needs for each fleet, important factors and expectations from the PAC members. DKS and Frontier will present the total energy demands (kWh) required to transition existing ICE vehicles to ZEVs for county, seven cities and three tribal government fleets.

PAC MEETING #2 Will be scheduled within the two months after the first meeting and at the end of Task 2. This meeting will be scheduled to help DKS to select and to provide insights to prioritize up to ten fleet facilities for ZEV transition and for EV charging and or hydrogen fueling infrastructure. DKS will coordinate with HCAOG on selecting of ten priority sites before scheduling this PAC meeting.

PAC MEETING #3 Will focus on the Task 3 deliverables addressing proposed charging strategy, infrastructure, capital and operating costs, implementation phasing recommendations at the ten selected sites, draft deliverables including the online dashboard and plan document.

PAC MEETING #4 Will present the final findings and recommendations addressing fleet transition, proposed charging strategy, infrastructure, guidelines for chagrin and refueling of fleet vehicles, implementation phasing, and funding opportunities.

PAC MEETING #5 Will be scheduled as necessary throughout the project to facilitate collaboration, address data needs, respond to PAC members' questions, and share any critical information that may affect the project timeline or deliverables. If this meeting is not scheduled during the project, DKS will present the final findings to PAC members at the conclusion of Task 4, concurrently with the presentation to HCAOG TAC members.

At the completion of each meeting, the DKS team will compile notes. These notes will be consolidated into the Final Report. The DKS team will also prepare a Microsoft PowerPoint presentation for each PAC meeting to summarize the key findings for PAC members to discuss during the meetings.

TASK 1: SUBTASK

- Help HCAOG to establish PAC Committee based on the project needs
- Prepare for and conduct up to five scheduled PAC team meetings and provide meeting agendas, presentation materials and minutes.
- Presentation to PAC members.

TASK 1: DELIVERABLES

- PAC Meeting agendas
- Microsoft PowerPoint presentation to present key findings and action steps
- PAC meeting notes and minutes

TASK 2: FLEET TRANSITION ANALYSIS

Under this task, DKS will conduct a comprehensive evaluation of the needs, barriers, and opportunities for transitioning local agency vehicle fleets to Zero Emission Vehicles (ZEVs) or low-emission vehicles in compliance with the CARB Advanced Clean Fleets (ACF) regulation. DKS will perform the feasibility of existing maintenance facilities, and other suitable facilities will be evaluated to support new electric vehicle charging and/or hydrogen fueling infrastructure. Based on preliminary site analysis with concurrence from the PAC, the jurisdictions will select a minimum of ten priority sites.

The DKS/Frontier team will perform the following task items under Task 2:

Subtask 2.1 Fleet Assessment and Available Alternative EV Review

The objective of this task is to develop an understanding of the vehicle fleets currently operated by Humboldt County's seven cities and three tribal governments. This includes collecting and analyzing inventory, age, miles driven and vehicle class of on-road and potentially off-road vehicles assets to determine their replacement

vehicle class of on-road and potentially off-road vehicles assets to determine their replacement schedule as well as duty cycle data to estimate electrical power needed for charging or for hydrogen fueling.

Prior to the kickoff meeting, DKS and Frontier will provide a detailed spreadsheet of fleet data (summarized below) required from Humboldt County and the other seven fleets to inform this analysis.

SAMPLE FLEET VEHICLE DATA RELEVANT TO ZEV REPLACEMENT & ENERGY ANALYSIS

- Inventory of vehicles by year, make, model, fuel type, VIN
- Planned replacement date (if applicable)
- Current odometer readings
- Vehicle fuel consumption records
- Duty cycle data
- Daily hours of use/nightly vehicle dwell times
- Existing and planned auxiliary equipment (parasitic electrical loads)
- Special travel behavior (long trips, emergency preparedness and response, used for a designated purpose, hot-seat with short dwell times, etc.)
- Operating days/year
- Average idling time
- Assigned parking location (name, address)
- Use of specialized equipment (light bars, cameras, radios, lifts, etc.)

Inputs to our analysis typically include fleet fuel card reports and, if available, telematics data for fuel consumption, supplemented with questionnaire responses or interviews with fleet managers from each department for information on daily vehicle duty cycle and nightly vehicle dwell times.

If any of the requested vehicle data is not available, Frontier and DKS can work with subsets of data to infer or extrapolate information for other vehicles or use appropriate assumptions based on our combined extensive fleet electrification project experience. By analyzing the collected data, DKS and Frontier will develop an understanding of each of the 11 fleets to determine their replacement schedules and estimate the electrical power needed for ZEV operations. For duty cycles that are too extreme for EVs, we will propose consideration of FCEVs and evaluate hydrogen fueling.

Specific actions comprising this subtask include the following:

- Collect and validate data about the existing internal combustion engine (ICE) vehicles to identify EV or FCEV replacements based on Advanced Clean Fleets (ACF) regulation.
- Conduct interviews with fleet managers and department leads to refine duty cycles, discuss delaying replacements, rightsizing, and identify the need for dedicated charging plugs.
- Identify available or soon to be available ZEV replacement vehicles suitable for each duty cycle for energy modeling.
- Identify fleet vehicles that are not (yet) viable for ZEV conversion and recommend options that may include PHEVs, renewable fuels, and electric-assist components (like ePTOs).
- Perform fleet right-sizing analysis to determine which vehicles are underutilized for current applications or may be replaced with a different vehicle class.
- Determine each vehicle's anticipated electrical energy needs at each fleet facility where these vehicles are domiciled, resulting in an estimate of anticipated electrical demand in kWh per day for EV charging at each fleet facility.
- Develop electrification timeline in line with ACF requirements.
- Estimate capital costs for the transition to ZEVs.

Subtask 2.2 Fleet ZEV Charging/Fueling Recommendations

After estimating the energy demands, the DKS team will perform charger analysis for each fleet facility operated by Humboldt County, the seven incorporated cities, and three tribal governments to determine the optimal quantity and type of EV chargers. DKS's EV charger recommendations are informed by the daily fleet vehicle energy requirements and nightly dwell times of the vehicles domiciled at each fleet facility, as determined in Task 2.1.

The objective of this task is to evaluate the operational viability and economics of alternative charging strategies to determine the best fit for each fleet site by analyzing the following two alternative charging strategies for each facility:

1. Dedicated Level 2 (AC and DC) chargers with load management
2. Shared Level 2 (AC and DC) chargers with load management

In addition to these two charging strategy alternatives, we recommend installing supplemental DC fast chargers (DCFCs) at strategically selected charging hub locations. DCFCs provide redundancy, resilience and convenience for fleets in cases when drivers forget to charge fleet EVs overnight or if Level 2 chargers are inoperable. As with other charging locations, we will recommend the quantity of DCFC based on EV energy demand, specific operations and dwell times of fleet EVs that would likely use these chargers. The primary users will be County fleet vehicles domiciled at these facilities, but due to their quick charging rates, other fleet EVs such as those operated by nearby cities, tribes or federal land use agencies may use them as well when not in use by the County's fleet.

If desired by a given fleet or suitable in their operational context, DKS may also assess and possibly recommend chargers for specialized applications such as the use of low-cost low-speed DC chargers for lightly used class 8 EVs lacking onboard AC-to-DC converters, Level 1 (110V) charging for electric carts, bikes, motorcycles, and others, and to trickle charge rarely-used EVs. We will also evaluate the need for mobile or portable chargers, and may recommend mobile, battery-buffered, or solar charging as an interim or low-cost charging solution at locations lacking adequate power or at leased fleet facilities.

TYPICAL CAPITAL COST DIFFERENCES BETWEEN DEDICATED & SHARED CHARGERS

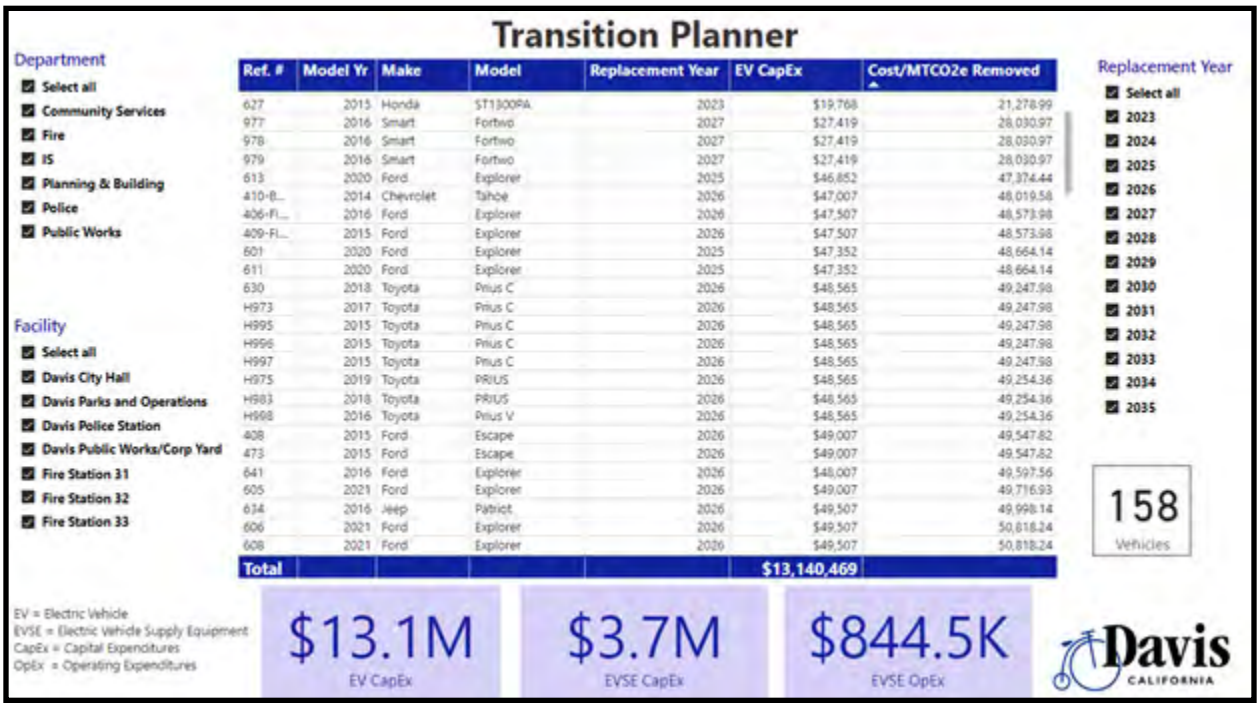
Based on DKS's extensive fleet electrification planning and design experience, dedicated chargers are typically 50-250% more expensive to deploy than shared chargers, given the common need for electrical service upgrades.

The lower end of that range would apply to facilities at which no major electrical system upgrades are needed. The higher end of that range applies when upgrades such as on the transformer, switchboard, or panel level are necessary. Electrical upgrades can be substantially more expensive when attempting to provide dedicated chargers for each fleet EV than when sharing a smaller number of chargers between EVs.

While at many fleet facilities the existing electrical panels may support a limited number of Level 2 charging stations (say, 2-3 low-output dual-plug stations), deploying more chargers (as required by the dedicated strategy) would incur expensive electrical upgrades involving new panels, switchboards, and/or transformers. Additionally, such upgrades substantially delay the process of providing charging infrastructure for new fleet EVs given frequent delays in the provision of utility-side upgrades and the procurement of the mentioned electrical hardware.

To determine the most cost-effective way to charge each fleet's future EVs, DKS developed a detailed spreadsheet-based tool named FLEELET (introduced in the beginning of Section 2) that helps the team determine quantities of each type and charging output based on the quantity and class of fleet EVs, battery sizes, charging acceptance rates, vehicle duty cycles and dwell times analyzed in Task 2.1. The most suitable charging solution for each fleet and facility included in this project may involve a mix of the different alternative strategies, in an effort to best meet the operational and budgetary needs of each fleet given any electrical infrastructure constraints.

Based on the output of this analysis, Frontier Energy will develop an online digital dashboard for use throughout the project to interactively display findings and recommendations, allowing HCAOG staff and other stakeholders to filter recommendations. For example, the Public Works Department could choose to view only the Public Works fleet, the Sustainability Manager could track GHG reductions and the budgeting office could adjust the implementation timeline as needed to track investments needed over time. Frontier will continue to host this password-protected dashboard, keeping it available to HCAOG staff and other stakeholders to use both during and after the project.



The figure above is the fleet vehicle transition dashboard for the City of Davis, a shared DKS/Frontier client, with filters and adjustment bars or sliders for vehicle lifespan and OpEx savings. Each of our clients chooses the filters and sliders they want to use.

Click here to view a sample interactive digital dashboard

Thanks to DKS and Frontier's sophisticated fleet electrification tools and methods, we will evaluate the entire vehicle inventory of all 11 fleets and recommend quantities and types of the EV chargers needed for each domicile location within the HCAOG jurisdictions and tribes within the budget allocated for this plan.

Subtask 2.3 Site Selection & Mapping

DKS will work with fleet managers, facilities staff, stakeholders and PAC members to identify each of the ten selected facilities with most operationally suitable per county, seven cities, and three tribal governments. Under this subtask, DKS will create a site prioritization matrix and mapping in GIS database of all the fleet charging facilities based on the estimated energy demands and the type, power output and quantity of fleet chargers recommended for each fleet facility.

The site prioritization matrix and GIS mapping will help HCAOG and stakeholders to select ten sites to prioritize for preliminary site design. The site prioritization tool will include a spreadsheet-based matrix of the key prioritization variables and, through an iterative process with HCAOG staff and stakeholders, a set of weighting criteria will be developed to help score the relative priority of each site. Scores will be calculated based on the individual criteria score multiplied by the weighting factor. This allows for dynamic ranking of locations based on client and stakeholder input. We will provide agencies with both a tabular listing and map of the ranking by points for potential sites.

DKS will score the sites based on various parameters. Some of these parameters, which can be customized based on Humboldt County's and the addressed fleets' needs, are shown below:

Category	Criterion	Data needs
General	**Site ownership status or departmental use**	Leased/owned for each facility. Prioritize sites owned by appropriate City department(s).
	Proximity to public charging stations (L2/DCFC)	AFDC, PlugShare. Prioritize sites close to public charging stations (which can serve public, fleet, and employee EVs)
	Equity (social and environmental)	Based on CalEnviroScreen, EJScreen, the Climate and Economic Justice Screening Tool/Justice40, or Census data on MUDs. Prioritize sites in disadvantaged and underserved census tracts.
	Expansion capacity / no. of available parking spaces	Expansion plans, parking layouts for each site, Google Earth
	Land use/Zoning	Assessor/parcel data
Pertaining To Public Charging	**Existing and upcoming public charging stations**	# of existing and new charging stations in proximity of each facility
	Charging demand for future public EVs	Replica. Based on travel demand and local EV adoption
	Proximity to amenities	Qualitative review of nearby amenities like restaurants, restrooms, convenience stores, etc.
	Visibility/Access	Traffic counts
	Proximity to high-density residential areas	Existing and future land use maps, Census data on MUDs

Pertaining To Fleet Charging	**Charging demand for future fleet EVs**	Class, make, model, mileage, fuel records for each fleet vehicle
	EV replacement model availability	Class, make, model for each fleet vehicle Prioritize sites with fleet vehicles that have suitable EV replacement models on the market (current & soon)
	Existing and upcoming County, City, Tribe-owned fleet charging stations	Existing fleet charging stations for each facility
	Number of vehicles of Class 2A and under (not affected by ACF)	Vehicle class for each fleet vehicle
	Number of vehicles of Class 2B and higher (affected by ACF)	Vehicle class for each fleet vehicle. ***Prioritize sites with more MDV & HDV (to be ACF compliant)***
	CO_2 emission reduction potential	Annual fuel consumption for each fleet vehicle
	Criteria Air Pollutant (CAP) reduction potential	Fuel type for each fleet vehicle
	Vehicle age	Model year for each fleet vehicle. Prioritize sites with older vehicles
	Distance to nearest another fleet site	Site locations with fleet domiciles.
	Age of the facility	Newer sites have accurate as-builts and potential to install more EV chargers than the older sites
Pertaining To Employee Charging	**Charging demand for future employee EVs**	Employee vehicles, commute distances, commute modes
	Existing and upcoming County or City owned employee charging stations	# of existing and new planned chargers for construction

Availability of unused fleet chargers during the day	Explore potential to use chargers for employee charging during the day when fleet vehicles are out
Proximity to amenities	Qualitative review of nearby amenities like restaurants, restrooms, convenience stores, etc.

DKS will also create a GIS map that will help HCAOG and stakeholders to review and select potential charging hubs for joint use by county, city, tribal and federal land use agency fleet ZEVs.

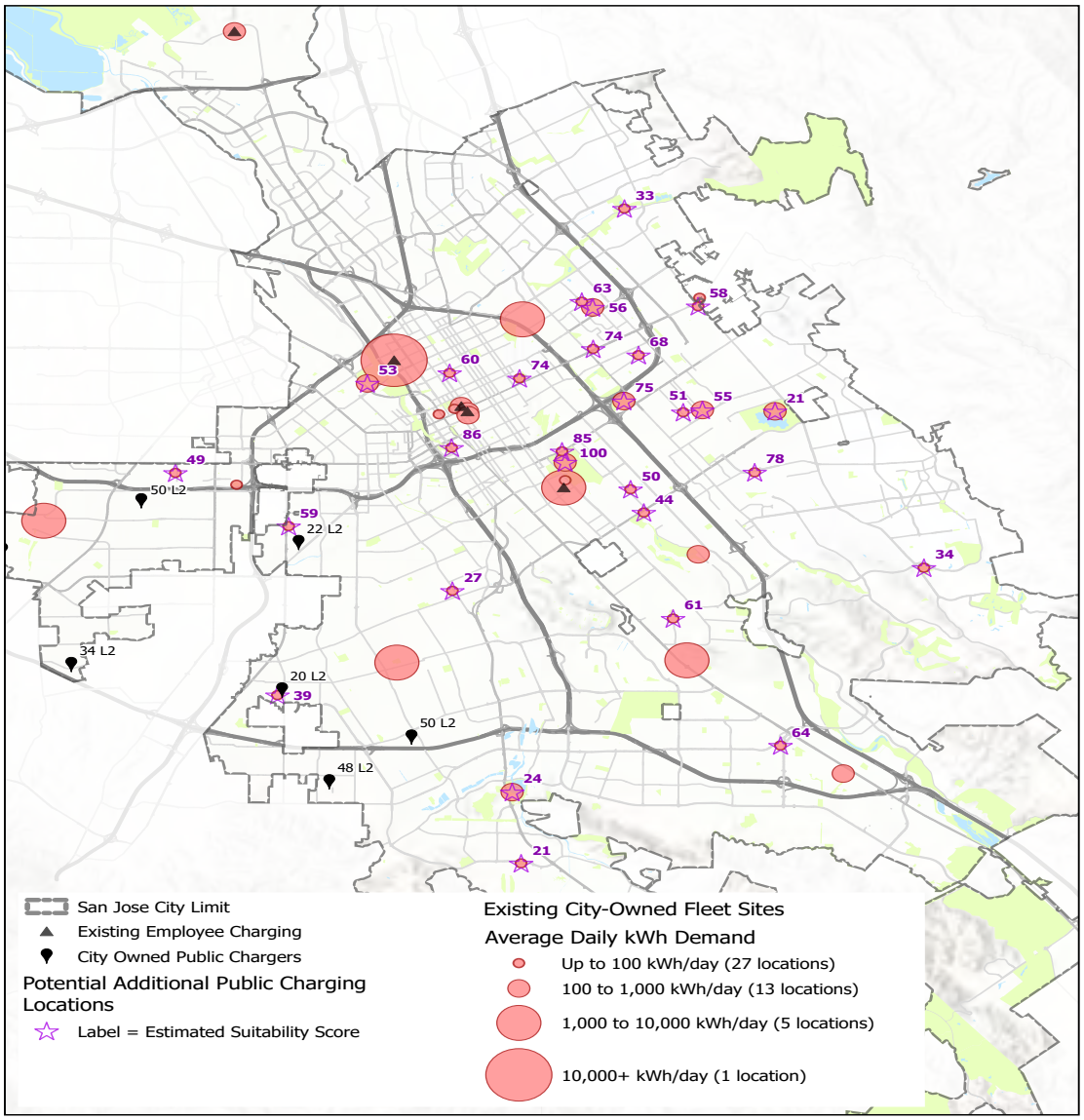


Figure 6: City of San Jose's Fleet Demand n(kWh) over 46 sites

DKS will schedule meetings with HCAOG and with PAC members to present their findings and recommendations.

TASK 2: ASSUMPTIONS

- DKS and Frontier to receive all fleet data at one time before proceeding with the analysis. New or additional information is added after the analysis reaches a defined milestone, it may be considered additional scope, effort and schedule, which can be negotiated between the consultant and the client.
- DKS and Frontier to analyze up to 1,000 vehicles as part of this project. These vehicles can be a mixture of LD, MD and HD vehicles. Any additional vehicles may be considered additional scope, effort and schedule, which can be negotiated between the consultant and the client.
- No site visits and review of as-built drawings to be performed under this task, as these will be performed as part of Task 3.

TASK 2: DELIVERABLES

- Interactive online data visualization dashboard showing total number of vehicles by domicile locations, estimated kWh demand per each vehicle and facility, and total recommended quantity, and type and power output of EV chargers required for fleet charging
- GIS map showing the fleet locations based on the kWh demand and total quantity of EV chargers required at each location
- Site prioritization tool matrix in Microsoft Excel
- Draft memo summarizing each sub-tasks in Task 2, finding and recommendations with chapters for up to eleven agency fleets
- Final memo summarizing each sub-task in Task 2, including findings and recommendations
- Presentation to TAC/Board members at draft and final stages of the task

TASK 3: INFRASTRUCTURE PLAN

The objective of this task is to prepare a detailed feasibility plan to install necessary charging and/or fueling infrastructure on the ten selected sites from Task 2.

DKS and Frontier team will perform the following subtasks:

Subtask 3.1 Facility Conditions Review

The objective of this subtask is to ensure that electrical system upgrades are sized and configured to meet the energy needs of charging future fleet EVs. As on most of our fleet electrification strategy projects, a critical question we will answer for HCAOG is, *"What electrical system upgrades (if any) will be required to provide EV charging at each fleet facility?"* To answer this, we will evaluate existing facility electrical loads relative to projected EV charging demand. We review available electrical data including PG&E utility bills from an appropriately representative timeframe, as-built drawings, electrical one-line drawings. DKS will perform this subtask in close coordination with County, and City electricians familiar with each fleet facility as well as with the local electrical utility (PG&E) on connecting proposed EV chargers to existing, upgraded, or new electrical infrastructure.

DKS will supplement our analysis with visits to the 10 selected sites to confirm the accuracy of the as-built drawings on the electrical system components, including electrical panels, electrical rooms, conduits, etc. in order to field-very our preliminary charger recommendations. While it is unlikely that demand from these ten selected sites will impact the electrical grid, based on other fleet electrification projects we have completed in PG&E's service territory, we know from our experience that service upgrades will often be required at least for larger fleet facilities. We will also note and document any existing chargers at fleet sites and take them into consideration in our charger analysis tool.

Subtask 3.2 Charger Infrastructure Recommendations

Based on the site selection process conducted in Subtask 2.3, DKS will work with fleet and facility managers at the prioritized sites (minimum of 10) to develop the most suitable and cost-effective approach to install the fleet charger quantities and types identified in Subtask 2.2.

Based on the information gathered from site visits, DKS's FLEELET tool (introduced in Task 2) will calculate comparative project capital costs (capital expenditure, or CAPEX) based on inputs including each facility's electrical capacity, charging make-ready infrastructure needs (as determined by PG&E electrical equipment costs), and charger and infrastructure purchase and installation.

To be cost efficient, DKS recommends installation of conduit systems, trenching and conduit stub-outs during an early implementation phase when electrical upgrades are happening at each site. The appropriate wiring can be installed in later phases based on the quantity and type of the EV chargers to be installed.

This task will be complemented by a detailed overview of estimated annual OPEX, which will assess and quantify charger depreciation, maintenance needs, charger software licensing, networking fees, electricity expenses, and other possibly applicable expenses.

Frontier will add the CAPEX and OPEX costs and site specific recommendations on the digital dashboard as discussed in Task 2. Dashboard tools allow you to filter recommendations, such as seeing one of the four cities under ZEV Task Force, or just seeing the police fleet, and to adjust the implementation timeline as needed.

Click here for the City of Davis' fleet electrification digital dashboard with live data visualizations. Password for the dashboard is: City of Davis

As you will see on the City of Davis' digital dashboard, DKS and Frontier recommend transition of ICE vehicles to ZEVs and charger installation in multiple phases. The initial phase (Phase 1) of the project focuses on the sites which have available electrical capacity and additional phases will follow based on the replacement timeframe of the vehicles and the quantity of the EV chargers to be installed.

Based on the field findings, DKS will prepare conceptual plans that will show proposed locations for installing chargers at 10 selected fleet domicile facilities. These conceptual plans will identify existing electrical panels as well as locations where electrical transformers would most likely be installed based on our experience and coordination with PG&E. DKS team will collaborate with PAC members and potentially other stakeholders to include input on the charger locations by type and use.

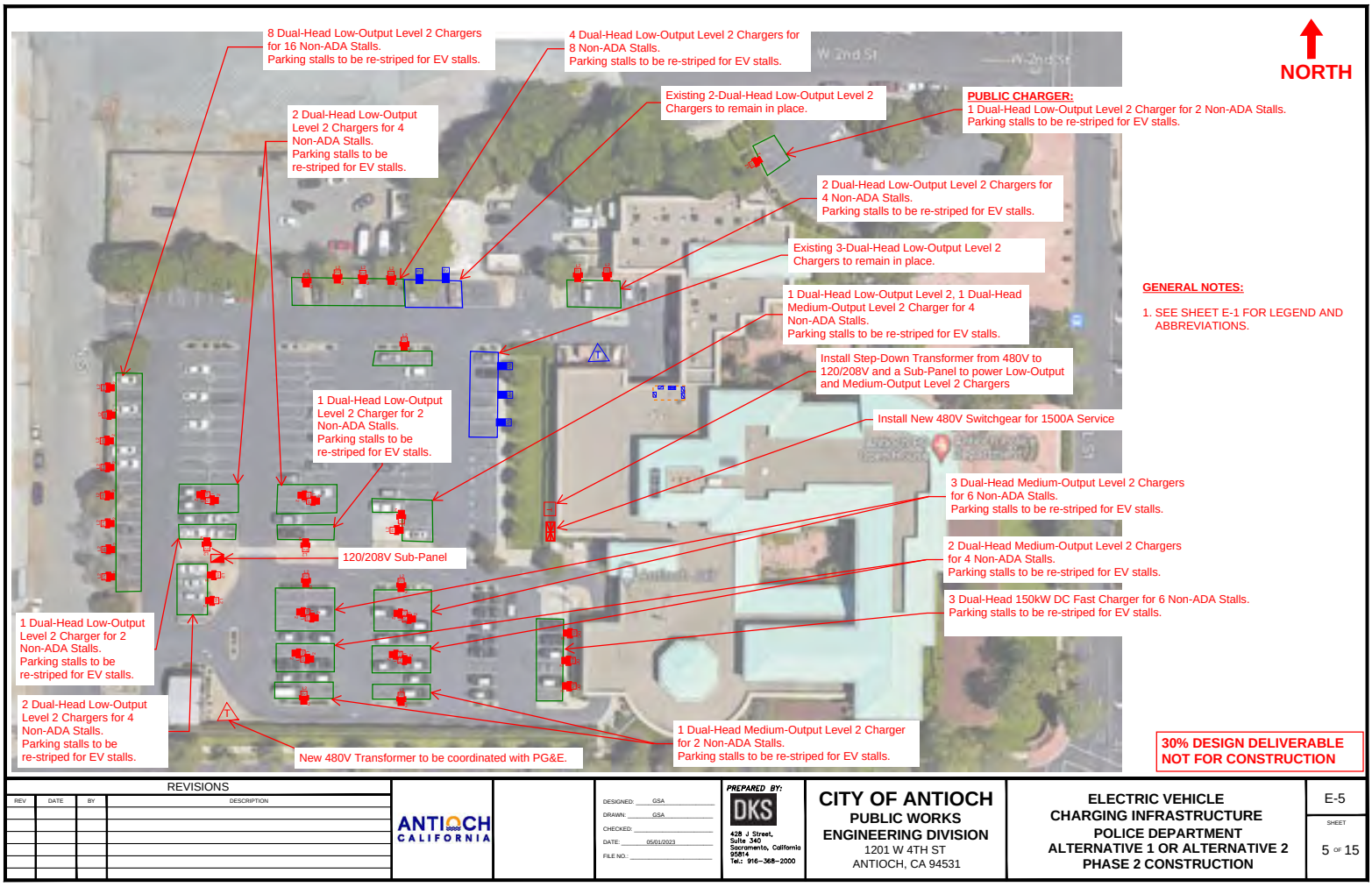


Figure 7: Typical Conceptual EV Charger Design Plan for a Medium-Sized Fleet Facility

Subtask 3.3 Resiliency and Back-Up Power

Many of our municipal fleet clients are increasingly concerned about how to charge fleet vehicles, especially police and other mission critical assets during power outages. To address this concern for HCAOG, DKS will provide resiliency strategy options includes:

- Backup generator options
- Mobile and stationary Battery Energy Storage Systems (BESS)
- Distributed energy microgrids (solar and micro wind)
- Bidirectional charging including vehicle-to-vehicle (V2V) and vehicle-to-building (V2B) and of course vehicle-to-grid (V2G) connectivity.

DKS will provide an overview of each approach including high-level cost analysis and equipment recommendations.

Figure 8: Mobile Back-Up Generator

Figure 9: Solar Charging Station

TASK 3: ASSUMPTIONS

- DKS to receive all as-builts and electric utility (PG&E) bills per each site at one time before proceeding with the analysis. New or additional information is added after the analysis reaches a defined milestone, it may be considered additional scope, effort and schedule, which can be negotiated between the consultant and the client.
- Any additional vehicles added after Task 2 may be considered additional scope, effort and schedule, which can be negotiated between the consultant and the client.
- One site visit to be performed under this task. If HCAOG desires additional field visits of any additional sites, it may be considered additional scope, effort and schedule, which can be negotiated between the consultant and the client.

TASK 3: DELIVERABLES

- Interactive online data visualization dashboard showing total quantity and type of EV chargers required, CAPEX, and OPEX per phase for a minimum of ten (10) selected sites. Site specific recommendations.
- CAPEX per each site per phase in PDF format.
- OPEX per each site per phase in PDF format.
- Conceptual Charger Layout Plans for ten sites
- Draft report summarizing each sub-tasks listed in Task 3, finding and recommendations
- Final report summarizing each sub-tasks in Task 3, finding and recommendations
- Presentation to TAC/Board members at draft and final stages of the task

TASK 4: IMPLEMENTATION PLAN

The DKS/Frontier team will perform the following subtasks under Task 4:

Subtask 4.1 Fleet ZEV Implementation and Infrastructure Phasing

We will prepare a roadmap for implementation of fleet transition and charger installation recommendations, including preliminary charger installation design for each of the ten (10) fleet facilities documented on interactive online data visualization dashboards hosted in Microsoft's PowerBi introduced in Tasks 2 and 3.

TASK 4: IMPLEMENTATION PLAN

Specifically, each dashboard will display proposed timelines for vehicle replacement with appropriate ZEVs, and identify the proposed timeline of charger installations by phase for each fleet facility as well as the estimated capital and operating costs for each year and phase of implementation. This will be based on such factors as fleet vehicle replacement schedules, ACF mandates for medium and heavy-duty vehicles, each fleet's decarbonization goals for light-duty vehicles, and municipal budget constraints. The dashboards will identify the number, type, and location of EV charging stations needed to support full fleet electrification and group these recommendations into distinct implementation phases. For most fleets, the first phase consists of the quantity of chargers supported by existing electrical capacity at each fleet facility, with a second phase comprised of additional chargers powered by expanded electrical capacity following installation of larger transformers, electrical panels and conduit. For larger fleet facilities, a third phase may be recommended to electrify fleet vehicles not available in earlier phases with chargers connected to the infrastructure that was installed in Phase 2. This simplifies municipal budget allocation over time and avoids deploying charging stations that will not be used until later in the fleet transition. These recommendations will be included in the interactive dashboard.

The Advanced Clean Fleet (ACF) Compliance tool can be used to help plan medium- and heavy-duty vehicle purchases to ensure compliance with the rule and to ensure enough chargers are installed and operational before the delivery of EVs. The Pass/Fail table automatically updates to indicate whether or not the replacement vehicles above comply with either the Procurement Pathway or the Milestone Pathway.

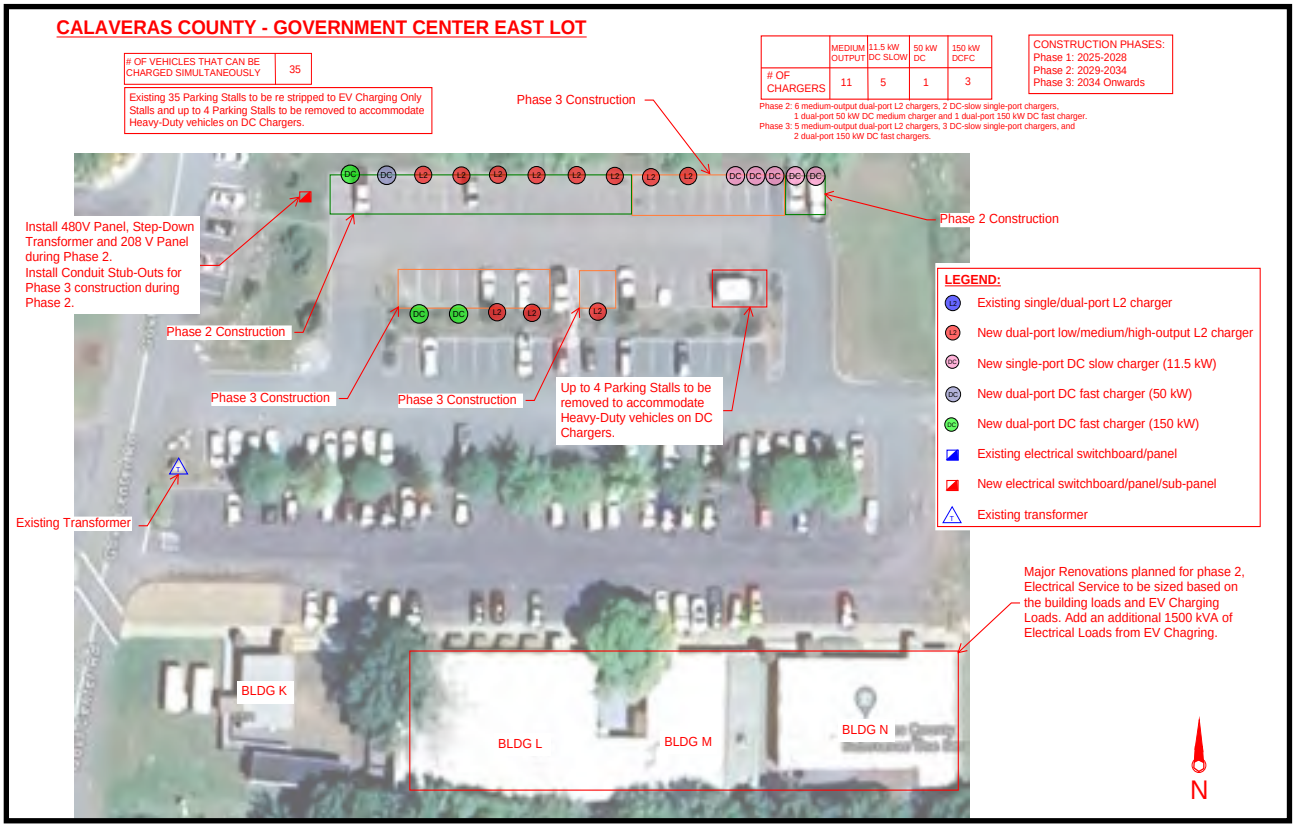


Figure 9: Charger Installation Recommendations by Implementation Phase for Calaveras County

Subtask 4.2 Identify and Analyze Funding and Financing Mechanisms and Strategies

The objective of this subtask is to identify, evaluate and compare financing options for ZEV purchase and ZEV charging/fueling infrastructure installation.

The following options will be considered:

UTILITY GRANTS & REBATES: DKS has a proven track record of success helping our fleet clients obtain charging infrastructure support from utilities. We have worked closely with PG&E in recent years on numerous municipal fleet electrification projects and will summarize current and anticipated incentive programs.

REVOLVING LOAN FUNDS: Revolving loan is a form of credit issued by a financial institution that provides the borrower with the ability to withdraw, repay, and withdraw again. Combined with deep industry knowledge, DKS can demonstrate the pros and cons of this financial mechanism in the context of fleet electrification.

STATE GRANT PROGRAMS: DKS tracks all the grants available by California State and will provide a summary of planned grant opportunities by these agencies.

PRIVATE THIRD PARTY FINANCING: One of the most attractive options for municipal fleets is to work with third party infrastructure-as-a-service providers who own and operate fleet assets then provide mobility services to clients on a pay per use basis. This reduces risk for fleet operators and converts capital expenditure into operating expenditure. DKS has relationships with multiple infrastructure-as-a-service providers including Sustainability Partners, NextEra Energy, 7th Generation Capital, Tesiac, e2 Energy Advisors, Ideanomics Capital and others. We will provide an overview of how this could work for HCAOG, assessing feasibility and pros and cons.

FLEET MANAGEMENT SERVICES: We will provide an overview of contracting with commercial fleet management services such as Enterprise Fleet Management Merchants Fleet, and Element.

LEASING: Both EVs and chargers are available on a lease basis. We will summarize and evaluate offerings from multiple vendors.

VEHICLE TO GRID TECHNOLOGY: Bidirectional charging will allow EV fleets to generate grid services revenues through the sale of power to the grid during peak demand periods. DKS has relationships with the leaders of vehicle to grid integration including Fermata Energy, Nuvve and Wallbox and will provide an assessment of the opportunities and constraints of this emerging technology.

ASSIGNED EMPLOYEE TAKE HOME VEHICLE AT HOME CHARGING: One challenge for fleet electrification is how to charge take home vehicles assigned to individual employees. DKS is currently working with King County which completed a pilot study on home charging and we previously performed an analysis of how to electrify the largest vanpool fleet in the U.S. for King County Metro Transit, nearly all of which are take home vehicles. Based on this completed work and ongoing collaboration with Ford, we will provide a summary of relevant information for Humboldt County and other fleets. As an alternative to extensive fleet depot charging infrastructure, allowing employees to take vehicles home to charge can, in some cases, save capital investment.

Subtask 4.3 Cost Benefit Analysis

Installing ZEV infrastructure requires major investments. To assess return on these investments, DKS and Frontier will coordinate with the Humboldt Transit Authority (HTA) and Schatz Energy Research Lab to carefully assess and demonstrate the cost differences between a "business-as-usual scenario" (in which Humboldt County, seven cities and three tribal government and the other jurisdictions continue to operate gas and diesel-powered vehicle fleets) and fleet electrification based on the recommended actions, timelines of vehicle replacements with ZEVs, and charging station purchase and installation. The results of this analysis will be documented using easy-to-understand digital visualizations that can enable or facilitate decision-making by agency leadership.

We will ensure our recommendations will best serve the fleet vehicles, optimize potential third-party incentive programs, and recover costs through Low Carbon Fuel Standard credit sales and charging fees and potentially revenues from grid services or public use of fleet chargers.

COST ANALYSIS

The DKS/Frontier will estimate Total Cost of Ownership (TCO) for both ZEVs and charging infrastructure, addressing capital costs, operating costs, and potential revenue opportunities informed by dozens of electromobility planning and design projects in California. As explained below, we will perform this subtask by quantifying all applicable costs, both capital (one-time) and operating and maintenance (ongoing/annual) expenditures that will be incurred by the different fleets.

This analysis will address the following cost factors:

DIRECT COST FACTORS FOR ZEV FLEET DEPLOYMENT

- Fleet vehicle **procurement** (based on the recommended rate and timeframe of transition to ZEVs, factoring in interim gas/diesel vehicle replacements, initial ZEVs, as well as subsequent ZEV replacements)
- Vehicle purchase **incentives** (this can include applicable tax credits for future ZEV purchases or available grant funding)
- Fleet vehicle **registrations/licensing** (this considers applicable California DMV registration fees)
- **Fuel and electricity** expenses (this considers each fleet vehicle's typical annual mileage and its transition year to a ZEV model, as well as respective gas/diesel prices and electricity rates)
- Vehicle **insurance** (this considers each fleet's chosen insurance model, whether they are self-insured, mileage-based, or insured via flat annual fees)

- Vehicle **repair and maintenance** (this considers different fleet vehicles' annual maintenance needs, which can be inferred based on data from each fleet or prior project experience of the team)
- **Charger OPEX** (as quantified as part of Task 3)

INDIRECT COST FACTORS FOR ZEV FLEET DEPLOYMENT

INCREASING VEHICLE COSTS: Due to vehicle manufacturers' gradual phase-out of gas and diesel vehicles in line with California's Advanced Clean Fleets (ACF), Advanced Clean Cars II (ACC II) and Advanced Clean Trucks (ACT) rules, fleet vehicle procurement costs for gas and diesel vehicles are expected to continue to increase over time.

UNPREDICTABLE FUEL COSTS: Gas and diesel prices may fluctuate due to a shift in both supply and demand in the next one to two decades resulting in added risk for municipal fleets that need to cover fuel expenses based on rather constant operational budgets. Electricity rates, while also adjusted by utilities over time, typically have lower levels of fluctuation on a relative basis.

OTHERS: As identified by project staff and stakeholders, through PAC meetings (Task 2), or based on new technological or regulatory developments.

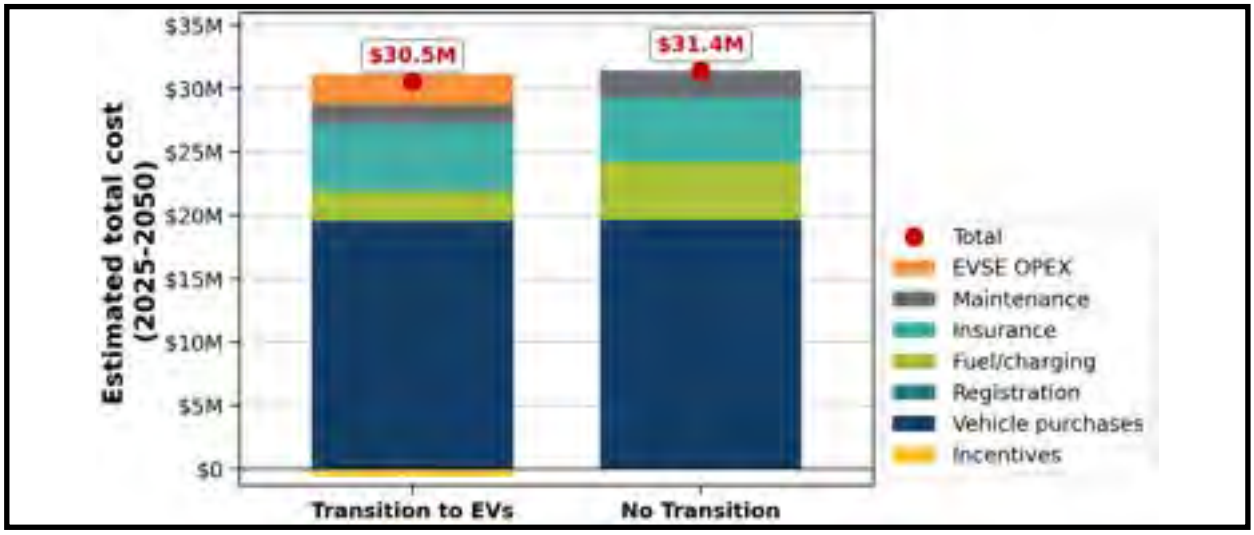
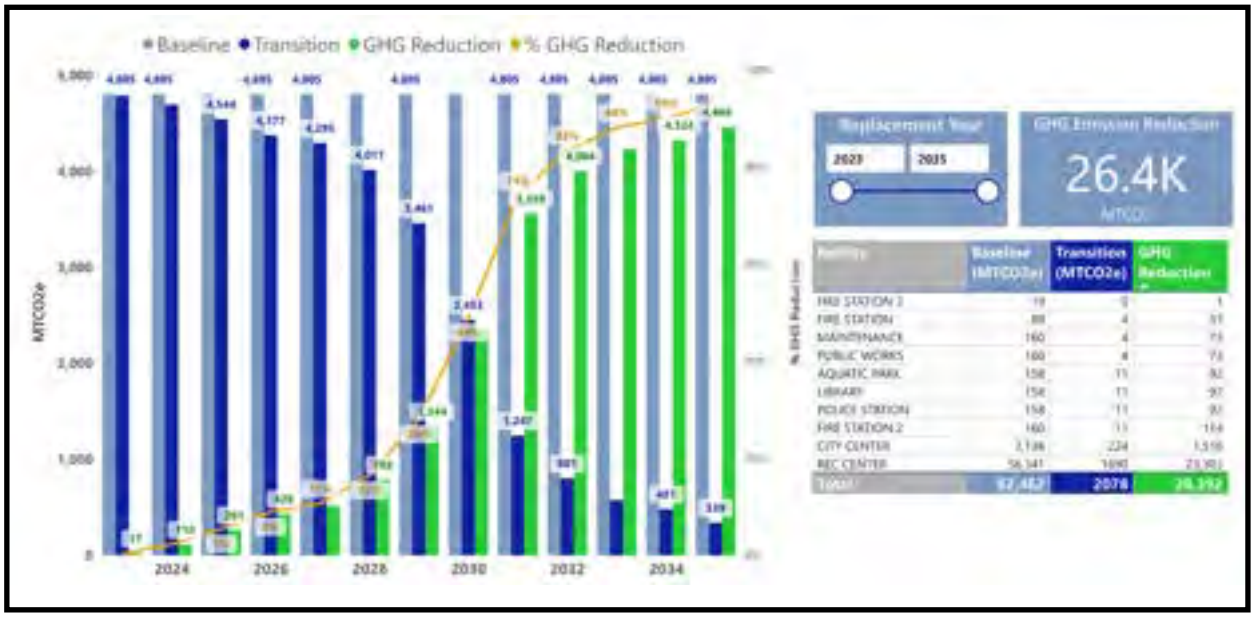


Figure 10: Cost-Benefit Analysis between Transition to EVs vs No Transition

BENEFIT ANALYSIS

We will estimate potential financial benefits including fuel and maintenance savings as well as potential revenue from the use of chargers by other agencies, sale of LCFS credits and other possible revenue streams. More significantly, we will evaluate each fleet's potential reduction in Scope 1 Greenhouse Gas (GHG) emissions as defined by the GHG Protocol which for many government agencies represent the largest single source of operational emissions. Activity and emissions are calculated on a vehicle-by-vehicle basis for each calendar year.

The fleet transition plan can be tailored to prioritize the removal of the lowest-cost GHG emissions first.



Frontier will also provide a cost/benefit analysis of hydrogen fuel cell vs battery electric vehicles and coordinate with HTA and Schatz Energy Research Lab on the planned infrastructure in the County.

Subtask 4.4 Develop Guidelines for Charging and Refueling of Fleet Vehicles

We will identify the main barriers to transitioning to a battery and/or fuel cell electric vehicle fleet. Based on our experience, these typically include availability and feasibility of cost-effective ZEVs, availability of transformers and other electrical system components; resistance from certain internal stakeholders; charging options for take-home EVs; staff training and workforce development; and funding. We will provide a summary of solutions based on the team's best practices for overcoming barriers based on input from the PAC and other stakeholders as well as lessons learned from similar projects.

DKS and Frontier will develop best practices summaries and operational guidelines that will help local fleet managers facilitate the transition from existing liquid fueling to future EV charging, including the following:

- Best practices for managing fleet data and EV charging management
- Overview of charge management software and related technology
- Guidelines for shared use of depot charging by multiple EVs and different times of day
- Guidelines for opportunity charging, using chargers operated by fleets from different agencies
- Guidelines for charging take home fleet EVs
- Best practices for charging law enforcement and other mission critical EVs
- Staff Training/Re-equipping maintenance facilities for servicing EVs
- Policies for use of County-owned and public charging stations
- Cost recovery for County-owned charging stations

Frontier Energy operates the Hydrogen Fuel Cell Partnership and will use H2FCP's modeling tools for hydrogen fueling stations and include the options for public hydrogen stations and County's role in the proposed Hydrogen Hub (H2FCP Hub).

Subtask 4.5 Prepare Report

The goal of the final sub-task is to compile the deliverables from Tasks 2- 4 into a comprehensive plan document intended to guide the transition to ZEV fleets and deploy chargers and potentially fuel FCEVs. The report will include images from the digital dashboard and is intended to supplement, not repeat, the interactive online information.

About three months before the end of the project, the DKS team will provide an outline of the final report for client review and approval. The team will follow this outline and prepare a report in ADA accessible format with two drafts: Draft, and Draft Final.

The DKS team will present the Draft Fleet Transition and Implementation Plan to the Stakeholder Advisory Group, PAC, and other relevant stakeholders in one meeting and provide a limited window of time for feedback. We will adopt minor comments. If comments substantially change the report or conflict with each other, we'll meet with HCAOG staff for resolution.

The DKS team will then present the Draft Final report to the HCAOG Technical Advisory Committee (TAC) and answer questions. After incorporating comments, the DKS team will produce a final report and deliver it as a PDF with links to appropriate sources. As needed and if budget allows, DKS may present findings to City Councils, Board of Supervisors, and/or Tribal Councils. The DKS team will develop any maps, graphics, or displays as needed for these presentations, and will attend in person or virtually as requested.

TASK 4: DELIVERABLES

- Interactive online data visualization dashboard with ACF-Compliance Tool
- Draft Fleet Transition and Implementation Plan report summarizing each tasks and sub-tasks from 1-4, finding and recommendations
- Final Fleet Transition and Implementation Plan report summarizing each tasks and sub-tasks from 1-4, finding and recommendations
- Presentation to HCAOG Technical Advisory Committee (TAC) after submitting Draft Fleet Transition and Implementation Plan report
- Optional (If budget allows): Presentation to City Councils, Board of Supervisors, and/or Tribal Councils.

WORK PLAN & SCHEDULE

DKS and Frontier typically perform fleet transition plans in 6-9 months, though the specific project duration is dependent on factors beyond our direct control, such as availability and accuracy of fleet data, facilities data, stakeholder engagement, client review time, responsiveness of PG&E, etc. To minimize project duration, we typically provide a detailed data request in the form of a spreadsheet listing needed fleet and facilities data upon notice of project award, which allows us to begin analytical tasks as soon as we receive the data and Notice to Proceed (NTP). The following project schedule is longer than typical due to the relatively large number of small fleets, which typically lack readily available fleet data, as well as the PAC review process. Both DKS and Frontier have relatively large and growing fleet electrification teams led by experienced electromobility planners and engineers who regularly communicate with one another, to manage workload and tasks on multiple fleets. This allows us to meet project deadlines and be responsive to unexpected client easily needs in the event of a grant funding deadline or a request from agency management.

SCHEDULE

Task / Title	2024				2025							
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Task 0 Project Management	NTP	CI	CI	CI	CI	CI	CI	CI	CI	CI	CI	CI
Task 1 Stakeholder Coordination and Project Advisory Committee Meetings			1		1			1		1		1
Task 2 Fleet Transition Analysis												
2.1 Fleet Assessment and Available Aternative EV Review												
2.1.1 Perform Energy Analysis	20	20	2	3								
2.1.2 Develop Interactive On-line dashboard				4	5							
2.2 Fleet ZEV Charging/Fueling Recommendations					6	7						
2.3 Site Selection and Mapping					10							
2.3.1 Develop Site Prioritization Matrix				8								
2.3.2 Develop GIS Mapping of all sites where fleet domiciles				9								
Task 3 Infrastructure Plan												
3.1 Existing Site Conditions Review												
3.1.1 Review as-builts drawings of up to 10 selected sites					11							
3.1.2 Review utility (PG&E) bills of up to 10 selected sites					11							
3.1.3 Perform Field Visits						12						
3.2 Charger Infrastructure Recommendations								6	7			
3.2.1 Charging Analysis based on phasing							13					
3.2.2 CAPEX and OPEX							13					
3.2.3 Prepare Conceptual Plans							14					
3.2.4 Update Interactive On-line dashboard								15				
3.3 Resiliency and Back-Up Power								6	7			
Task 4 Implementation Plan												
4.1 Fleet ZEV Implementation and Infrastructure Phasing								6	7			
4.2 Identify and Analyse Financing Mechanisms and Strategies								6	7			
4.3 Cost-Benefit Analysis								6	7			
4.4 Develop Guidelines for Charging and Refueling of Fleet Vehicles								6	7			
4.5 Prepare Report												
4.5.1 Prepare Draft Report										16		
4.5.2 Prepare Final Report												17
4.5.3 Presentation to HCAOG Technical Advisory Commitee (TAC)											18	
4.5.4 Optional Presentation to City Councils, Board of Supervisors, and/or Tribal Councils.												19
4.5.5 Update Interactive On-line dashboard											20	

Meetings/Milestones

NTP Notice To Proceed (Sept 23rd)
CI Check In Meetings

1	Stakeholder Coordination and PAC Meeting
2	Present Energy Demands (kWh) for entire fleet (county, 7 cities, and 3 tribal government)
3	Present Charger Analysis for entire fleet per site (county, 7 cities, and 3 tribal government)
4	Present Online Dashboard to HCAOG TAC
5	Present Online Dashboard to PAC/TAC
6	Draft Memo
7	Final Memo
8	Site Prioritization Matrix to HCAOG TAC
9	GIS Map to HCAOG/TAC
10	Finalize selection of prioritized sites
11	Collect and Review Drawings, Utility Bills for selected sites
12	Site Visits
13	Cost Estimates (CAPEX/OPEX)
14	Conceptual Plans to HCAOG
15	Present Online Dashboard to PAC/TAC/PAC
16	Draft Report
17	Final Report
18	Presentation to HCAOG TAC/Board
19	Optional (If Budget Allows)
20	Data collection/validation

COST PROPOSAL

	DKS						FRONTIER							
	Principal-in-Charge	Project Manager	Deputy Project Manager	Planner/Engineer	Admin	Creative Services	VP	Frontier/Program Manager	Frontier/Program Consultant	Admin	Total DKS Hours by Task	DKS Labor Cost by Task	Total Frontier Hours by Task	Frontier Labor Cost by Task
Standard Billing Rates	$ 330.00	$ 250.00	$ 200.00	$ 190.00	$ 145.00	$ 210.00	$ 338.00	$ 190.00	$ 175.00	$ 80.00				
TASK 0 PROJECT MANAGEMENT											114	$25,790.00	61	$10,398.00
0.1 Prepare project workplan and manage project progress	2	16	12		2		1	12	2	2	32	$7,350.00	17	$3,128.00
0.2 Prepare for and conduct regularly scheduled project team meetings and provide meeting minutes	12	16	16	4	4			14	12		52	$12,500.00	26	$4,760.00
0.3 Provide monthly invoices and progress reports		12	6		12			8	2	8	30	$5,940.00	18	$2,510.00
TASK 1 STAKEHOLDER COORDINATION AND PROJECT ADVISORY COMMITTEE MEETINGS											36	$8,870.00	9	$1,665.00
1.1 Help HCAOG to establish PAC Committee based on the project needs	1	1	1					1			3	$780.00	1	$190.00
1.2 Prepare for and conduct up to five (5) scheduled PAC team meetings and provide meeting agendas, presentation materials and minutes	5	7	7	2				3	3		21	$5,180.00	6	$1,095.00
1.3 Presentation to PAC members	2	5	5					2			12	$2,910.00	2	$380.00
TASK 2 FLEET TRANSITION ANALYSIS											165	$36,210.00	282	$51,126.00
2.1 Fleet Assessment and Available Alternative EV Review											0	$0.00	0	$0.00
2.1.1 Perform Energy Analysis		2					2	80	120	2	2	$500.00	204	$37,036.00
2.1.2 Develop Interactive On-line dashboard		2	1					20	24		3	$700.00	44	$8,000.00
2.2 Fleet ZEV Charging/Fueling Recommendations											0	$0.00	0	$0.00
2.2.1 Charger Analysis of the entire county, 7 cities and 3 tribal government fleet	2	8	24	16	1			8	2	1	51	$10,645.00	11	$1,950.00
2.3 Site Prioritization and Mapping											0	$0.00	0	$0.00
2.3.1 Develop Site Prioritization Matrix	2	4	8								14	$3,260.00	0	$0.00
2.3.2 Develop GIS Mapping of all sites where fleet domiciles	1	2	12	8	2						25	$5,040.00	0	$0.00
2.3.3 Prepare draft memo	8	8	8	12	2	2		8	4	1	40	$9,230.00	13	$2,300.00
2.3.4 Presentation to HCAOG TAC/Board members	1	2	2					2	2		5	$1,230.00	4	$730.00
2.3.5 Prepare final memo	4	4	6	8	1	2		4	2		25	$5,605.00	6	$1,110.00
Task 3 INFRASTRUCTURE PLAN											323	$72,650.00	41	$7,380.00
3.1 Existing Site Review											0	$0.00	0	$0.00
3.1.1 Review as-builts drawings of up to 10 selected sites	2	24		40							66	$14,260.00	0	$0.00
3.1.2 Review utility (PG&E) bills of up to 10 selected sites	1	4		8							13	$2,850.00	0	$0.00
3.1.3 Perform Field Visits		32		2							34	$8,380.00	0	$0.00
3.2 Charger Infrastructure Recommendations											0	$0.00	0	$0.00
3.2.1 Charging Analysis based on phasing	2	4	16	4		2					28	$6,040.00	0	$0.00
3.2.2 Prepare estimated project costs CAPEX and OPEX	6	8	8	40							62	$13,180.00	0	$0.00
3.2.3 Prepare Conceptual Plans	2	24		8							34	$8,180.00	0	$0.00
3.2.4 Update Interactive On-line dashboard		2	2					12	12	1	4	$900.00	25	$4,460.00
3.3 Resiliency and Back-Up Power											0	$0.00	0	$0.00
3.3.1 Prepare draft memo	8	4	12	8	4			4	4		36	$8,140.00	8	$1,460.00
3.3.2 Presentation to HCAOG TAC/Board members	2	8		8				2	2		18	$4,180.00	4	$730.00
3.3.3 Prepare final memo	6	4	6	8		4		2	2		28	$6,540.00	4	$730.00
Task 4 IMPLEMENTATION PLAN											288	$66,460.00	68	$12,405.00
4.1 Fleet ZEV Implementation and Infrastructure Phasing	8	4	8	4							24	$6,000.00	0	$0.00
4.2 Identify and Analyse Financing Mechanisms and Strategies	4	4	4	8				2	2		20	$4,640.00	4	$730.00
4.3 Cost-Benefit Analysis	4	2	4					8	8		10	$2,620.00	16	$2,920.00
4.4 Develop Guidelines for Charging and Refueling of Fleet Vehicles	8	4	8					4	4		20	$5,240.00	8	$1,460.00
4.5 Prepare Report											0	$0.00	0	$0.00
4.5.1 Prepare Draft Fleet	24	4	24	40	8	24		8	4		124	$27,520.00	12	$2,220.00
4.5.2 Prepare Final Fleet	16	4	20	24	4	8		8	4		76	$17,100.00	12	$2,220.00
4.5.3 Presentation to HCAOG Technical Advisory Commitee (TAC)	2	4	2	2				2	1		10	$2,440.00	3	$555.00
4.5.4 Optional Presentation to City Councils, Board of Supervisors, and/or Tribal Councils.											0	$0.00	0	$0.00
4.5.5 Update Interactive On-line dashboard		2	2					8	4	1	4	$900.00	13	$2,300.00
Sub-Total (each consultant)	135	231	224	254	40	42	3	222	220	16	926	$209,980.00	461	$82,974.00
Sub-Total												$292,954.00		
Expenses														
Mileage, Lodging & Perdiem (per GSA)												$2,000.00		
Grand Total												$294,954.00		

SUBCONSULTANT LIST

REP ATTACHMENT D
SUBCONSULTANT LIST

The proposal shall include a complete list of all proposed subconsultants. All subconsultants listed must be provided a meaningful element of work within the defined scope of work. Changes to this Subconsultant List will not be allowed without prior written approval from RTPA.

Proposed Subconsultants

Subconsultant Firm Name and Address	Scope of Work	Dollar Amount of Work
Name **Frontier Energy, Inc** Address	**Fleet Assessment, data validation, replacement plans**	$ **$82,974**
Name Address		$
Name Address		$
Name Address		$
Name Address		$
Name Address		$

[illegible]
Name of Lead Firm

John Bosket, Vice President
Printed Name and Title of Signatory

John Bosket
Signature

09/19/2024
Date

GURBIR ANTAAL, PE

PROJECT MANAGER

Gurbir is DKS's most experienced electromobility engineer, especially for fleet electrification projects. Gurbir combines his electrical engineering background with his transportation operations expertise on every transportation electrification project and uses his wide variety of skills to analyze electric vehicle charging requirements for municipal fleets. Gurbir has served as a trusted advisor for EV-focused projects to public agencies throughout California and Washington State. He communicates promptly with his public agency clients and truly understands their needs. His relevant project experience includes work for both power providers and public agencies, including SMUD, East Bay Community Energy, California Department of Transportation, Berkeley, Fremont, Oakland, San Jose City, Mountainview, Dublin, Alameda County, Hayward, Albany, Davis, and Spokane, King County, and Tacoma, Washington. He can also convey technical information to a broad audience in an understandable, approachable manner. He makes sure all the deadlines are met well in time and within the overall budget of the projects.

EDUCATION

MS, Electrical & Computer Engineering, McMaster University

BS, Electronics & Communications, Punjab Technical University

REGISTRATIONS

Texas Professional Engineer, No. 151842

Nevada Professional Engineer, No. 031573

Canada Professional Engineer, No. 100502110

SELECT EXPERIENCE

Elk Grove Infrastructure Plan for Fleet Electrification Electric Vehicle, CA Gurbir is the project manager of the fleet electrification project with the City of Elk Grove, which aims to reduce greenhouse gas and vehicle emissions by the City's fleet vehicles, City staff vehicles, and public vehicles at City facilities. DKS is supporting the City with a plan for a charging network sufficient to maintain fleet readiness and responsiveness. One that can grow as additional electric vehicles are added to the City fleet and are more prevalent among City staff and the public. DKS is working towards the transition of the City fleet to zero-emission vehicles, including analysis, policies, and guidelines updates.

Shasta County Fleet Transition Plan, CA Gurbir is serving as a project manager on this project. Project includes planning efforts by evaluating fleet charging needs at various fleet facilities and proposed future charging hubs to serve the transition of Shasta County's fleet of more than 500 vehicles to zero emissions. Challenging aspects of this project include the provision of large amounts of power at currently undeveloped sites and facilities without sufficient electrical infrastructure as well as optimizing locations of and charging stations at charging hubs that will serve multiple dozens of vehicles each.

City of Redding Fleet Electrification, CA Gurbir is a project manager for the northern California City of Redding in the development of a fleet and infrastructure transition plan toward zero-emission vehicles. The plan includes a phased implementation strategy for charging and refueling infrastructure for battery-electric and hydrogen fuel cell vehicles at over a dozen City facilities. Gurbir helped align the vehicle transition with a schedule for charging infrastructure buildout and supported the development of cost estimates for this multi-phase plan.

City of Roseville Fleet Electrification, CA DKS is helping to determine the vehicle energy requirements and charging needs for the municipal fleet for the City of Roseville. Gurbir is serving as a project manager on this project. His role also includes calculating fleet charging demand, performing field visit reviews to determine existing electrical demand and capacity, and creating preliminary design and quantity estimates for the EV charging stations.

AVA Community Energy Municipal Fleet Electrification Studies, CA Gurbir is responsible for calculating the charging needs for each vehicle fleet site for the cities of Berkeley, Oakland, Dublin, Albany, Hayward, Emeryville, Livermore, Newark, Piedmont, Pleasanton, Tracy, Union City, San Leandro, and Alameda County California as well as electrification of numerous medium and heavy-duty vehicle fleets in compliance with CARB's Advanced Clean Fleets rule. As deputy project manager and subsequently project manager, his role includes field visits, evaluating fleet data, and calculating EV charger quantities required at each site based on electric load calculations, EV battery size, and power consumptions for Level 1, Level 2, and DC Fast Chargers. He is also responsible for estimating project costs for each site.

Kirkland Fleet Electrification, WA Gurbir managed this recently completed project to electrify the City of Kirkland's municipal fleet conversion to EV operations. As with all aspects of this project, Gurbir oversaw feasibility evaluation of charging locations and charging strategies and estimation of anticipated electrical energy needs, implementation phasing, and cost estimates for each implementation phase. Gurbir conducted site visits and as-built drawing reviews for this project to determine existing facility conditions. He was also responsible for delivering the final report.

MIKE USEN, AICP

PRINCIPAL-IN-CHARGE

Mike Usen leads DKS's company-wide electric vehicle charging infrastructure planning and design practice. Mike is a nationally recognized subject matter expert in multiple aspects of charging infrastructure master planning for light-,medium-, and heavy-duty electric vehicles. With support from DKS' rapidly growing electromobility team, Mike assists sustainability directors, fleet and facility managers plan smart electric vehicle charging infrastructure for transit systems, electric vehicle fleets as well as public, workplace, and residential applications. Clients include vehicle fleets, regional transportation planning agencies, utilities, ports, school districts, universities, and other organizations. For much of the past three decades, Mike has worked at the intersection of transportation and sustainability for market-leading consulting firms and large public agencies including King County Metro Transit where he developed the agency's award-winning Sustainability Program.

EDUCATION

MA, Urban Planning,
University of Washington

BA, Environmental Studies,
University of Vermont

REGISTRATION

American Institute of
Certified Planners, No. 012577

SELECT EXPERIENCE

Lawrence Berkeley National Laboratory Fleet Electrification, CA Mike is overseeing Berkeley Lab's fleet electrification planning efforts to replace existing vehicles with electric vehicles and install charging infrastructure at strategic locations on Berkeley Lab's campus.

Calaveras COG EV Charging Infrastructure Implementation Plan, CA Mike is overseeing development of an electric vehicle transition plan for the County's and City of Angels Camp's fleets across multiple facilities. The project involves prioritizing charging infrastructure installation locations and specifying the quantity and types of charging stations to address both the County and City fleets' vehicle energy and operational needs.

Nevada County ZEV Transition Plan, CA Mike is DKS' technical lead for the Nevada County Zero Emission Vehicle Transition Plan that will provide a roadmap for supporting required fleet modifications to meet State requirements over the next 20 years and provide efficient implementation of necessary alternative fuel solutions at County facilities for the County's fleet, as well as providing charging infrastructure for use by staff and the public.

Ava Community Energy Fleet Electrification Study, CA Mike leads DKS's efforts to recommend appropriate charging strategies for the cities of Berkeley, Oakland, Dublin, Albany, Hayward, Emeryville, Livermore, Newark, Piedmont, Pleasanton, Tracy, Union City, San Leandro, and Alameda County California. Following promulgation of California's Advanced Clean Fleets rule, this project was expanded to include electrification each of these fleets' medium- and heavy-duty vehicles as well as numerous private sector medium- and heavy-duty vehicles including Wyse Logistics drayage fleet, Mutual Express' bulk freight shippers, Vulcan Materials redi-mix concrete fleet, and many others. This project includes estimation of fleet electrical load calculations and associated charging infrastructure requirements, as well as cost estimates for infrastructure upgrades at each fleet facility. This evaluation also recommends innovations such as dynamic load management, charger sharing, mobile chargers, and other technologies.

City of Redding Fleet Electrification, CA Mike oversaw Redding's zero-emission vehicle fleet and infrastructure transition plan. The plan included a phased implementation strategy for charging and refueling infrastructure for battery-electric and hydrogen fuel cell vehicles at over a dozen City-owned facilities.

Antioch ZEV Assessment, CA Mike assisted the City of Antioch evaluate its vehicle fleet and facilities for conversion to electric vehicles. As leading charging subject matter expert, Mike advised the City on electric vehicle selection, charging strategy determination and charger selection and assisted with infrastructure installation design and identification of grant funding opportunities and other implementation actions.

South San Francisco Electric Vehicle Charging Master Plan, CA Mike helped the City of Antioch in evaluating its vehicle fleet and facilities for conversion to electric vehicles. As leading charging subject matter expert, Mike advised the City on electric vehicle selection, charging strategy determination and charger selection, and assisted with infrastructure installation design and identification of grant funding opportunities and other implementation actions.

City of Fremont Fleet Electrification Study, CA Mike's role on this project was to oversee evaluation of the fleet's existing energy demands and project the future energy requirements of an electrified fleet by conducting a systematic assessment of all current City-operated vehicles based on a detailed review of vehicle inventories provided by each departmental unit that operates vehicles.

City of Seattle Electric Vehicle Supply Equipment Systemwide Assessment, WA Mike evaluated Seattle's existing facilities, conducted internal stakeholder engagement, assessed the EV market and charging technology, evaluated facility electric load capacity, and recommended load management alternatives.

City of Bellevue Green Fleet Strategy, WA Mike led development of Bellevue's Green Fleet Strategy to replace the City's existing vehicle fleet with electric vehicles. This involved engaging stakeholders on department operations, conducting a right-sizing analysis, identifying market-ready EVs to replace existing ICE-powered fleet vehicles, and planning for EV infrastructure needs at key City-owned buildings as well as a multi-year implementation strategy.

City of Spokane Green Fleet Plan, WA Mike led development of an EV charging infrastructure plan for Spokane's 1,600-unit vehicle fleet. The project resulted in a site-by-site plan for charging stations, recommended charging strategy, estimated project cost per fleet facility, and implementation phasing timeline for charging system installation with an on-line dashboard.

STEFFEN COENEN

DEPUTY PROJECT MANAGER

Steffen is a transportation electrification and decarbonization subject matter expert and data scientist. Steffen leads development of DKS's analytical tools for EV charging, specializing in technically challenging electrification use cases such as charging large fleets of heavy-duty specialized EVs with on-site power constraints, developing models for predicting EV adoption, charger utilization, and charging site selection prioritization. Originally from Germany with two degrees in physics, he has exceptionally strong quantitative and data analytical skills. He also has a Master's degree in Transportation Engineering from the University of Washington in Seattle where he studied electric vehicle adoption patterns and supported state-level charging infrastructure planning for WSDOT. He is experienced in data analysis, EV charging infrastructure planning, and carbon emission assessments, and is passionate about the overall need to decarbonize the transportation sector and how that challenge intersects with the energy sector.

EDUCATION

MS, Transportation Engineering,
University of Washington

MS, Physics,
RWTH Aachen University

BS, Physics,
RWTH Aachen University

SELECT EXPERIENCE

EV Transition Planning for King County Fleet Services Division, WA Through this project, DKS is providing the County with a clear and actionable plan for transitioning its fleet of more than 4,000 vehicles to zero emissions in an effort to comply with one of the most ambitious fleet electrification County ordinances in the country. Steffen is serving as task lead for multiple parts of this project including, but not limited to, a market analysis of available battery-electric and fuel cell electric vehicles, a vehicle replacement plan in line with the County's targets and many other priorities and constraints, and an in-depth financial analysis of the costs for full fleet transition.

EVSE Engineering Services for King County Solid Waste Division, WA Steffen serves as the lead fleet analyst for an assessment of King County's Solid Waste Division's fleet for a transition to zero-emission vehicles and adequate installation of charging infrastructure. In particular, this project and his work focus on transitioning the agency's Class 8 heavy-duty waste-hauling semi trucks, which have unique energy and charging requirements due to their 30,000+ mi annual duty cycle and anticipated battery sizes.

Shasta County Fleet Transition Plan, CA Steffen supports this planning effort by evaluating fleet charging needs at various fleet facilities and proposed future charging hubs to serve the transition of Shasta County's fleet of more than 500 vehicles to zero emissions. Challenging aspects of this project include the provision of large amounts of power at currently undeveloped sites and facilities without sufficient electrical infrastructure as well as optimizing locations of and charging stations at charging hubs that will serve multiple dozens of vehicles each.

Ava Community Energy Municipal Fleet Electrification, CA DKS is currently tasked with a multi-year fleet electrification project for Ava (formerly East Bay) Community Energy, a Community Choice Aggregator, planning the conversion of private- and public-sector, medium- and heavy-duty vehicle fleets to battery electric operation. The project aims to convert dozens of fleets in alignment with California's Advanced Clean Fleets (ACF) regulation. Steffen supports the CCA's efforts to design rates tailored to the charging needs of medium- and heavy-duty vehicle fleets that balance the need to reflect costs while incentivizing EV adoption by offering the potential for operational cost savings to fleet operators in Ava's service territory.

Nevada County ZEV Transition Plans, CA This project aimed at providing a comprehensive transition plan for Nevada County's fleet of more than 400 vehicles, including many medium- and heavy-duty vehicles such as multi-axle trucks, water and sander trucks, and cargo vans, toward electric and hydrogen fuel cell vehicles. Steffen led the analysis of appropriate charging infrastructure, including quantifying required charging stations by type, power output, and location. He also assessed anticipated operations and maintenance costs at the more than a dozen County facilities in Grass Valley, Nevada City, and Truckee. Finally, he provided the County's transit agency (Nevada County Connects) with guidance on charging schedules and load profiles based on a spatiotemporal analysis of select transit bus routes, energy requirements, and dwell times.

City of San Jose Fleet Electrification, CA DKS is currently working with the San José on a citywide fleet electrification plan that assesses six fleet domiciles and, in addition, considers up to 15 community sites for public and employee charging. Steffen serves as the task lead to systematically identify the most suitable of these locations based on various prioritization criteria. He also supports the development of an optimized charging strategy for the City's more than 450 fleet assets by evaluating their energy needs and the feasibility of multiple DC fast charging hubs distributed across the City.

Orange County Waste; Recycling Clean Fleet Replacement Plan, CA In this project, DKS evaluates necessary charging infrastructure and operations for the County's future all-electric Waste; Recycling fleet, which includes various vehicle types such as stakebed, dump, and water trucks with challenging duty cycles. Steffen leads the development of an optimal charging strategy that minimizes agency investment through sharing of charging stations.

DAVE TOKARSKI

SENIOR TRANSPORTATION PLANNER

Dave is a senior transportation planner with 26 years of experience at DKS. He has managed a wide range of transportation planning projects. He specializes in Geographic Information Systems (GIS) applications, Electric Vehicle charger planning, environmental analysis, impact analyses, and travel demand forecasting. Dave led the development of DKS's EV charger siting optimizer model based on his extensive experience developing detailed GIS parcel maps linked to land use databases and his work updating travel demand models.

EDUCATION

MS, Civil and Environmental Engineering, California Polytechnic State University, San Luis Obispo

BS, City and Regional Planning, California Polytechnic State University, San Luis Obispo

SELECT EXPERIENCE

San Joaquin COG Alternative Fuels Vision Plan, CA Project Manager, Dave is working with the San Joaquin Council of Governments (SJCOG) to create an Alternative Fuels Vision Plan (AFVP) to evaluate connection gaps of both EV and alternative fueling locations in the regional transportation system. This study assesses the existing conditions and needs of the region's alternative fuels network to better inform the infrastructure needs in the county, as well as provide insight on where public charging and fueling stations should be sited or prioritized.

MCTC ZEV Readiness Plan, CA Dave is providing technical expertise and support for this county-wide plan that assesses the existing ZEV infrastructure environment, recommends infrastructure improvements and investments, identifies implementation strategies and policies to promote ZEV infrastructure adoption in the short- and long-term. It also identifies key community challenges and barriers to advancement, and provides stakeholders with tools to procure, site and install various ZEV infrastructure.

East Bay Community Energy (EBCE) Municipal Fleet Electrification Study, CA Dave prepared shortest path travel analysis for approximately 25 of Alameda County's fleet domicile locations. This analysis was used to identify proximity between potential charging locations and identify potential service overlaps. This analysis helped the County's fleet managers select the most cost-effective charging sites and eliminate less cost-effective locations, resulting in a 30% cost savings.

Transitioning Metro Non-Bus Fleets to Zero Emissions Feasibility Study, WA Dave provided his GIS expertise by analyzing King County socioeconomic data to prioritize County-owned Park and Rides for EV charger installation. Dave has produced a series of maps and associated data files that identify which facilities to install chargers based on the County's Mobility Framework addressing racial, economic, linguistic and environmental justice disparities.

OWEN WANG, EIT

ENGINEERING/ASSOCIATE PLANNER

Owen applies his electrical engineering background and transportation design experience to fleet electrification projects. On most of DKS's fleet electrification projects, Owen takes the lead role in performing the charging analysis including evaluation of multiple potential charging strategies, evaluating fleet facilities for electrical capacity, conducting site visits, estimating project costs, and developing fleet implementation strategies for charging infrastructure deployment by phase. Owen also has experience coordinating with utility providers such as PSE, SCL, SnoPUD, and PG&E to provide electrical infrastructure needs and utility service upgrades.

EDUCATION

BS, Electrical Engineering,
University of Washington

REGISTRATIONS

Washington
Engineer in Training

SELECT EXPERIENCE

AVA Community Energy Municipal Fleet Electrification Studies, CA DKS is helping determine the vehicle energy requirements and charging needs for the municipal fleets for every city in Alameda County. During the first phase of this project, we completed fleet electrification planning for Oakland, Berkeley, Dublin and Albany, Hayward, and Alameda County, California. We currently work on fleet analysis and facilities electrification planning for Emeryville, Livermore, Newark, Piedmont, Pleasanton, Tracy, Union City, and San Leandro. This work included estimating fleet electrical load calculations, associated charging infrastructure requirements, and cost evaluations for infrastructure upgrades at each fleet facility. This evaluation included recommended innovations such as dynamic load management, public charger sharing, mobile chargers, and other technologies. For this project, Owen assisted with the electrical as-builts review, load calculations, and charger analysis for the cities of San Leandro and Emeryville. In the current project phase, Owen is evaluating the charging needs of medium- and heavy-duty vehicles in compliance with the Advanced Clean Fleets rule.

Redding ZEV Fleet Plan, Redding, CA DKS is working on the City of Redding's Fleet Replacement and Infrastructure plan that will guide the City of Redding, CA in complying with federal and state regulatory obligations and support the conversion of the City's fleet to zero-emission vehicles. The plan will include a blueprint for a fueling network sufficient to maintain fleet readiness and responsiveness and that will be able to grow as additional zero-emission vehicles (ZEVs) are added to the fleet. The Plan will accommodate the conversion of the existing and additional fleet vehicles needed through the 2035 planning horizon. Owen's role and responsibilities on this project include reviewing as-built drawings to determine existing electrical infrastructure, analyzing fleet data and recommending charging scenarios, and providing planning-level cost estimates for the EVSE equipment and installation.

Snohomish County Public Utility District Fleet Transition Planning, WA DKS is providing fleet electrification planning on behalf of SnoPUD to 7 Public agencies including Lynnwood, Everett, the Port of Everett, Snohomish County, SnoPUD's own fleet, and others. Owen is conducting site visits and providing EV charging recommendations and cost estimates for over 50 sites across the County. As the project's lead electromobility engineer, Owen is also tasked with coordinating with the client and presenting findings and recommendations during project check-in meetings with the client.

Kirkland Fleet Electrification, WA The City of Kirkland is in the planning phases of developing a municipal fleet conversion to electrification. DKS is working alongside the City to evaluate the fleet for electrification and determine which vehicles can be replaced by EVs. DKS will also be performing a needs assessment for the anticipated electrical energy needs, evaluating the feasibility of charging locations and evaluating charging strategies. Owen conducted site visits and as-builts reviews for this project to determine existing facility conditions. He also helped draft the existing conditions memo, which summarized the findings from site visits and as-builts review. Lastly, Owen was one of the main contributors to the final report document which totaled over 100 pages and summarizes all the findings and recommendations developed from the study.

THOMAS PADDON, PMP

FLEET ELECTRIFICATION

Thomas joined Frontier in 2021 to manage fleet transition planning and vehicle electrification projects. He has more than six years of experience in developing vehicle electrification strategies and roadmaps, and fleet transition plans with a focus on ZEV programs for disadvantaged communities. He develops economic and total cost of ownership (TCO) models, digital dashboards, visualizations, and interactive planning tools. Thomas has a master's in management from the University of Redlands and is a certified Program Management Professional (PMP).

EDUCATION

MA, Management,
University of Redlands

BA, French/International Business,
University of South Florida

REGISTRATIONS

PMP, Certified Project Management Professional Commercial

Instrument-rated SEL Pilot

SELECT EXPERIENCE

AVA Community Energy Fleet Transition Planning Program, CA
Thomas was both the program manager and project manager for each fleet assessment. During the first phase of this project, we completed light-duty fleet transition plans for Berkeley, Emeryville, Hayward, Livermore, Oakland, Piedmont, Pleasanton, San Leandro, Tracy, and Union City with the help of the DKS team. A year later we followed that up with an evaluation of these municipalities' medium- and heavy-duty fleets. Thomas managed the data collection and analysis, developing energy demand profiles, fleet replacement schedules and then publishing our findings on interactive digital dashboards. Thomas also managed a digital marketing outreach campaign to obtain leads for the program.

City of Roseville Fleet Transition, CA Planning Thomas was the project manager for this project. This assessment included Roseville Utility vehicles that required a comprehensive duty cycle analysis. Thomas prepared the TCO analysis and with the EVSE recommendations from DKS, created a digital dashboard with interactive visualizations to display the results.

California Air Resources Board Zero Emission Freight Facilities and Truck Demonstrations, CA

- Co-managed $30.8M fleet electrification project for Frito-Lay/Pepsi to deploy electric and CNG vehicles and an RNG fueling station in Modesto.
- Managed $12.9M CARB fleet pilot project for Aramark to deploy 21 Class 5 electric step vans and charging stations in the San Joaquin Valley.
- Managed $6.7M CARB fleet pilot project for USPS to deploy 15 Class 4 electric step vans in the San Joaquin Valley.

San Joaquin County Council of Governments ZEV Blueprint, CA

- Forecast deployment of battery and fuel cell electric vehicles through 2040.
- Identify barriers and opportunities to speed deployment and adoption of ZEVs.
- Identify opportunities for green hydrogen production.

Snohomish Public Utility District Fleet Transition Planning Program, WA Thomas was both the program manager and project manager for each fleet assessment. We completed full fleet transition plans for Lynnwood, Port of Everett, City of Everett, and Snohomish County with the help of the DKS team. Thomas managed the data collection and analysis, developing energy demand profiles, fleet replacement schedules and then publishing our findings on interactive digital dashboards.

Municipal Fleet Transition Planning Projects: Pacific Northwest

- City of Davis, CA
- City of Elk Grove, CA
- City of Spokane, WA
- City of Duluth, MN
- City of Roseville, CA
- City of Hayward, CA
- City of Antioch, CA
- City of San Jose, CA
- East Bay Municipal Utility District, CA

DAVID PARK

INDUSTRY AFFAIRS DIRECTOR, HYDROGEN SUBJECT MATTER EXPERT

David Park has a long record of supporting sustainable transportation to improve air quality and mitigate global climate change. As an expert on emerging advanced transportation infrastructure and drivetrains, David has a comprehensive understanding of the economic, technical, and environmental issues of diverse alternative transportation technologies. He has provided strategic analysis of the state of technology to inform air pollution regulatory policy to numerous state and national jurisdictions and has advised various public and private sector clients on the integration of alternative transportation technologies into the existing framework.

EDUCATION

MS, Environmental Health Sciences, Harvard University of School of Public Health, Boston, MA

BS, Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY

PROFESSIONAL AFFILIATIONS

New York State Registered Engineer in Training

Air and Waste Management Association

Harvard Alumni Association

Rensselaer Polytechnic Institute Alumni Association

SELECT EXPERIENCE

Hydrogen Fuel Cell Partnership, CA

- Facilitate the implementation of fuel cell vehicle (FCEV) and fuel cell bus (FCEB) fleet programs through interfacing and advising with stakeholders, vehicle and station operators, and regulatory agencies such as CARB, CEC, US EPA, US DOE, US DOT FTA, and relevant codes and standards community.
- Led and managed the H2FCP Working Group, Automaker OEM Working Group, and Medium-duty/Heavy-duty Fuel Cell Electric Truck Group to complete action items and task force deliverables.
- Organize and lead renewable hydrogen production and regulation development initiatives in collaboration with the California Air Resources Board, U.S. Department of Energy, and H2FCP hydrogen production industry members.
- Establish a solid knowledge base on fuel cell technology advancements, hydrogen production, transportation, and station and vehicle storage strategies. Regularly attend fuel cell and hydrogen conferences to monitor and report industry advancements and best practices.
- Educate and communicate with key stakeholders and industry experts on lessons learned and best practices for implementing hydrogen refueling stations.

Air Pollution Specialist, California Air Resources Board, CA (Prior Experience)

- Carl Moyer Funding Program Grantor.
- Zero-emission mobile source regulation developer associated with the SIP strategy and greenhouse gas reduction policies.

Director of Air Pollution Policy Practice, Alta Environmental, CA (Prior Experience)

- Sustainability practice manager including total corporate sustainability reporting and specific technical sustainability initiatives with a focus on energy.
- Corporate strategic analyst and advisor to heavy-duty truck OEMs and end-users, specific to renewable and alternative transportation fuels.

ARI SANJAR

SENIOR PROGRAM COORDINATOR

Ari Sanjar brings a passion for sustainability and a background in policy analysis, community engagement, and data analysis to her work at Frontier, where she supports EV fleet transition planning, workforce training, and planning for public charging stations for multiple clients. Previously, she worked as an Energy Policy Analyst for INTEK in Virginia.

EDUCATION

BS, Environmental Science & Policy, University of Maryland

SELECT EXPERIENCE

City of Redding EV Transition, CA Ari supported data collection and fleet analysis activities to develop an energy demand profile. She also assisted in writing technical memos and presented findings to the client. Ari helped identify funding opportunities and regulatory changes that affected the fleet transition and incorporated this information into the analysis.

AVA Community Energy EV Fleet Technical Assistance Program, CA Ari coordinated the outreach program and conducted onboarding activities for Ava's evFleet Technical Assistance Program. Ari also has helped prepare interactive data visualizations for the fleet transition assessments and edited the digital dashboards for municipality clients such as Berkeley and Hayward with the EVSE recommendations from DKS.

Anaheim Public Utilities EV Concierge Service, CA Ari supported outreach to property owners and fleet operators in APU service territory and conducted intake calls. She then collected and analyzed fleet data to develop energy demand profiles for various sites and helped to prepare memo deliverables for each fleet.

City of Angels Camp/Calaveras County EV Transition, CA Ari collected and cleaned fleet inventory data as well as supported the analysis for each fleet to develop their energy demand profiles. She also helped develop deliverables and presented the results of the assessment. Ari assisted in identifying funding opportunities and regulatory changes that affected the fleet transition and incorporated this information into the analysis.

EXCEPTIONS, OBJECTIONS & REQUESTED CHANGES

DKS respectfully requests the following changes:

On Page 5, Section K

- Delete the reference to “defend” in line 2
- Delete “and agents” in line 3
- Add “third party:” before losses in line 4
- Add “reasonable” in front of attorney’s fees in line 5
- For the second paragraph, delete “defend” and add “third party:” before liability. Also add “negligent” before performance.

INSURANCE STANDARD REQUIREMENTS

DKS and Frontier can meet the standard insurance requirements. DKS and Frontier do not have any stated exceptions.

OTHER REQUIREMENTS

DKS and Frontier have reviewed the other requirements on pages 7 and 8 of the RFP. DKS and Frontier agree to comply with the stated requirements.

DKS AFFIRMATIVE POLICY

DKS AN EQUAL OPPORTUNITY EMPLOYER

DKS Associates is an equal opportunity employer and makes employment decisions on the basis of merit. We want to have the best available employee in each position. Company policy prohibits unlawful discrimination based on race, sex (including pregnancy, perceived pregnancy, childbirth, breastfeeding, and related medical conditions), color, religious creed (including religious dress and grooming practices), gender, gender identity, gender expression, transitioning, religion, national origin (including language use restrictions), marital status, familial status, registered domestic partner status, age, national origin or ancestry, physical or mental disability (including HIV/AIDS), medical condition including cancer and genetic characteristics, genetic information, sexual orientation, veteran/military status, political ideology or any other characteristic protected by applicable federal, state, or local laws. DKS also prohibits unlawful discrimination based on the perception that anyone has any of these characteristics, or is associated with a person who has or is perceived as having any of these characteristics.

The Company is committed to compliance with all applicable laws providing equal employment opportunities. This policy applies to all persons involved in the operation of the Company and prohibits unlawful discrimination by any employee of the Company, including supervisors and managers, as well as vendors, clients, independent contractors and any other persons.

To comply with applicable laws ensuring equal employment opportunities to qualified individuals with a disability, the Company will make reasonable accommodations for the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or an employee unless such an accommodation would be an undue hardship to DKS.

If you require an accommodation in order to perform the essential functions of your job, you should contact Human Resources to discuss the need for an accommodation. The Company will engage in an interactive process with you to identify possible accommodations, if any, which will help you perform the job. If the accommodation is reasonable and will not impose an undue hardship, the Company will make the accommodation. Similarly, an applicant or employee who requires an accommodation of a religious belief or practice (including religious dress and grooming practices, such as religious clothing or hairstyles) should contact Human Resources to discuss their need.

If you believe you have been subjected to discrimination in violation of this policy, you should immediately notify your supervisor, Office Manager or Human Resources. Supervisors and Office Managers who receive complaints of discrimination must report the complaint to Human Resources immediately. It would be best to communicate your complaint in writing, but this is not mandatory. Your complaint should be specific and should include the names of the individuals involved and the names of any witnesses. In response to a complaint, DKS will undertake a fair, timely, thorough, and effective investigation conducted by qualified personnel. The investigation will provide all parties with appropriate due process and will result in reasonable conclusions based on the evidence collected. DKS will maintain confidentiality to the extent possible, but the investigation may not be completely confidential if necessary to conduct a thorough investigation. DKS will keep the complainant updated on the progress of the investigation and will notify the complainant of the conclusion of the investigation.

DKS AFFIRMATIVE POLICY - CONTINUED

If the Company determines that a violation of this policy has occurred, the Company will take effective remedial action. DKS prohibits retaliation against any person who complains in good faith of discrimination or participates in good faith in the investigation of possible discrimination. Any employee engaging in retaliation in violation of this policy will be subject to discipline up to and including termination of employment.