Increasing Nationwide ZEV Adoption – Enhanced Joint Procurement Process for Public Fleets

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Annual Merit Review Meeting
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Project ID: TI076

EV Smart Fleets

This presentation does not contain any proprietary, confidential, or otherwise restricted information

Overview

Timeline

- Start: March 2016
- End: March 2018
- Percent Complete 40%

Budget

- Total $1,545,081
  - DOE $1,199,076
  - Cost Share $346,005
- Funding spent $503,000
- Cost share $120,000
- As of 3/31/2017

Barriers Addressed

- Support Pioneering Deployments of Market-Ready Vehicles and Alternative Fuels in Key Early Markets
- Provide Best Practices, Objective Data, and Informational Materials to Potential End-Users and Investors to Promote Acceptance of Advanced Vehicles and Alternative Fuels

Partners

- CA Dept. of General Services
- NESCAUM
- Georgetown Climate Center
- Atlas Public Policy
- Ross Strategic
- 9 Clean Cities Coalitions

Project Objectives

Multi-state ZEV procurement for public fleets

Develop a replicable procurement model that will secure public fleets access to a wider range of ZEV models with purchase price reduction and improved access to charging

- *Execute multi-stakeholder outreach & engagement (Year 1)*
- *Understand critical procurement barriers and evaluate fleet purchases (Year 1)*
- *Establish mechanism for competitive aggregated ZEV purchasing (Year 2)*
- *Develop flexible and multi-state ZEV procurement process (Year 2)*
- *Roll out program solicitation (Year 2)*

Supports DOE Vehicle Technology Development

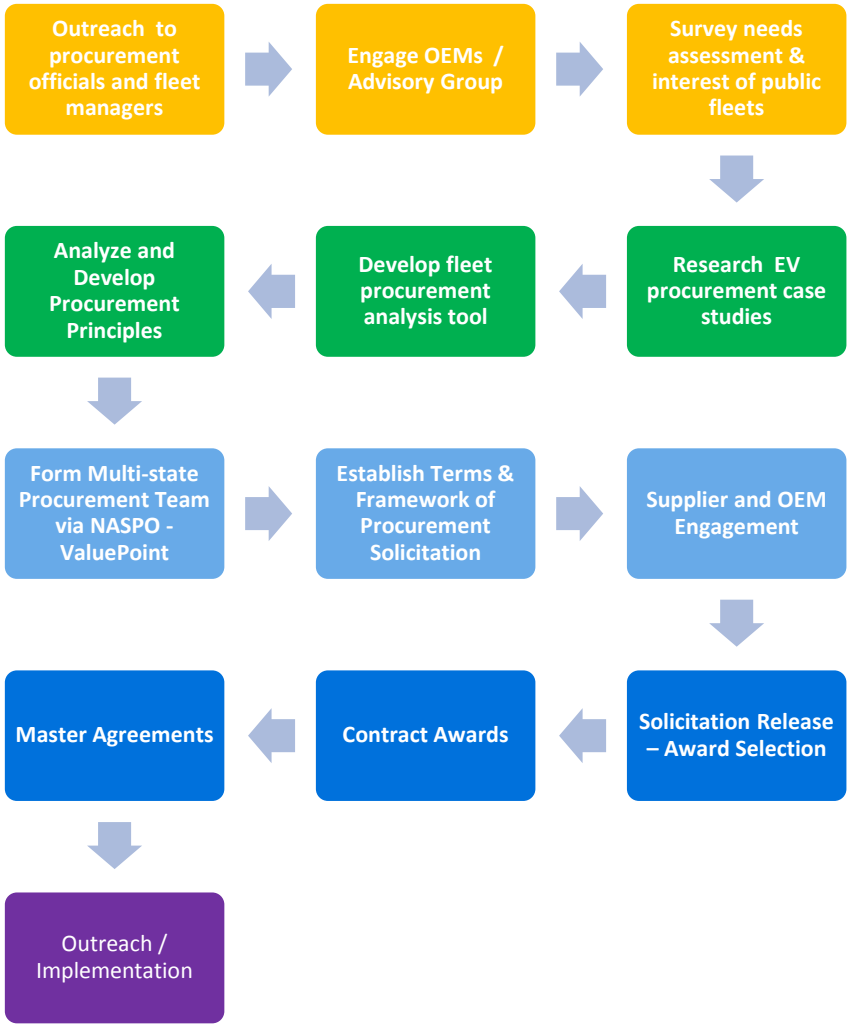
Project Supports EERE Goal 1 “Accelerate the Development and Adoption of Sustainable Transportation Technologies” through pathway (2) “Replacing conventional fuels with cost-competitive, domestically produced, sustainable alternatives (alternative fuels) that reduce pollution.

Project Tasks and Approach

- Task 1: Project Management
- Task 2: Fleet Procurement Network Building & Primary Stakeholder Engagement
- Task 3: Analysis and Development of Procurement Principals
- Task 4/5: Development of Procurement Solicitation
- Task 6: Procurement Agreement Implementation
- Task 7: Final Report

Budget Period 1

Budget Period 2



Milestones

BP1 Milestones	Type	Description	
Automaker Advisory Group Established	Technical	An Automaker Advisory Group is established to provide input and inform the multi-state ZEV procurement process and provide connection to dealership networks in the 16 project states.	√
Purchase Inducement Tools Identified	Technical	The appropriate purchase inducement tools (such as access to charging, access to leasing and financing options, and policy incentives) to use are identified	√
Projected Volume of ZEV Purchases and Stakeholder Interest	Go/No Go decision	Use analytical tools and survey responses to develop an assessment of the projected volume of ZEV purchases and stakeholder interest	√

BP2 Milestones	Type	Description
Multi-state ZEV Request For Proposal	Technical	Multi-state ZEV procurement contract solicitation issued
Multi-state ZEV Contract Awarded	Technical	Winning bidders notified and awarded contracts
Outreach/Implementation in ZEV MOU and other states	Technical	Outreach materials and guidance developed

Collaboration & Coordination

CALSTART
calstart.org

California Department of General Services
dgs.ca.gov

Northeast States for Coordinated Air Use Management
nescaum.org

Atlas Public Policy
atlaspolicy.com

Georgetown Climate Center
georgetownclimate.org

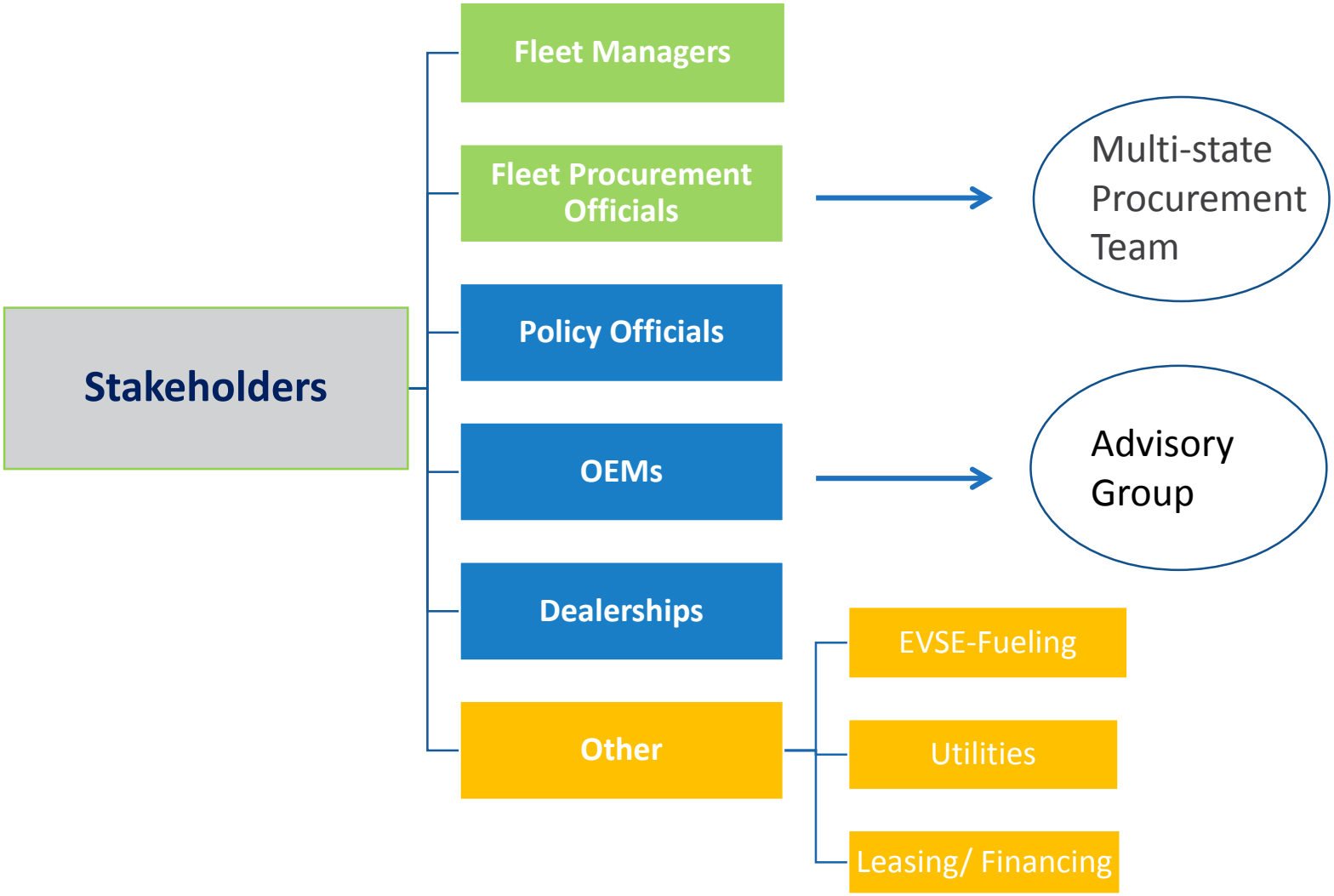
Ross Strategic
rossstrategic.com

- ***Regular biweekly team meetings***
- ***Collaboration site on SharePoint***
- ***Quarterly calls / meetings with CCC***

Collaboration & Coordination

CALSTART	California DGS	NESCAUM	Georgetown	Ross	Atlas Public Policy	*9 Clean Cities*
•*Prime* •*OEM Advisory* •*West Coast (CA, UT, CO)* •*Support Research*	•Lead Procurement Process •with NASPO ValuePoint	•*East Coast* ZEV MOU (CT, MD, MA, NY, RI, VT) •Outreach •Dealerships •Support Research	•*TCI remainder* (DE, DC, ME, NH, NJ, PA) •Engagement •Fleet Survey •Support Research	•*PCC States* (OR, WA) •State Outreach •Support Analysis	•*Analytical Fleet Tool* • *Lead Research* •*Cast Studies*	•*Engage Municipal Fleets*

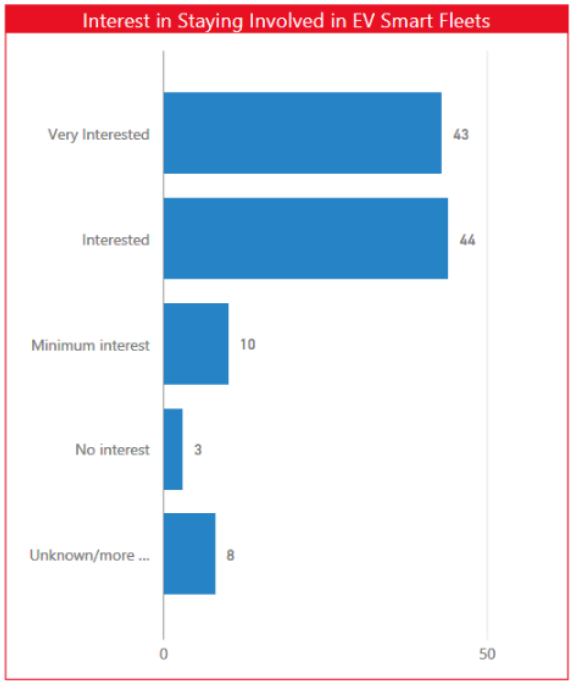
Accomplishments/Progress
Outreach & Engagement

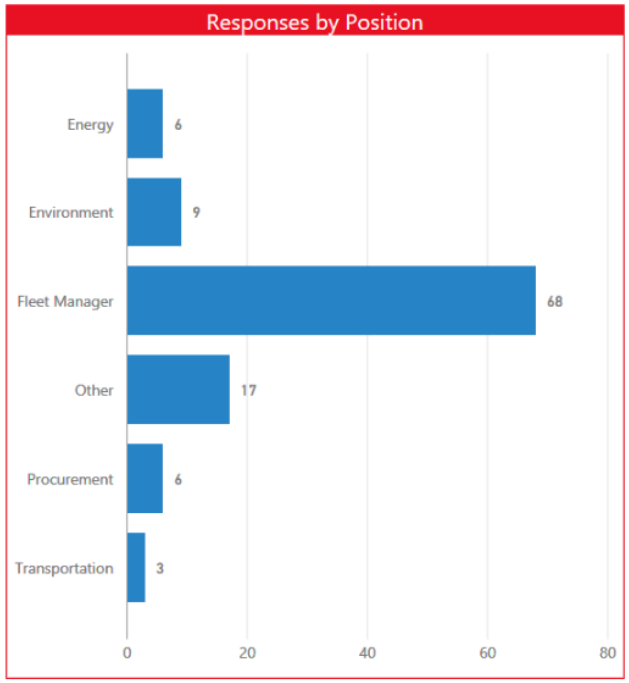


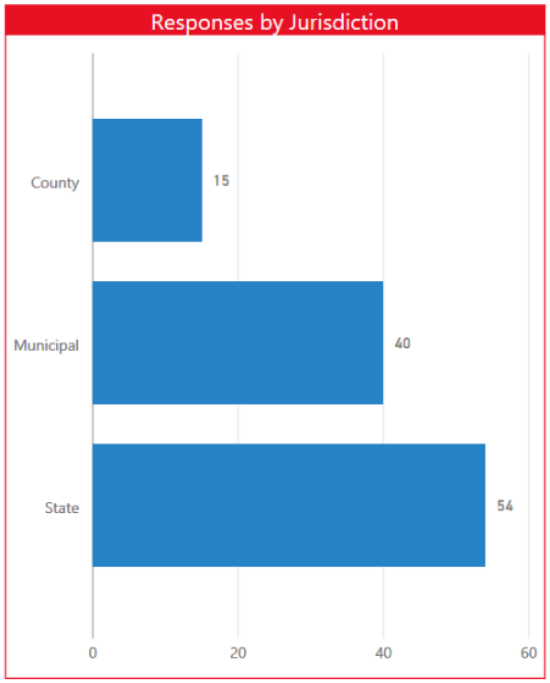
Accomplishments/Progress

Initial Fleet Survey Analysis Dashboard

Survey: EV Smart Fleets website

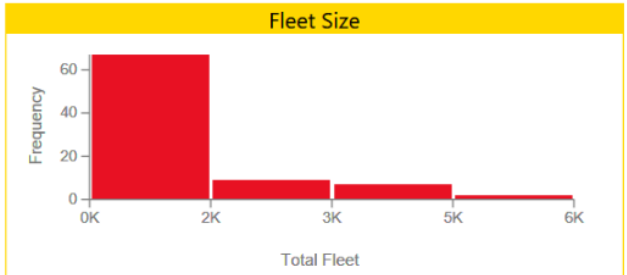


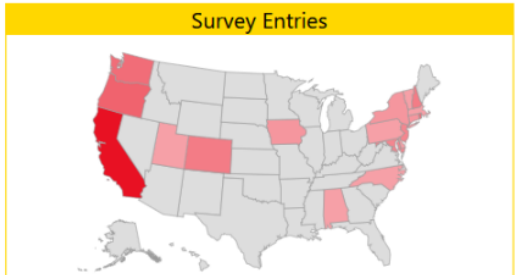




Entries Count	State Count
109	18

This page summarizes the characteristics of the survey respondents and their interest in the initiative.





EIA Region Filter: All

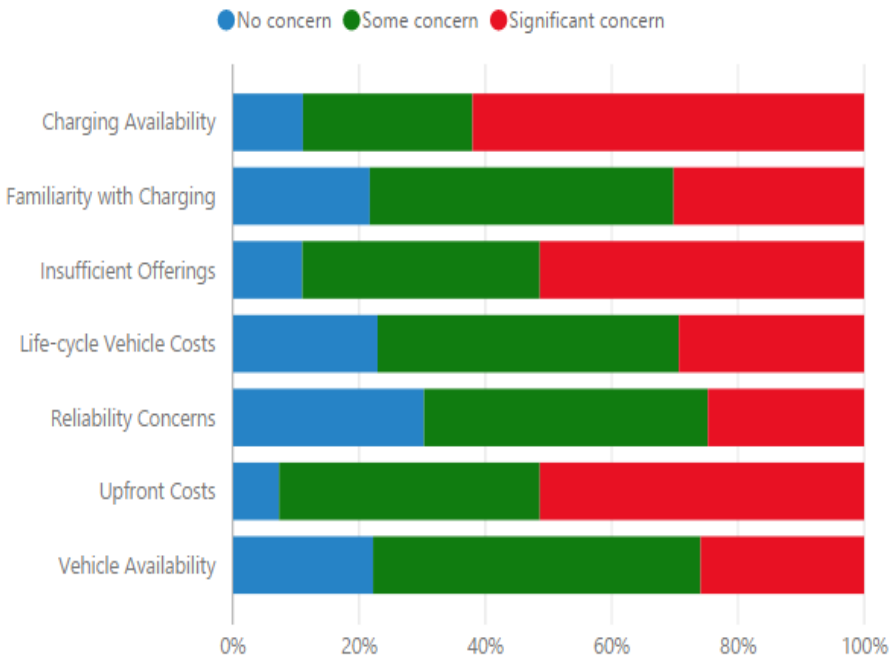
ZEV State Filter: All

Source: http://atlaspolicy.com/evsmartfleets/initial_fleet_survey

Accomplishments/Progress

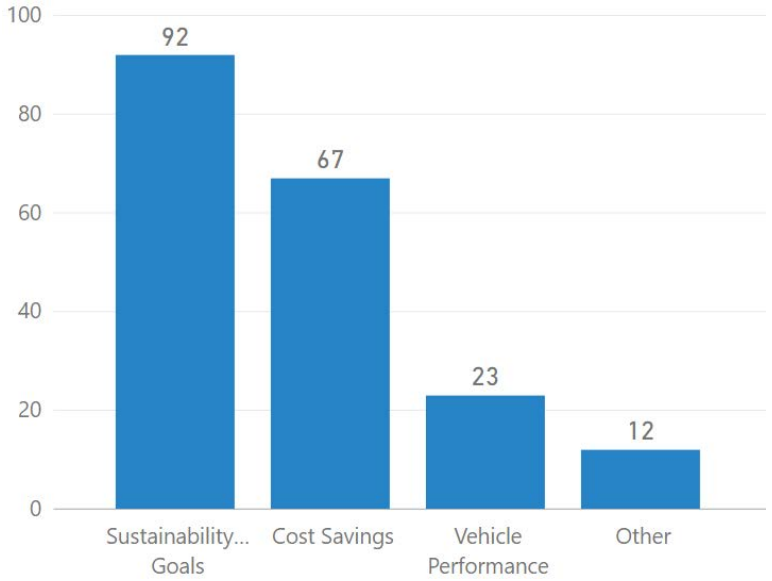
Fleet Survey: Interest in EVs

Barriers to EV adoption



Access to charging / upfront costs / insufficient offerings

Reason for interest in EVs



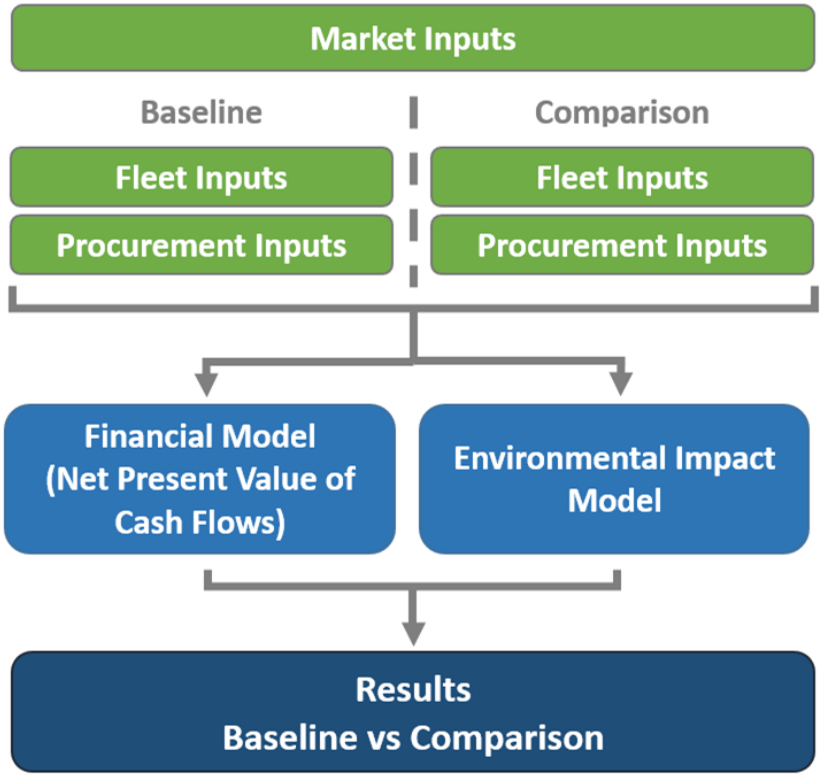
Survey respondents could select more than one reason. Over 90 respondents selected sustainability and/or cost savings as the reason for their interest in EVs.

Accomplishments
Potential Procurement Elements

Procurement Element	Feasibility for Including Element
Encourage capture of federal EV tax credit and all available state EV incentives	• Requires a dealer (or third-party) with tax appetite • Can be captured in a lease or a purchase • Uncertain availability of tax credit may deter bidders • Option in solicitation for bidders to capture if available
Provide flexibility to lease or own vehicles	• State and local fleet ownership practices vary broadly • Ability to lease is dependent on funding sources and policies
Allow fleets to finance vehicles through a third-party	• Many fleets don't have access to low cost financing or don't finance vehicles
Require pricing from the dealer's cost up and seek discounts	• Discounts vary by dealer • Volume discount from Automakers uncertain • Using this pricing methodology may affect bidding pool • Initial feedback from potential bidders will determine if a requirement in solicitation
Solicit bids from networked auto dealers rather than individual auto dealers	• Contract with networked dealers conglomerates can potentially increase chance of capturing tax credit • Vehicle deliveries between dealers is common practice • Need a dealer that can distribute vehicles widely throughout a region

Accomplishments
Fleet Procurement Analysis Tool

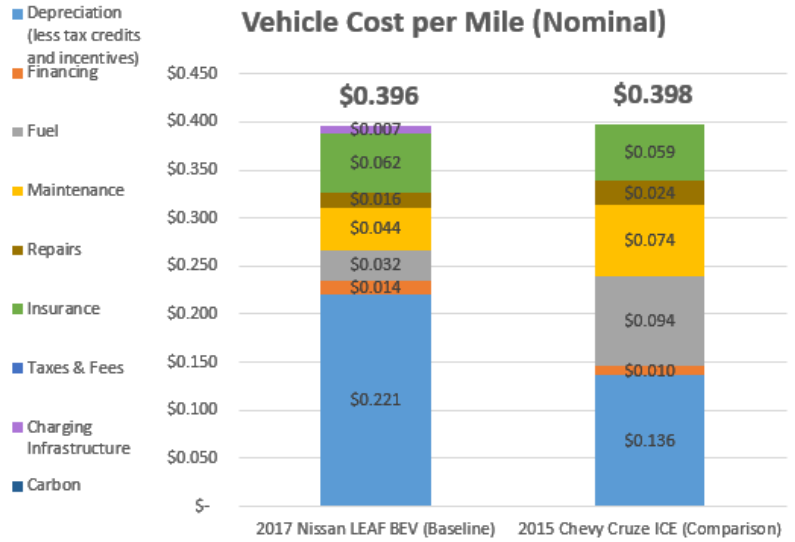
- Total cost of ownership fleet procurement model
  - ✓Evaluates several procurement structures (lease/own)
  - ✓Side by side comparison
- Outputs include
  - ✓procurement summary,
  - ✓societal benefits summary,
  - ✓sensitivity analysis
- Microsoft Excel-based
  - ✓Easy to use,
  - ✓Flexible (export/import inputs)
- Next steps
  - ✓Address feedback from fleet managers - tool design and user experience
  - ✓Tailor user inputs of tool to solicitation



Accomplishments
Fleet Procurement Analysis Tool

Results - Fleet Procurement Analysis Tool

Procurement Summary

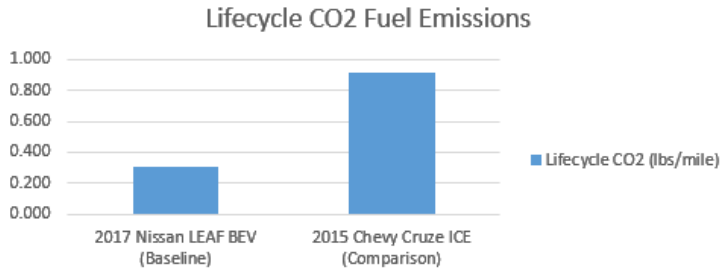


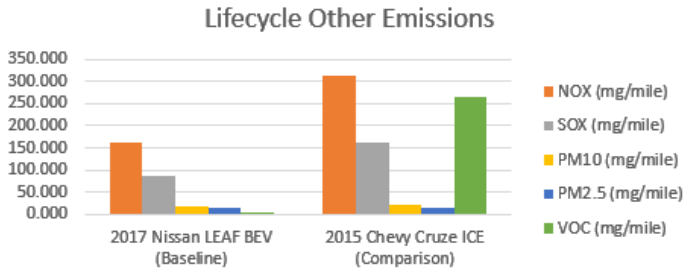
The baseline is 0.48% less expensive than the comparison vehicle

Procurement Details

	2017 Nissan LEAF BEV (Baseline)	2015 Chevy Cruze ICE (Comparison)
Procurement Type	Purchase (Loan)	Purchase (Loan)
Number of Vehicles Procured	10	10
Years of Use/Ownership	7	7
Miles Procured	1,050,000	1,050,000
Total NPV Vehicle and Operating Cost	$ 456,554	$ 389,875
Total Tax Incentives Captured	$ 75,000	$ -
Total Non-Tax Incentive Captured	$ -	$ -
Total Discounts Captured	$ -	$ -
NPV Vehicle Total Cost less Incentives and Discounts	$ 381,554	$ 389,875
NPV Total Cost of Infrastructure	$ 7,716	$ -
Total NPV Cost	**$ 389,269**	**$ 389,875**
Total NPV Cost / Mile	$ 0.371	$ 0.371

Societal Benefit Summary

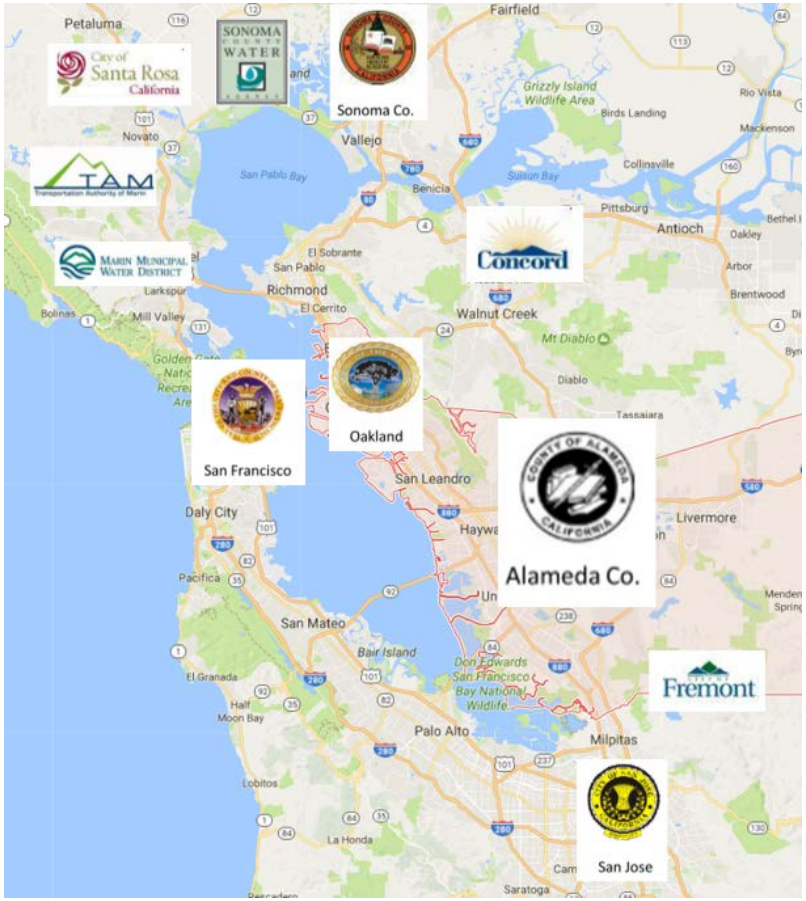




Accomplishments
Case Study – Alameda County

- Alameda led a collective EV purchase of 90 EVs for 10 county and municipal public fleets
  - 64 Ford Focus EVs at $31,361 per vehicle
  - 23 Nissan LEAFs for $33,947 per vehicle
  - Also conducted aggregate procurements for EV charging
- Successful bids from local vendors for purchase of EVs
- Reduced administrative costs of vehicle purchases for participating fleets
- Winning bidder included full value of the federal tax credit

Participating jurisdictions in Local Government EV Fleet Project



Accomplishments
Engagement with Dealerships

Streamline procurement through national conglomerate dealerships and national fleet dealership groups

- Automakers offer additional price discounts to fleets
- Dealerships concerned that EV pricing is a barrier to EV sales
- Leasing not a barrier to the federal tax credit for public sector fleets
- National fleet dealerships can bid on aggregated government solicitations and can drop-ship vehicles to dealers in multiple states
- Feedback that government contracts sometimes have very narrow specifications

Accomplishments
Development of Procurement Solicitation

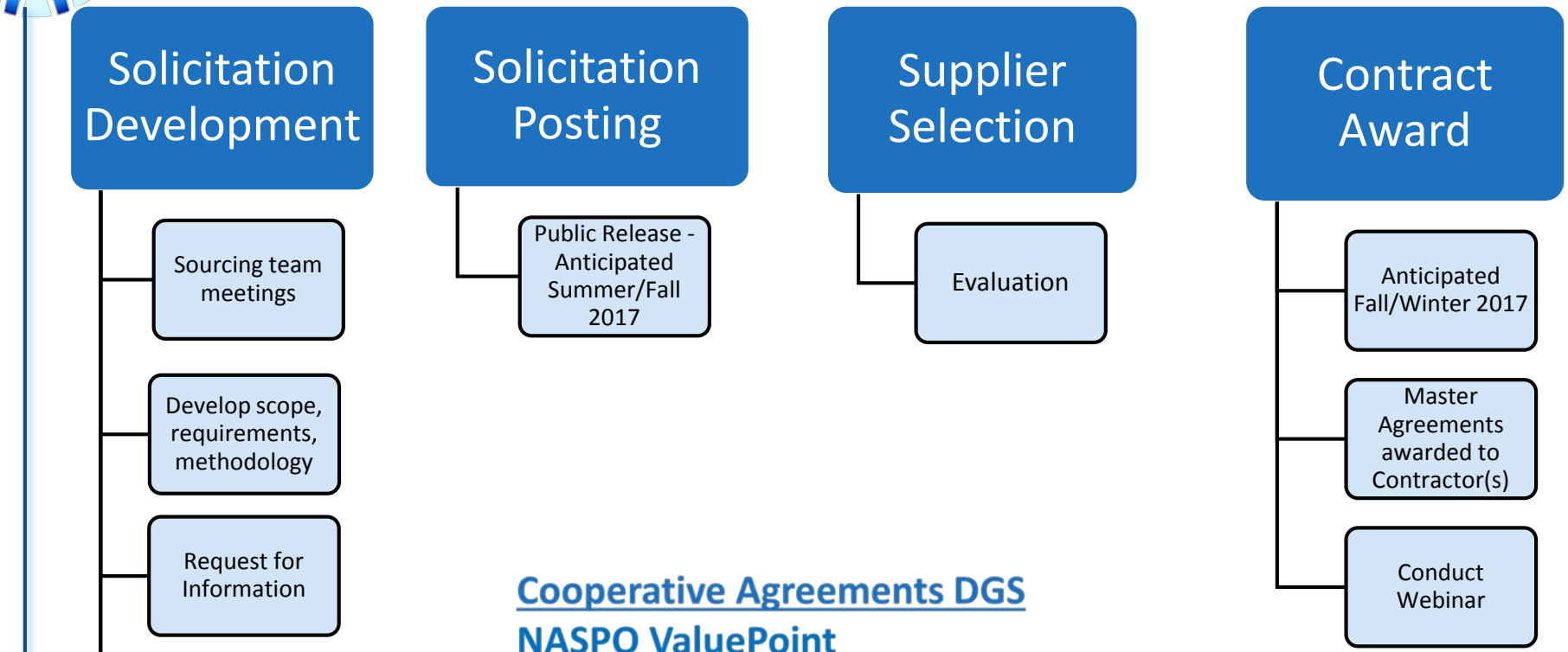
California DGS in cooperation with National Association of Procurement Officials (NASPO ValuePoint)

- Multi-State Procurement Sourcing Team
  - Experienced Procurement and Fleet subject matter experts
  - Includes representatives from 7 states (CA, CO, CT, FL, HI, MN, WA)
  - Additional states have the opportunity to indicate interest in resulting contracts
- Cooperative Purchasing Benefits
  - Lead State model
  - Leveraged volume
  - Reduces procurement and administrative processing
  - Increased competition

What sets NASPO ValuePoint apart from other purchasing cooperatives?

The NASPO ValuePoint purchasing cooperative program is led by State Procurement Officers from member States elected by their peers. In contrast to many other purchasing cooperatives, NASPO ValuePoint is considered a "pure" cooperative. A multi-state team of procurement and subject matter experts cooperate in the creation of the solicitation, which is conducted by a lead state, in full compliance with that state's laws and procedures, including public notice requirements. NASPO ValuePoint contracts are among the most successful and highest volume contracts in the US with administrative fees significantly lower than other cooperatives.

Procurement Process Overview

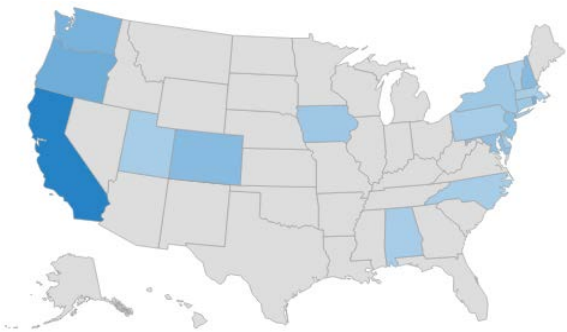


Cooperative Agreements DGS
NASPO ValuePoint

EV Smart Fleets

Market Impact and Sustainability

- Developing a replicable procurement model is the goal:
  - secure government access to a wider range of ZEV models meeting diverse needs of public fleets
  - average vehicle purchase price reduction ~15%
  - improved access to charging/fueling stations (remains a challenge)



- Purchasing agreement will be open to all state, county and municipal governments
- Model can be extended to private fleets
- Developed contracts will be in affect beyond project period of performance

Next Steps

Summer/ Fall 2016
- Outreach and needs assessment
- Formation of Automaker Advisory Group

Fall/Winter 2016/ 2017
- Analysis & Development of Procurement Principals

Spring 2017
- Development of solicitation

Summer/Fall 2017
- Issuance of solicitation

Fall/Winter 2017/18
- Contract(s) awarded
- Implementation

Summary

Goal

- Develop multi-state replicable model for EV procurement by public fleets
- Increase EV adoption by public fleets

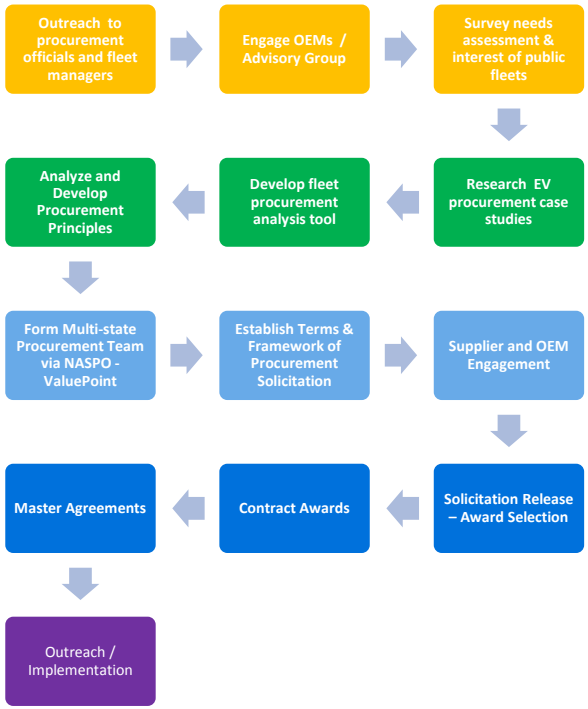
Collaborations

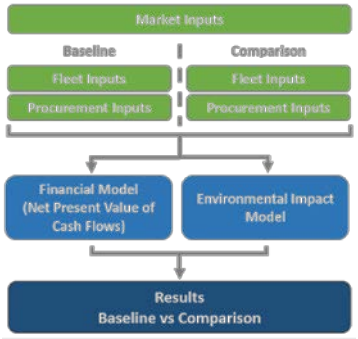
- 9 Clean Cities Coalitions – Outreach to 16 states – West Coast Cities led EV RFI – TCI States– ZEV MOU States

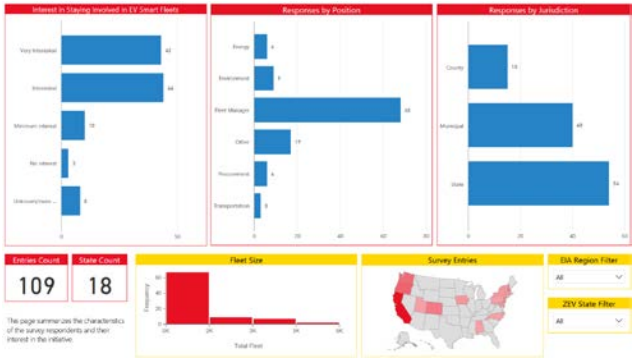
Accomplishments/Progress

- ✓ Completed Survey and 1st Outreach
- ✓ Fleet Analytical Procurement Tool (Draft)
- ✓ Developed procurement elements
- ✓ Multi-state sourcing team working on solication

Approach







Summary of Interest
ZEV MOU States

- Overall strong ZEV MOU state interest in fleet electrification and the project
- Fleet electrification an action item in the ZEV Action Plan
- Several states have implemented fleet incentive programs
- Driven by sustainability and environmental goals, and ambitious GHG emission reduction targets
- Chief barriers to fleet electrification across ZEV MOU states are:
  - Higher upfront purchase price of EVs – states typically do not consider TCO over the life of the vehicle
  - Need for additional funding to install charging infrastructure
  - Lack of electric options in the LDV truck and SUV sectors
- This procurement would compete with existing EV contracts in several states

Summary of Interest - Example
New Jersey

Summary of outreach and engagement:

- Transportation and Climate Initiative
- Briefings with key state agencies and officials
- **Participation in EV Smart Fleets sourcing team**
- State and local agencies provided input through survey

Interested state agencies:

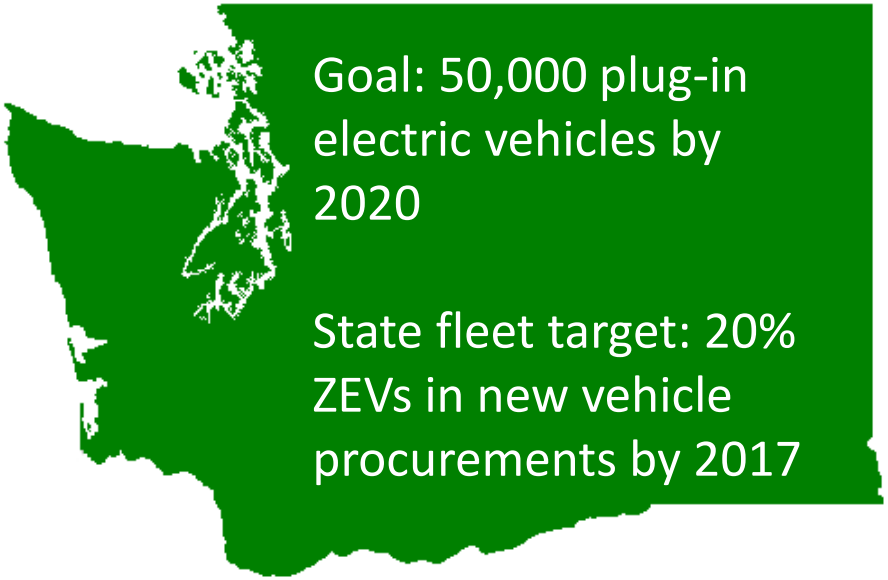
- NJ Dept. of Treasury (state procurement)
- NJ Dept. of Environmental Protection
- NJ Dept. of Transportation
- NJ Board of Public Utilities

Key factors and opportunities:

- New Jersey Clean Cities outreach to local jurisdictions and stakeholders
- **State seeking opportunity to add EVs to state contract**
- **Interest in alternative procurement/ownership strategies**
- ChargEVC coalition promoting EV adoption
- Utility interest in installation of charging infrastructure

Summary of Interest – Example
Washington

- Consistent outreach with state officials throughout project—including monthly calls with WA Department of Enterprise Services (DES) and DOT
  - State expects to order a total of 250 200+ mile range ZEVs in 2017 for state fleets
  - Expects 20% of fleet passenger sedan purchases in 2018 will be ZEVs



- Engaged with Western WA Clean Cities Coalition to build interest in EV Smart Fleets
- Cities of Seattle, Renton and Bellevue responded to survey, indicating interest
  - City interest driven by sustainability goals, cost savings, and vehicle performance
  - Nearly all indicated that there is an opportunity for more EVs in their fleets
  - Local governments in WA are able to purchase from state procurement contracts

Terms Definition

- **Solicitation:** refers to multi-state solicitation being led by State of California through NASPO ValuePoint Cooperative Purchasing Organization
  - Solicitation may take form of a Request for Information (RFI) and an Invitation for Bid (IFB)
  - **Procurement:** refers to individual contracts that state and local public fleets will execute with a winning contractor that has signed Master Agreement
  - Master Agreement refers to contractual agreement executed between winning contractor(s) and lead state (California).
- More information
  - NASPO: Procurement 101
  - How NASPO ValuePoint Works

EV Fleet Procurement Analysis Tool

Input Screen

Inputs - Fleet Procurement Analysis Tool

Market Inputs

Zip Code	98101	Gasoline Cost ($/Gallon)	$ 2.00	PADD Region	5	Include Cost of Carbon?	No
State	WA	Electricity Cost ($/kWh)	$ 0.1000	Egrid Region	NWPP	Cost of Carbon ($/ton)	$ -
		Inflation Rate (Excluding Fuel) (%/Year)	2.00%				

Vehicle Inputs

Procurement 1 (Baseline)		Procurement 2 (Comparison)	
Type Of Vehicle	2017 Nissan LEAF BEV	Type Of Vehicle	2015 Chevy Cruze ICE
Fuel Economy Gas City (MPG)	-	Fuel Economy Gas City (MPG)	22.0
Fuel Economy Gas Highway (MPG)	-	Fuel Economy Gas Highway (MPG)	35.0
Fuel Economy Electric City (MPGe)	124.0	Fuel Economy Electric City (MPGe)	-
Fuel Economy Electric Highway (MPGe)	101.0	Fuel Economy Electric Highway (MPGe)	-
Expected Years of Use/Ownership (Years)	7	Expected Years of Use/Ownership (Years)	7
Annual Vehicle Mileage (VMT/Year)	15,000	Annual Vehicle Mileage (VMT/Year)	15,000
% of Annual Miles on Gasoline	0%	% of Annual Miles on Gasoline	100%
% of Annual Miles City Driving	55%	% of Annual Miles City Driving	55%
Cost to Insure ($/Year)	$ 869	Cost to Insure ($/Year)	$ 838
Maintenance Cost ($/Mile)	$ 0.0415	Maintenance Cost ($/Mile)	$ 0.07010
Repair Cost, Not Including Damages ($/Mile)	$ 0.0148	Repair Cost, Not Including Damages ($/Mile)	$ 0.02260
Reoccurring Taxes and Fees ($/Year)	$ -	Reoccurring Taxes and Fees ($/Year)	$ -

Vehicle Financing Inputs

Procurement 1 (Baseline)		Procurement 2 (Comparison)	
Discount Rate for NPV Calculations (%)	2.00%	Discount Rate for NPV Calculations (%)	2.00%
Number of Vehicles to Procure (#)	10	Number of Vehicles to Procure (#)	10
Pricing Approach (select one)	MSRP Less Discounts	Pricing Approach (select one)	MSRP Less Discounts
MSRP ($/Vehicle)	$ 30,680	MSRP ($)	$ 16,170
Value of Negotiated Discounts ($/Vehicle)	$ -	Value of Negotiated Discounts ($/Vehicle)	$ -
Dealer Triple Net Price ($/Vehicle)		Dealer List Price ($)	$ -
Dealer Markup ($/Vehicle)		Markup ($)	$ -
Total Base Price	$ 30,680	*Total Base Price*	$ 16,170

Initial Fleet Survey

- Fleet survey conducted through EV Smart Fleets website and available to any fleet nationwide

- Survey results provided insights into fleet procurement
  - Identified many opportunities and challenges to implementing a multi-state solicitation

- Interactive dashboard of results
  - http://atlaspolicy.com/evsmartfleets/initial_fleet_survey

Analysis & Development of Procurement Principles

- Identify procurement elements that meet project goals:
  1. Achieve cost savings for fleets
  2. Be replicable in future years
  3. Be usable by a wide variety of state and local fleets
  4. Increase a fleet's access to wider range of plug-in hybrid and all-electric vehicle models
- Conducted outreach, extensive research, and stakeholder survey
- Output Materials
  - Drafted detailed write-up on potential procurement elements for a multi-state solicitation
  - Wrote case study on Alameda County's regional joint procurement that captured federal EV tax credit
  - Created Fleet Procurement Analysis Tool to assess financial and environmental costs and benefits of various procurement structures
- Next Steps
  - Complete write-up of EV-related procurements by public fleets
  - Evaluate financial performance of procurement elements to inform solicitation process

Fleet Procurement Analysis

- Analysis of financial performance of EV fleet procurements
  - Use tool to evaluate combinations of potential procurement elements
  - Educate fleets on key factors that drive cost savings
  - Inform solicitation development process
- Results will be summarized in a report
  - Report includes outreach summary, procurement elements, analysis results, and recommendations for solicitation

Direct Fleet Outreach by Clean Cities Coalitions

- Clean Cities Coalitions led request for information from fleets on targeted procurement practices
- Mixed responses from fleets depending on state and fleet type
- Many fleets can go outside of existing procurement contracts if certain EV models aren't offered on current contract
- EV availability generally limited, though many fleets have access to EVs on current contracts
- Majority of fleets that responded said they don't have access to low cost financing for EVs

West Coast Electric Fleets

- Promoting EV Smart Fleets through West Coast Electric Fleets (WCEF)
  - WCEF is a peer network of over 50 leading city and state fleets in CA, OR, WA, and British Columbia
  - Member fleets commit to ZEV procurements consistent with Pacific Coast Collaborative goals for transforming West Coast transportation

- Conferences and webinars have reached hundreds of fleets across the West Coast about EV Smart Fleets—and will continue to do so
- Key electric vehicle program staff and senior officials have engaged in discussions on the EV Smart Fleets initiative from the beginning of the project

ZEV MOU State Research Phase Outreach and Engagement

- Developed one-pager on project for outreach to fleets
- Comprehensive slide deck on project and benefits of EVs

- Briefed fleet and procurement managers in CT, MD, MA, NY, RI, VT and NYC on project
- CT and RI CCCs conducted outreach to local governments
- Developed EV procurement case studies for City of New Bedford and New York State