State and Local Climate and Energy Program

Fleet Electrification Webinar Series: Federal Highlights and Resources

January 27, 2022 | 2 PM Eastern

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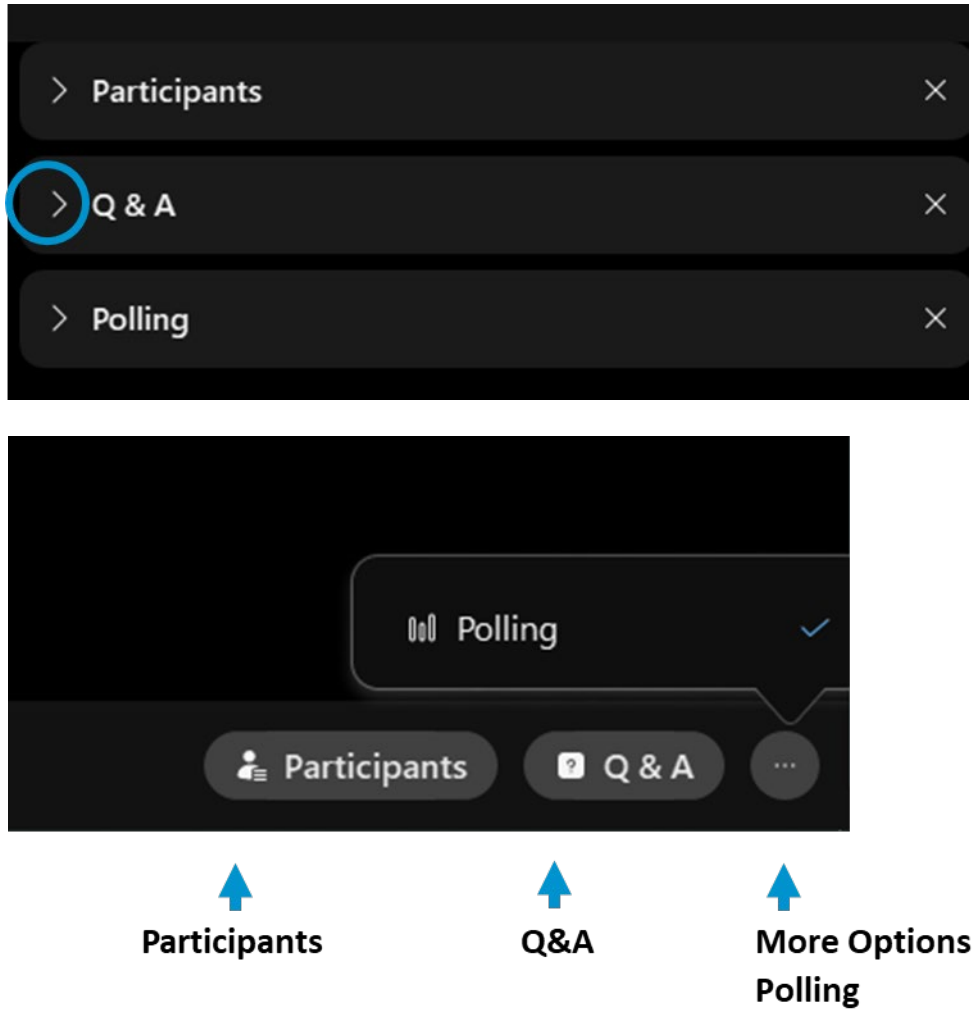
We'll use three panels

- Participants, Polling, and Question & Answer (Q&A)
- Use the arrow to expand or collapse the panels

Adding Panels

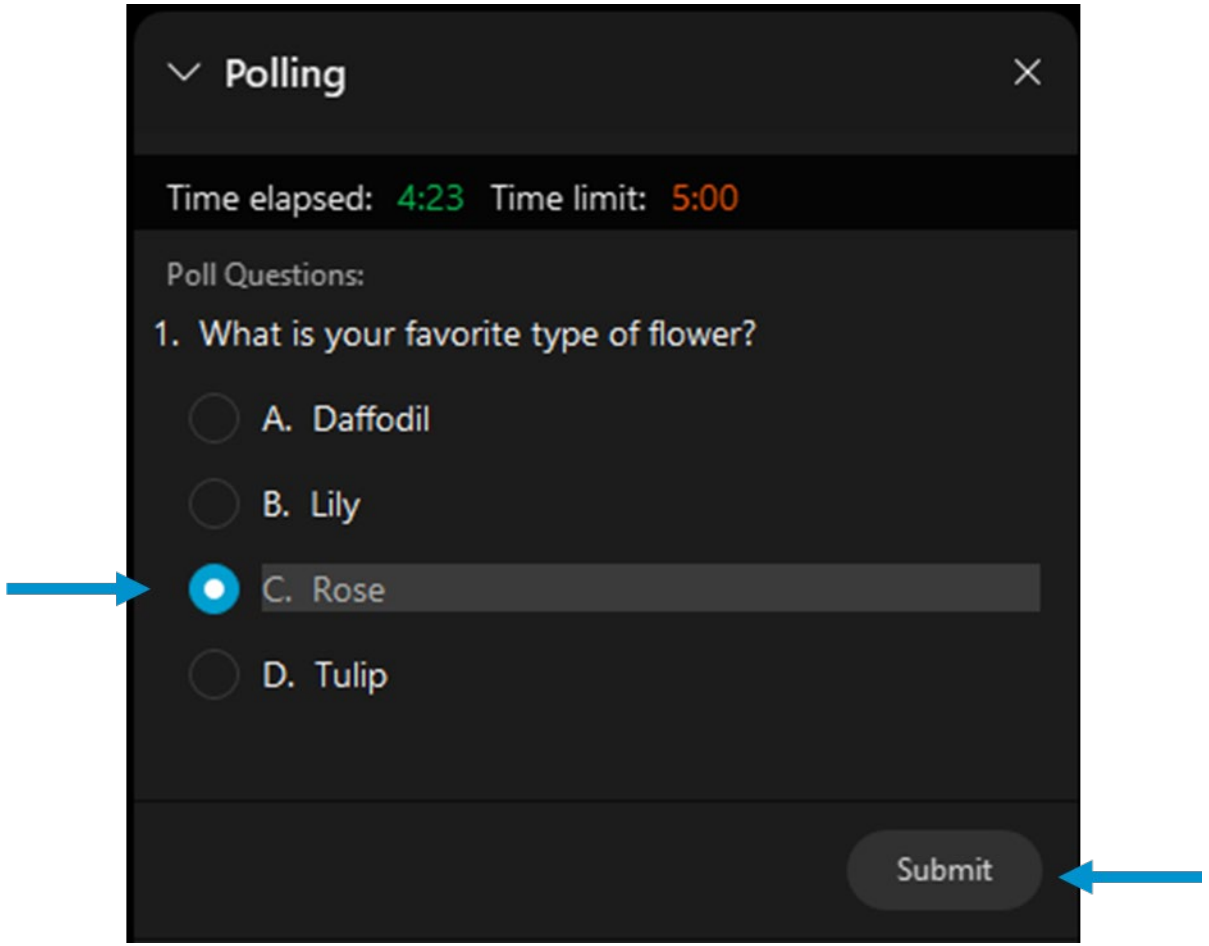
- If some panels don't appear, hover over the bottom of the screen and select the desired panels
- Select More Options (…) for additional panels
- Highlighted backgrounds indicate active panels



Polling and Feedback

Polling

- We'll ask several poll questions during the webinar
- The polling panel will appear when we open the first poll
- Select your desired response and hit "Submit"



Webinar Feedback

- A feedback form will pop-up when you exit today's webinar

Q&A

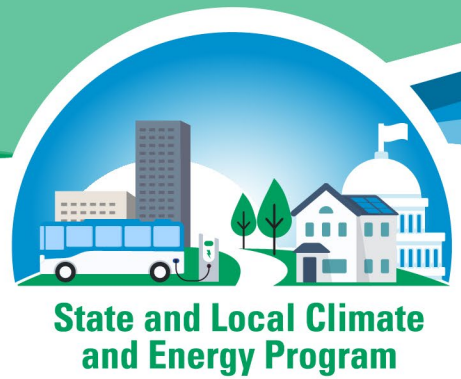
- Participants are muted
- Questions will be moderated at the end
- To ask a question:
  1. Select “All Panelists” from the drop-down menu
  2. Enter your question in the Q&A box
  3. Hit “Enter”

- EPA will post final materials on the Webinar Series page: www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series

Today's Agenda

- Introduction – Jessica Daniels, U.S. Environmental Protection Agency (EPA)
- Building a Federal Fleet Community – Cabell Hodge, National Renewable Energy Laboratory (NREL)
- U.S. Department of Energy: Supporting Fleet Electrification in Partnership with Clean Cities Coalitions – Margaret Smith, U.S. Department of Energy (DOE) Vehicle Technologies Office (VTO)
- Federal Energy Policy Act (EPAct) State and Alternative Fuel Provider Fleet Program and the Alternative Fuels Data Center – Ted Sears, NREL
- Federal EV Procurement Mechanisms – Stephanie Gresalfi, U.S. General Services Administration (GSA)
- Question and Answer Session

The views expressed by speakers on this webinar are solely those of the participants and EPA does not endorse any products or commercial services mentioned in this webinar.



INTRODUCTION

Andrea Denny
State and Local Climate and Energy Program
U.S. EPA

Jessica Daniels
Office of Transportation and Air Quality (OTAQ)
U.S. EPA

U.S. EPA's State and Local Climate and Energy Program

- We offer free tools, data and technical expertise about energy strategies, including energy efficiency, renewable energy and other emerging technologies, to help state, local and tribal governments achieve their environmental, energy and economic objectives

- Access these resources at: www.epa.gov/statelocalenergy

- Electrification Webinar Series
  - Get notifications by subscribing to our newsletter:
    - www.epa.gov/statelocalenergy/state-and-local-energy-newsletters
  - Past Webinars:
    - www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series

Select State and Local Resources

- **Electrification Toolfinder:** screen tools and resources to evaluate environmental and economic benefits of electrification programs
  www.epa.gov/statelocalenergy/tool-finder-local-government-clean-energy-initiatives
- **Avoided Emissions and geneRation Tool (AVERT):** quantifies the emissions benefits of energy efficiency and renewables
  www.epa.gov/avert
- **Co-Benefits Risk Assessment Health Impacts Screening and MappingTool (COBRA):** calculates health impacts of emissions changes and their economic value
  www.epa.gov/cobra
- **Benchmarking and Building Performance Standards Policy Toolkit:** informs policies for commercial and multifamily buildings
  www.epa.gov/statelocalenergy/benchmarking-and-building-performance-standards-policy-toolkit

U.S. EPA's State, Local, and Tribal Transportation Resources

- EPA's OTAQ protects human health and the environment by reducing air pollution and greenhouse gases from mobile sources and the fuels that power them, advancing clean fuels and technology, and encouraging business practices and travel choices that minimize emissions.

- We help state, local, and tribal governments achieve their environmental and other objectives by providing expertise on:
  - State Implementation Plans
  - Transportation Conformity
  - Vehicle Emissions Inspection & Maintenance and state fuel programs
  - Travel Efficiency and Greenhouse Gas (GHG) Planning
  - MOtor Vehicle Emission Simulator (MOVES), Calculators, and Tools

- Access these resources at the State and Local Transportation Resources page: www.epa.gov/state-and-local-transportation

OTAQ's Voluntary Programs and Initiatives

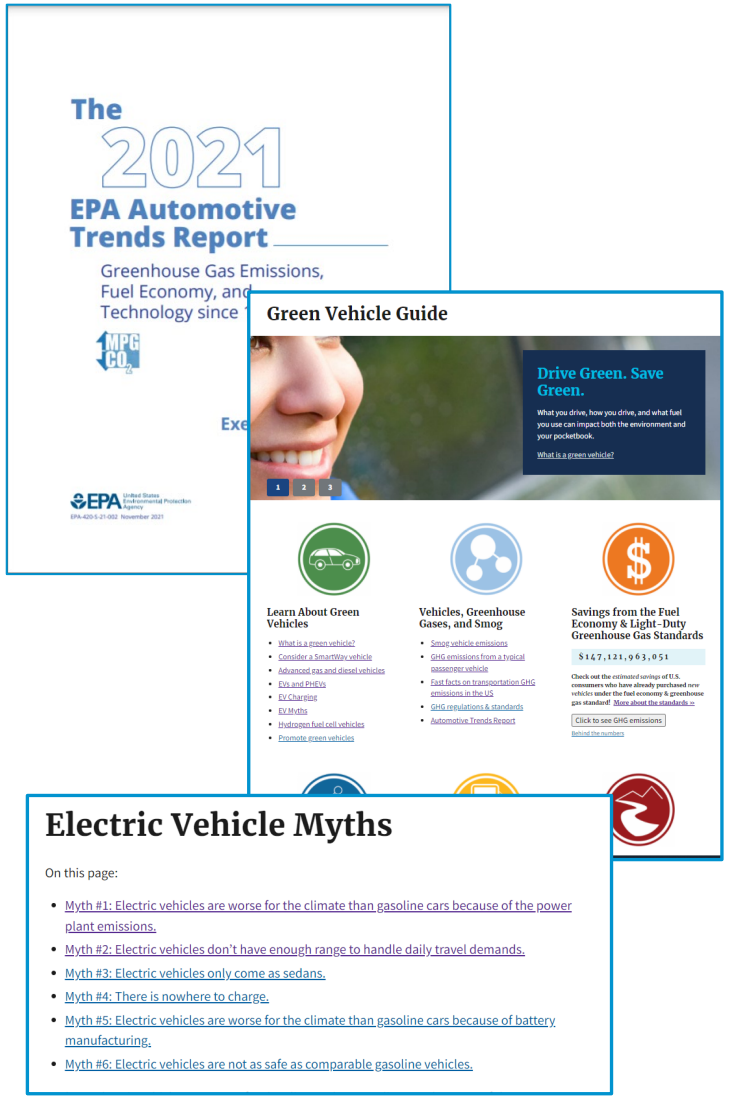
- Clean Diesel Program – To reduce diesel emissions that impact public health
  - Includes grants and rebates under the Diesel Emissions Reduction Act (DERA)
  - www.epa.gov/cleandiesel
- Ports Initiative – To improve environmental performance near ports
  - www.epa.gov/ports-initiative
- SmartWay – To advance sustainable transportation supply chains
  - www.epa.gov/smartway

www.epa.gov/cleanschoolbus

Transportation Trends

- EPA Automotive Trends Report
  - Public information about new light-duty vehicle greenhouse gas emissions, fuel economy data, technology data, and auto manufacturers' performance in meeting the agency's GHG emissions standards
  - www.epa.gov/automotive-trends

- EPA Green Vehicle Guide
  - Learn more about emerging options in transportation like zero emission vehicles (ZEVs), shared mobility, and self-driving cars
  - www.epa.gov/greenvehicles



Upcoming Webinars

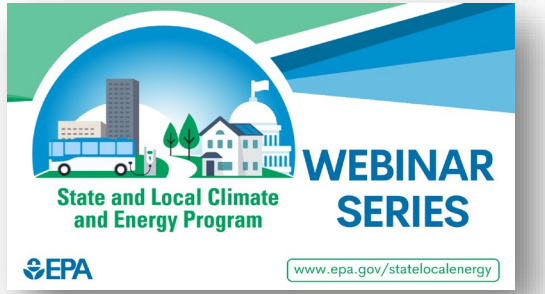
February 10: Learn about EPA's Tribal Greenhouse Gas Inventory Tool

February 15: Learn about EPA's Local Greenhouse Gas Inventory Tool

February 22: EPA CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA) (registration coming soon)

March 8: Electrification in the Urban Environment: Making Room for Express Delivery (registration coming soon)

www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series



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State and Local Climate and Energy Program

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Which best describes your organization's experience with fleet electrification?

- We have a program
- We are launching a program
- We are considering a program
- We are not considering a program
- Other (enter in Q&A box)

Poll 1

State and Local Climate and Energy Program

Building a Federal Fleet Community

Cabell Hodge
National Renewable Energy Laboratory

Building a Federal Fleet Community

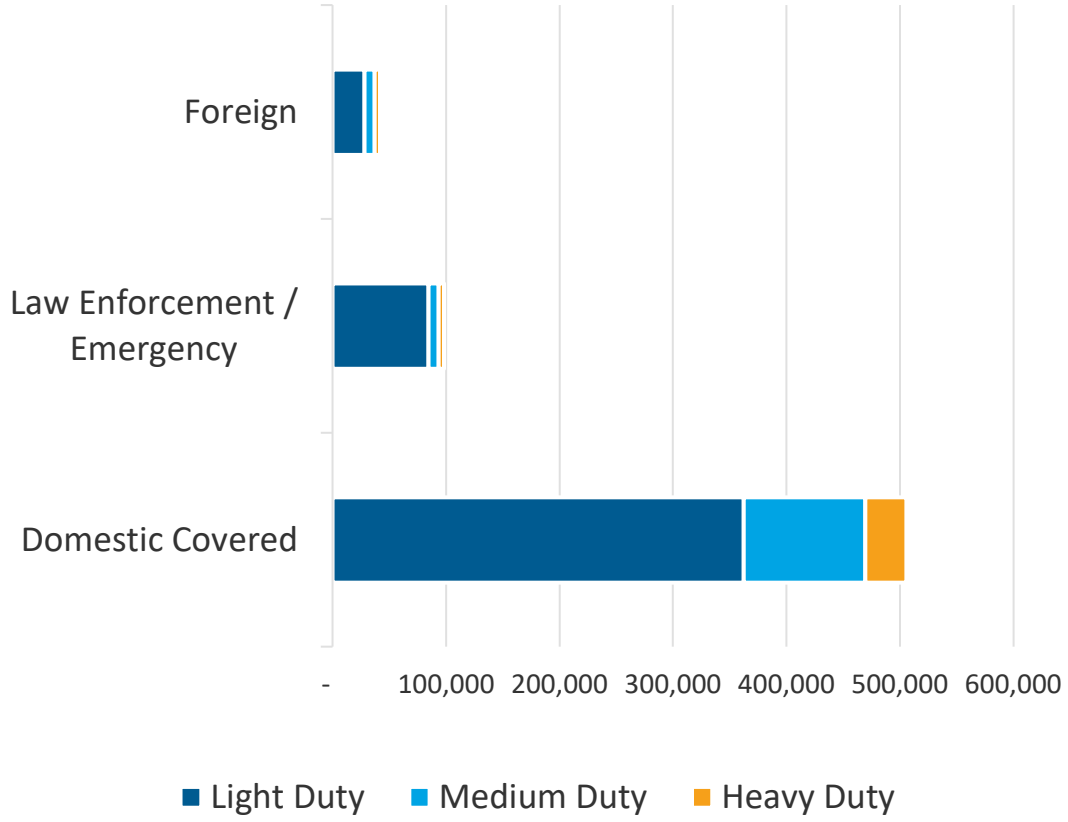
Cabell Hodge
1/27/2022

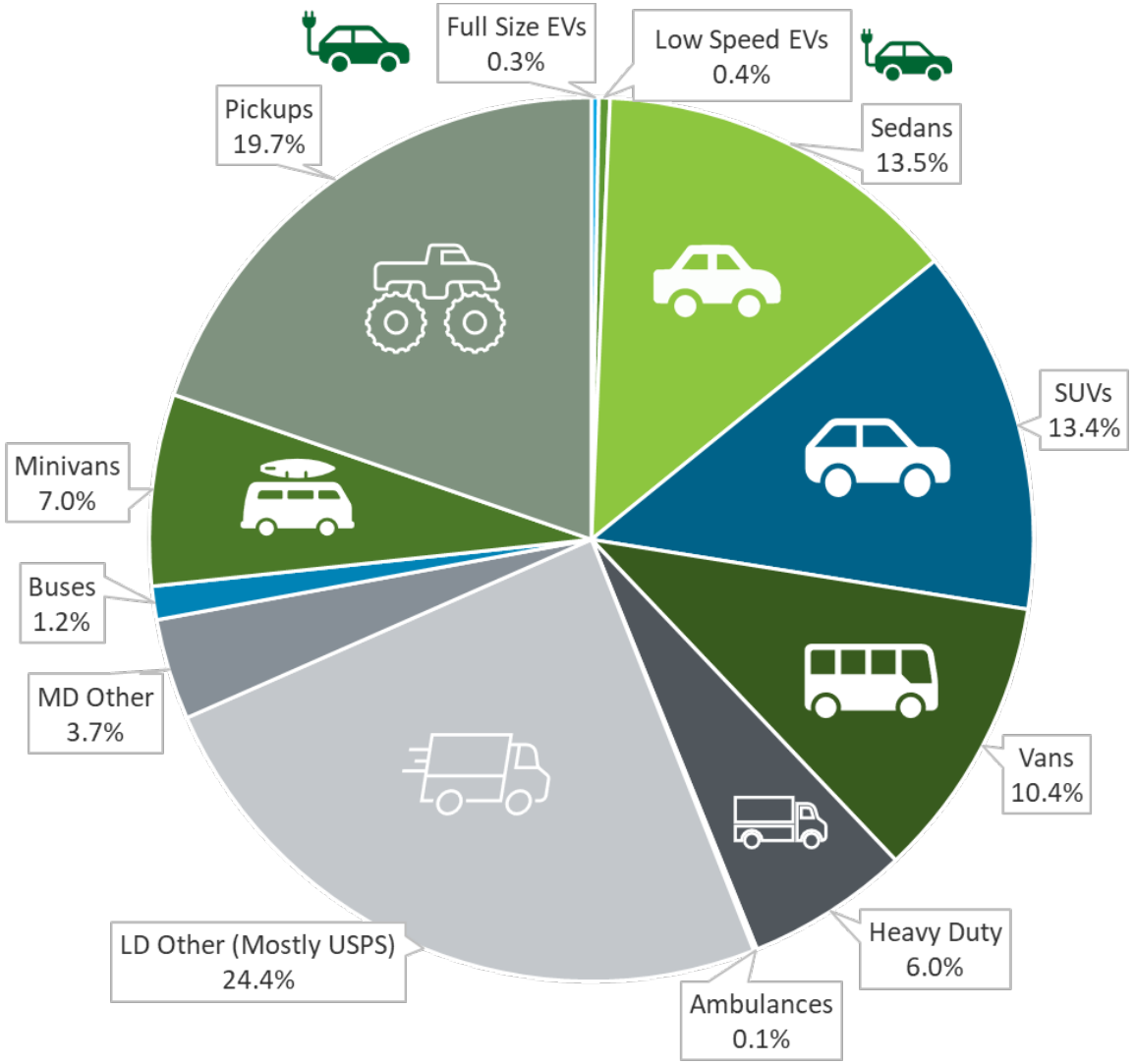
Overview

1. Federal Fleet Overview
2. NREL Role + Support
3. Building a Community
4. Tools and Engagement
5. Training Opportunities

Breakdowns of the Federal Fleet

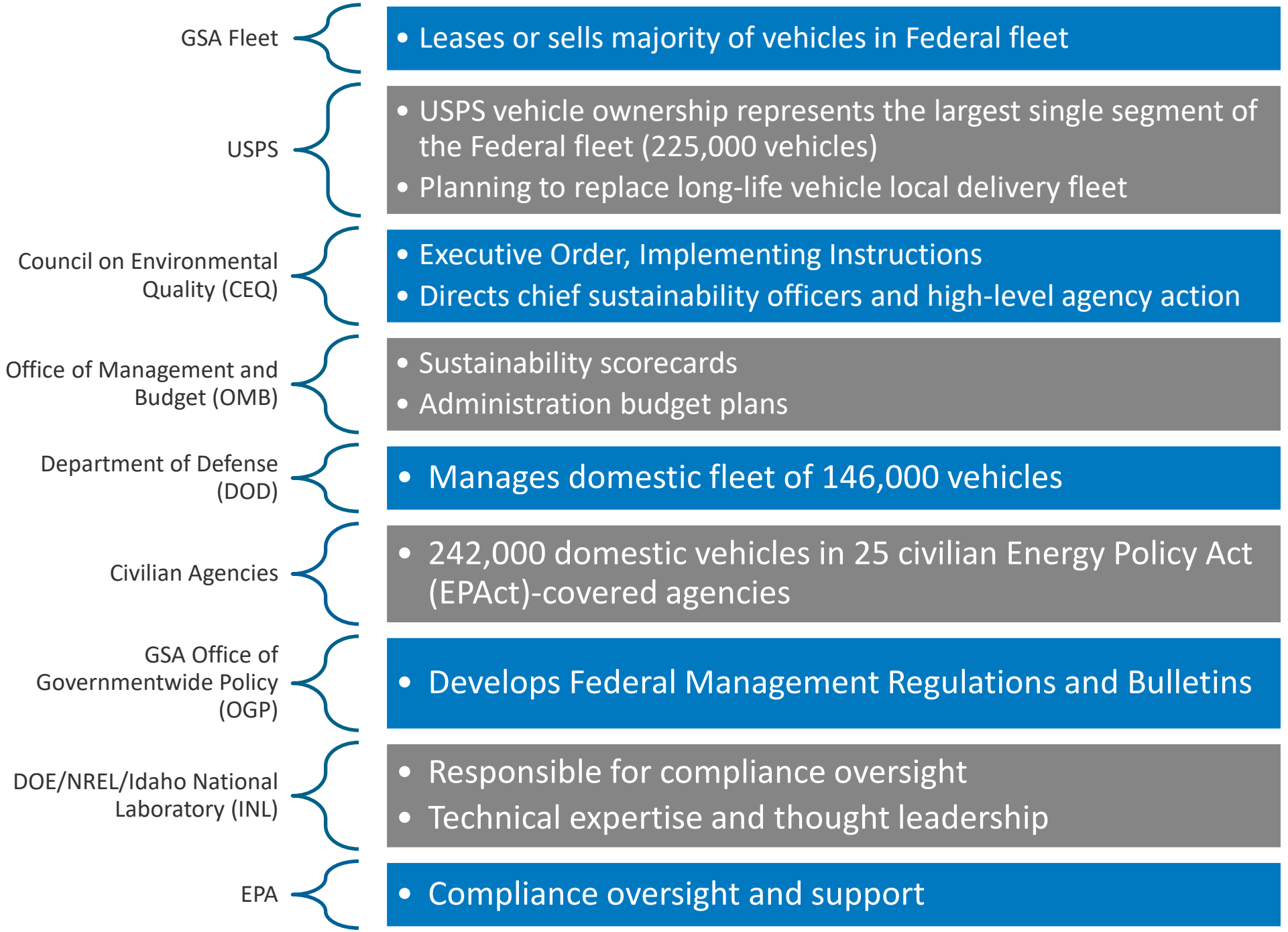
Federal Fleet by Classification





LD: Light duty
SUV: Sport utility vehicle
USPS: United States Postal Service

Largest Stakeholders in the Federal Fleet



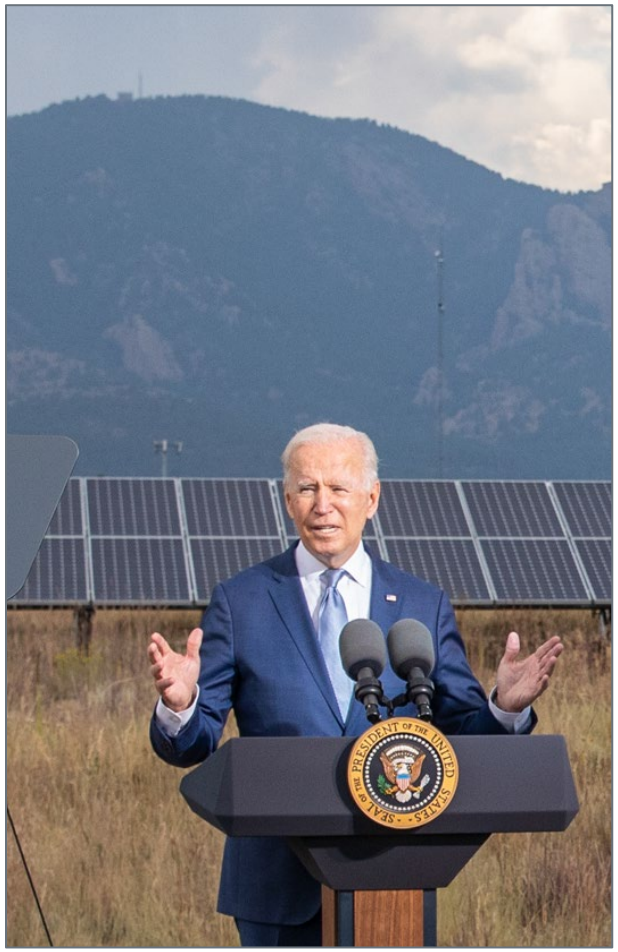
Electric Vehicles as an Administration Priority

WH.GOV

Executive Order on Tackling the Climate Crisis at Home and Abroad

January 27, 2021

GSA, CEQ, and OMB in coordination with DOE, DOL, and DOC to develop a plan to convert Federal, state, local, and Tribal fleets to ZEVs



WH.GOV

Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability

December 8, 2021

Transition to a zero-emission Federal fleet

- Annual targets for ZEVs by agency
- 100% LD acquisitions by 2027
- 100% MD/HD acquisitions by 2035

WH: White House
DOC: Department of Commerce
MD: Medium duty
HD: Heavy duty

Federal Energy Management Program (FEMP) Fleet Program + NREL Support

Tools to plan and execute agency fleet electrification goals

- Statutory Requirements
- Fleet Data
- Alterative Fuel Vehicle (AFV) Candidates
- EV Technology Training
- Electric vehicle supply equipment (EVSE) Installation Planning
- Workplace Charging Programs
- Cybersecurity Considerations
- Best Practices and Case Studies

www.energy.gov/eere/femp/electric-vehicles-federal-fleets

ZEV Planning and Charging Tool (Example of NREL Support)

1. Vehicle up for replacement (100 vehicles)

2. Great and good candidates (70 vehicles)

3. Minus unsuitable candidates (52 vehicles)

4. At priority EVSE locations (48 vehicles)

Garage	Zip	Vehicles	EVs
NREL Bldg. 16	01234	25	17
NREL South Table Mountain (STM) Lot	01234	65	44
NREL Wind	56789	10	9

Garage	Zip	Vehicles	EVs	EVs
NREL Bldg. 16	01234	25	~~17~~	12
NREL STM Lot	01234	65	~~44~~	36
NREL Wind	56789	10	~~9~~	4

Garage	Zip	Vehicles	EVs	EVs
NREL Bldg. 16	01234	25	~~17~~	12
NREL STM Lot	01234	65	~~44~~	36
~~NREL Wind~~	~~56789~~	~~10~~	~~9~~	~~4~~

Federal EV Agency Roundtable (FEVAR)

- Peer group to share electrification plans and goals and to discuss ways to overcome gaps and barriers to fleet electrification
  - Technology options
  - Data usage
  - Site and agency planning
  - Collaboration with external stakeholders (e.g., utilities)

FEMP
Federal Energy Management Program

Become a Member of the Federal Electric Vehicle Agency Roundtable (FEVAR)

Join fellow agencies in sharing best practices and overcoming barriers in electrifying the Federal fleet

GSA

Federal EV Agency Roundtable

Meeting format

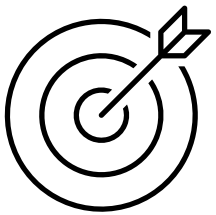
- Standing updates from FEMP, GSA Fleet, GSA OGP, and CEQ
- Roundtable discussion
- Agency speaker (e.g., fleet manager)
- External speaker (e.g., technical expert)

Objectives

- Inform on latest policy updates and fleet requirements
- Share lessons learned with fleets
- Connect fleets with other stakeholders
- Understand fleet needs

Zero-emission Vehicle Planning and Charging (ZPAC) Tool Agency Engagement

- **ZPAC Process**
  - Introduced the tool at FEVAR
  - Posted training videos for agencies
  - Set up working meetings with each agency
  - Reviewed results and discussed issues

Battery electric vehicle (BEV) available? → Midday charging challenges? → GHG benefits? → 

BEV Considerations					
BEV SIN Availability	BEV Replacement SIN	Modeled BEV Range Concerns*	Reported BEV Range Concerns (Dropdown)	BEV GHG Emission Reduction Potential	Quality of BEV Candidate
3 - Consider PHEV	20P	1 - Minimal Public Charging Likely		5 - Limited	5 - Consider PHEV
1 - Identical BEV	96E	2 - Some Public Charging Likely		4 - Moderate	2 - Good
1 - Identical BEV	105E	1 - Minimal Public Charging Likely		2 - High	1 - Great
4 - Reassess Next Year	-	5 - Very Frequent Public Charging Likely		1 - Very High	6 - No FY22 ZEV Option
1 - Identical BEV	8E	5 - Very Frequent Public Charging Likely		1 - Very High	4 - Challenging

SIN: Standard Item Number

EVSE Tiger Team Engagement

EVSE Tiger Teams

- Team of EVSE experts and electrical engineers from NREL

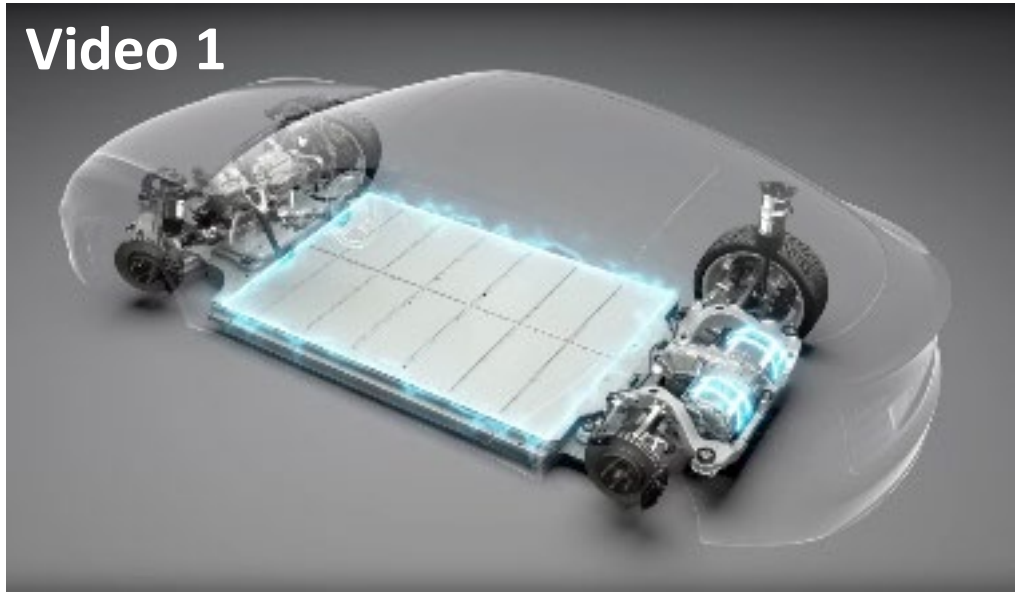
Objectives

- Develop plans for charging infrastructure
- Use information on vehicle plans to inform charging needs
- Assess site needs, logistics, and electrical infrastructure

Activities

- Visit potential EVSE locations
- Develop site-specific recommendations

EV Training Videos



Video 1: EV Technology Overview
Video 2: EV Financial Considerations
Video 3: Electric Vehicle Supply Equipment

Federal Fleet EV Training Materials

TRAINING	TYPE	DURATION	SUBJECT AREA AND LEVEL
☐ FEMP EV Technology Overview	Video	12 minutes	EV 101, EVSE 101
☐ FEMP EV Financial Considerations	Video	9 minutes	Financial 101
☐ FEMP Electric Vehicle Supply Equipment Infrastructure	Video	8 minutes	EVSE 101, Facility 101
☐ Charging GSA Fleet EVs Publicly	One Page	5 minutes	EVSE 101
☐ GSA ZEV Fact Sheet and AFV Guide	Website	30 minutes	EV 101
☐ Attend EV Champion Training 1: Technology & Financials	CEU Webinar	1.5 hours	EV 102, EVSE 102
☐ Attend EV Champion Training 2: EVSE Power/Install	CEU Webinar	1 hour	EVSE 201, Facility 201
☐ Attend EV Champion Training 3: EV Site Assessments	CEU Webinar	2 hours	EVSE 202, Facility 202
☐ Attend EV Champion Training 4: Advanced EV Solutions	CEU Webinar	2 hours	Facility 301, Program 301
☐ EV Champion Worksheet 1: Technology & Financials	Worksheet	30 minutes	EV 201, Financial 201

https://www.energy.gov/eere/femp/electric-vehicles-federal-fleets

Cabell Hodge

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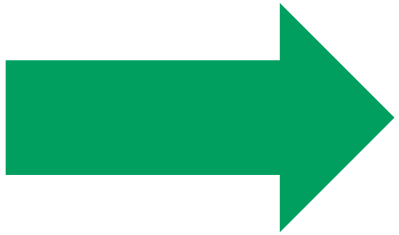
Which of these Federal resources and partners do you use in your fleet electrification work?

- Clean Cities Coalitions
- Technical Response Service
- Alternative Fuels Data Center
- FuelEconomy.gov
- Alternative Fuel Life-Cycle Environmental and Economic Transportation Tool

Poll 2



State and Local Climate and Energy Program

U.S. Department of Energy: Supporting Fleet Electrification in Partnership with Clean Cities Coalitions

Margaret Smith
U.S. DOE Vehicle Technologies Office

U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

DOE Supporting Fleet Electrification in Partnership with Clean Cities Coalitions

Margaret Smith, U.S. Department of Energy, Vehicle Technologies Office

January 27, 2022

Vehicle Technologies Office (VTO)

Some research and development (R&D) for On/Off-Road MD/HD Vehicles

ON-ROAD

Light-, Medium-, Heavy Duty Vehicles

Air, Marine, Rail

VTO Technology Integration Program

Provide objective data and real-world lessons learned that inform future research needs and support local decision-making to advance affordable, domestic transportation fuels and energy-saving technologies

- **Clean Cities Coalitions**
- **Information and Tools**
- **Technical Assistance**
- **Training, Outreach, Partnerships**
- **Financial Assistance**

Regulatory Activities / State and Alt Fuel Provider Fleets

Advanced Vehicle Technology Competitions

TRS: Technical Response Service

VTO Technology Integration Strategies

1. Work closely with the **nationwide network of local Clean Cities coalitions** to support local decision-making

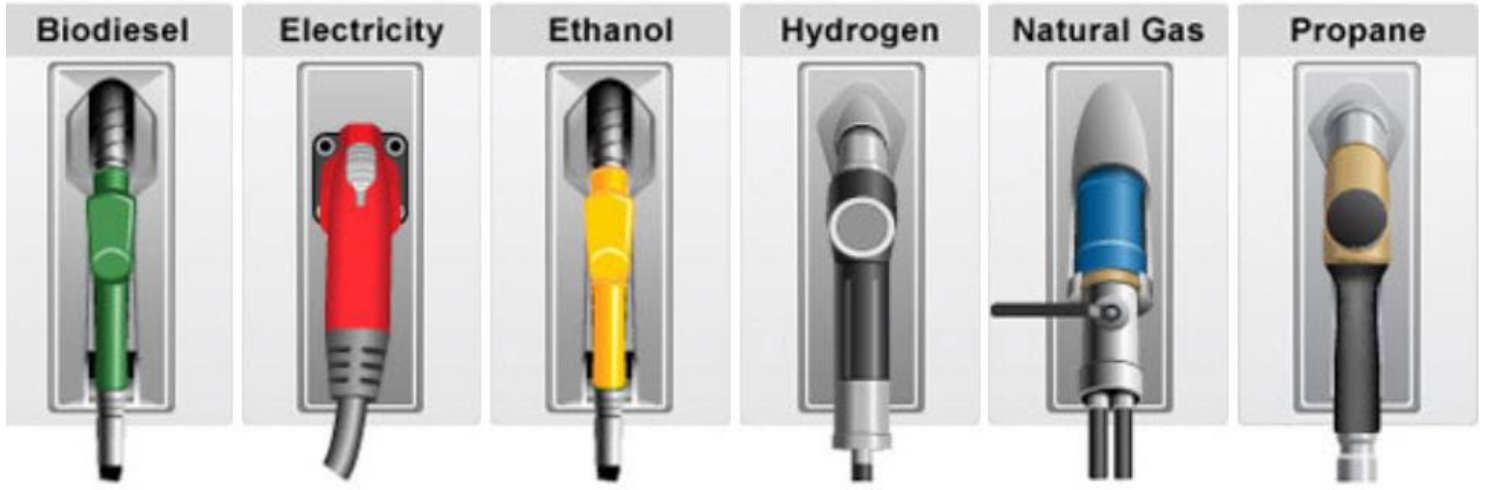
2. Help stakeholders **evaluate transportation needs and energy choices**

3. Fund projects that:
   - Shift to **domestic transportation energy sources,**
   - Improve transportation **fuel efficiency,**
   - Reduce **harmful emissions,** and
   - Demonstrate **new mobility choices.**

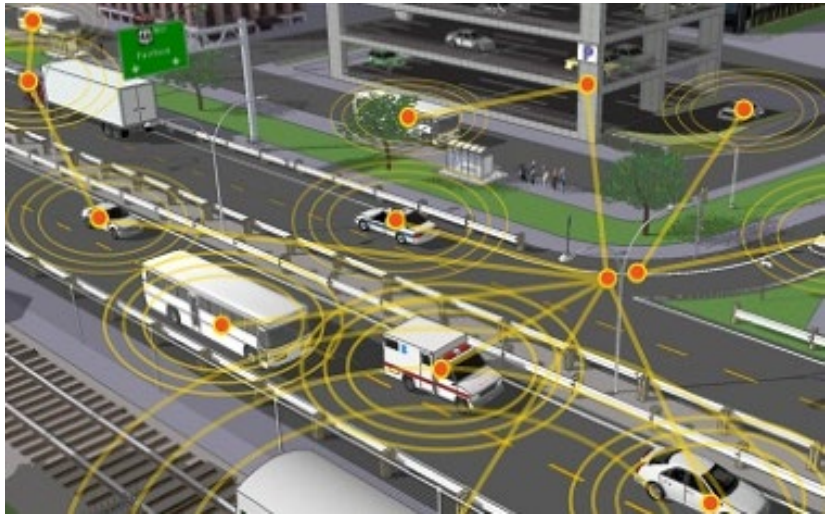
Vehicle Technology Focus Areas

Light-, Medium- and Heavy-Duty Vehicles

Alternative Fuel Infrastructure



Energy Efficient Mobility Systems and Technologies



More than 75 Clean Cities coalitions with thousands of stakeholders, representing ~80% of U.S. population

Coalition projects have helped to put nearly

1 million alternative fuel vehicles on the road.

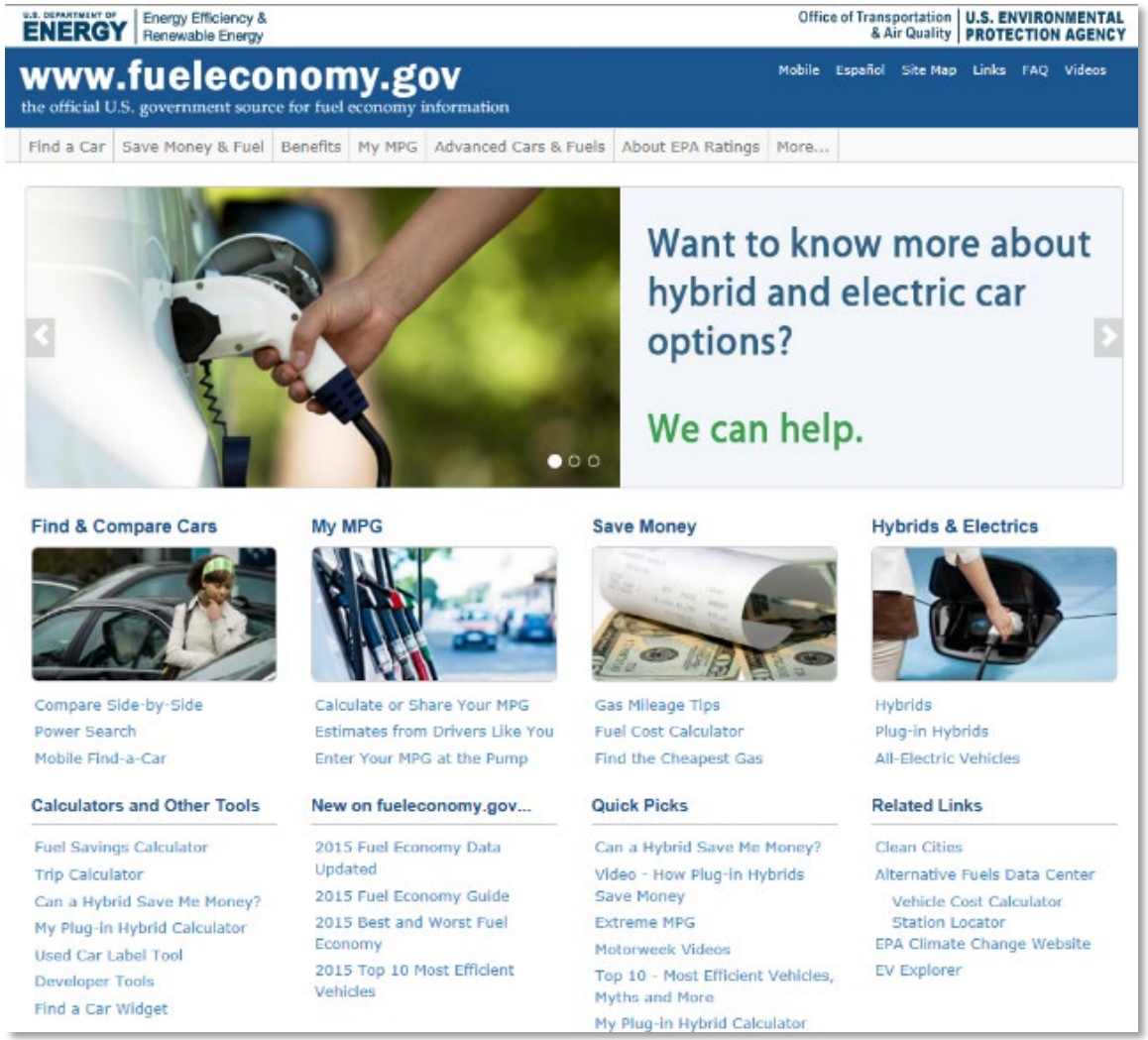
89 million gasoline gallon equivalents

of energy were saved through fuel economy improvement projects like telematics, driver training, and outfitting fleets with idle reduction equipment.

Full Infographic: cleancities.energy.gov/files/pdfs/28th_infographic.pdf

cleancities.energy.gov

FuelEconomy.gov and Alternative Fuels Data Center (AFDC)



FuelEconomy.gov

afdc.energy.gov

Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool by Argonne National Laboratory (ANL)

Examines light-duty, heavy-duty, and off-road vehicle:

- Petroleum use
- Greenhouse gas (GHG) emissions
- Air pollutant emissions
- Cost of ownership

Covers 18 fuel/vehicle technologies

- Conventional, Hybrid
- Plug-in electric
- Alt. fuels: natural gas, propane, hydrogen, ethanol, biodiesel, renewable diesel

Recent AFLEET updates

- Updated vehicle and charging infrastructure costs
- Updated emission factors using EPA's MOtor Vehicle Emission Simulator (MOVES3)
- New EV charging emissions calculator

AFLEET Spreadsheet: 10,000 users

AFLEET Online: 7,500 users

Heavy-Duty Vehicle Emissions Calculator: 10,000 users

afleet.es.anl.gov

Technical & Problem-Solving Assistance

Technical Response Service

Seasoned experts who will help you find answers to technical questions about

- Alternative fuels,
- Fuel economy improvements,
- Idle-reduction measures,
- Advanced vehicles, and
- Clean Cites resources

TechnicalResponse@icf.com 800-254-6735

VTO Technology Integration Competitive Project Funding

VTO has funded over **600 Technology Integration** projects and distributed nearly **$500 million** since 1993

Living Labs for Energy Efficient Transportation

AFV Adoption Through Partnerships

AFV Safety Training

Rural New Mobility Solutions

EV Community Partner Projects

AFV Data Collection and Analysis

cleancities.energy.gov/partnerships/projects

VTO Annual Merit Review Presentations: www.energy.gov/eere/vehicles/annual-merit-review-presentations
VTO Annual Progress Reports: www.energy.gov/eere/vehicles/annual-progress-reports

Fiscal Year (FY) 19 New Mobility Services in Rural America

Area of Interest (AOI) Objective:

- Demonstrate technology approaches to provide affordable access to new mobility services to rural populations
- Vehicle/infrastructure, rural outreach and education

Example Projects:

- Electric First/Last Mile On-Demand Shuttle Service for Rural Communities in Central Texas (Lone Star Clean Fuels) - Low speed EVs to provide on-demand transportation around a small town's downtown area and connections to a park and ride service to Austin.

- The Clean Rural Shared Electric Mobility Project (Forth) - Deployment of light-duty EVs for use in car share (use by tourists and local underserved community residents) with associated EVSE. Location: Rural Oregon

FY20 Alt. Fuel Proof of Concept in New Communities and Fleets

AOI Objective:

- Small, targeted proof of concept demonstrations of alternative fuel vehicles and fueling infrastructure
- Sharing of data, best practices, and lessons learned with other fleets in their areas

Example Projects:

- Cold-Weather Operation, Observation and Learning Electric Vehicles: COOL EVs (American Lung Association Minnesota) – Deployment of several MD/HD commercial trucks in Minnesota winters, including an EV school bus, refuse hauler, and MD shuttle buses, with extensive data collection and analysis to inform replication.

- Pilot Heavy-Duty Electric Vehicle Deployment for Municipal Solid Waste Collection (Municipality of Anchorage) Deployment of Peterbilt battery electric box truck for residential recycling bin distribution and Peterbilt battery electric refuse hauler, plus direct current (DC) fast charging with battery storage to manage grid load/demand charges, all operating in Alaskan winters (harsh for current BEVs).

FY20 EV Community Partner Projects (3-year projects launched late 2020)

Applicant	Clean Cities (CC) Coalition	Project Name (DOE share)	States
American Lung Association	Minnesota CC	Twin Cities EV Community Mobility Network - EV Spot Network & Evie Carshare ($6.7M)	MN
PacifiCorp	Utah CC, Treasure Valley CC (Boise), Valley of the Sun CC (Phoenix), Columbia-Willamette CC, Rogue Valley CC, Yellowstone-Teton CC	WestSmartEV@Scale ($6.6M)	OR, UT, NV, ID
Virginia Energy	Virginia CC, Greater Washington Region CC, Maryland CC, State of West Virginia CC	Mid-Atlantic Electrification Partnership ($5.4M)	VA, DC, MD, WV

Electric Vehicles and Charging Stations

Community Engagement and Workforce Development

Drivers

- Public EV charging
- Multi-family housing charging stations
- Electric car-sharing

Transit Riders

- E-buses
- E-ride hailing

Environmental Justice Community Air Quality

- Electrify MD/HD vehicles operating in or near environmental justice (EJ) communities

EV Spot Network & Evie Carshare in Saint Paul and Minneapolis

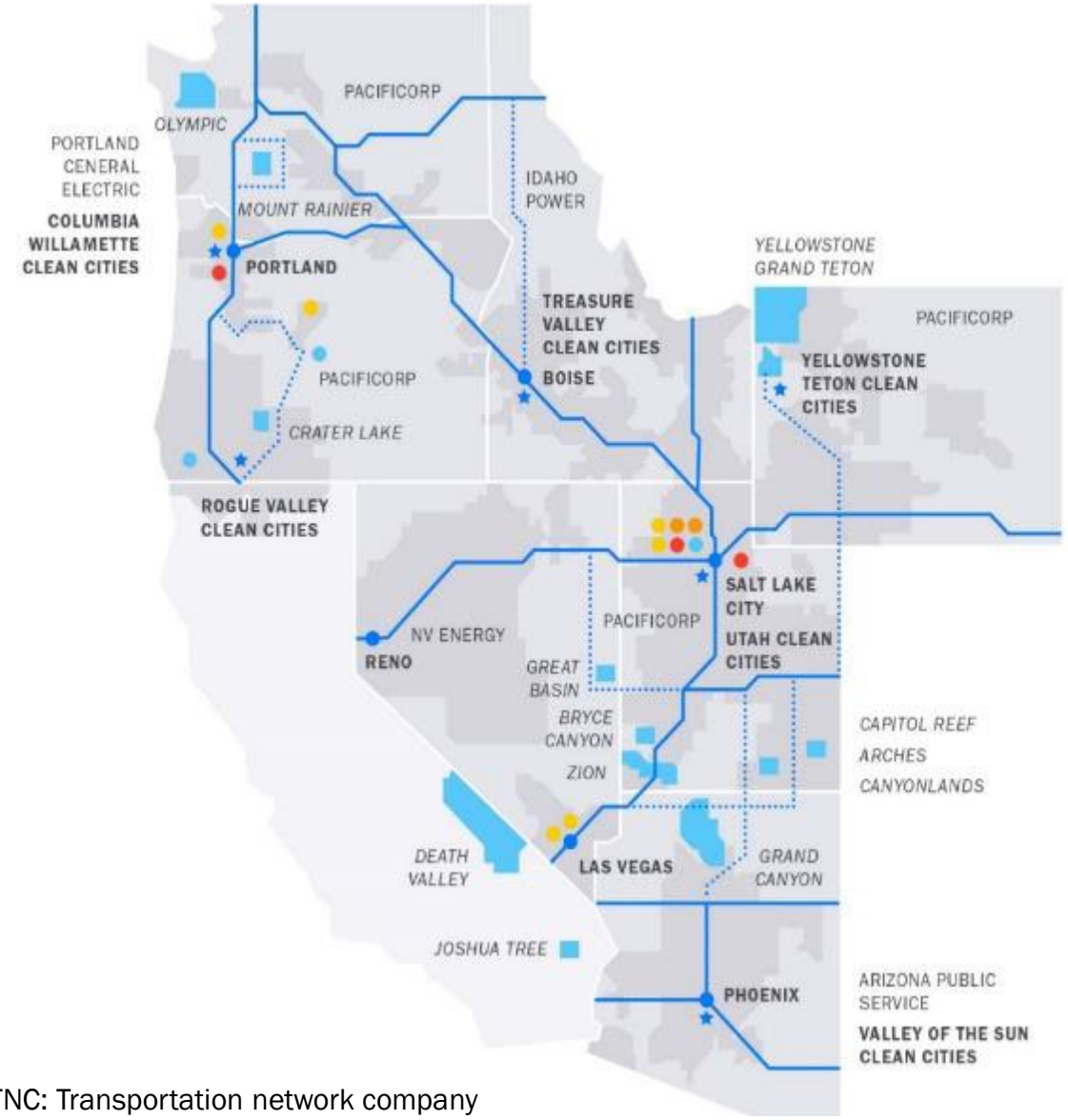
- 70 curbside community charging hubs (280 Level 2 ports total)
- 25 multi-unit housing charging hubs (100 Level 2 ports total)
- 12 DC fast chargers (ten 50 kilowatts (kW); two 120kW)

- 170 Evie Carshare vehicles
- 50 EVs for multi-unit housing
- www.evspotnetwork.org

evie Operated by HOURCAR

ev spot network

WestSmart EV (WSEV) @ Scale



WSEV@SCALE FOCUS AREAS

Sub-Projects

Destination Highways
- NATIONAL PARK AND RECREATION ELECTFICATION

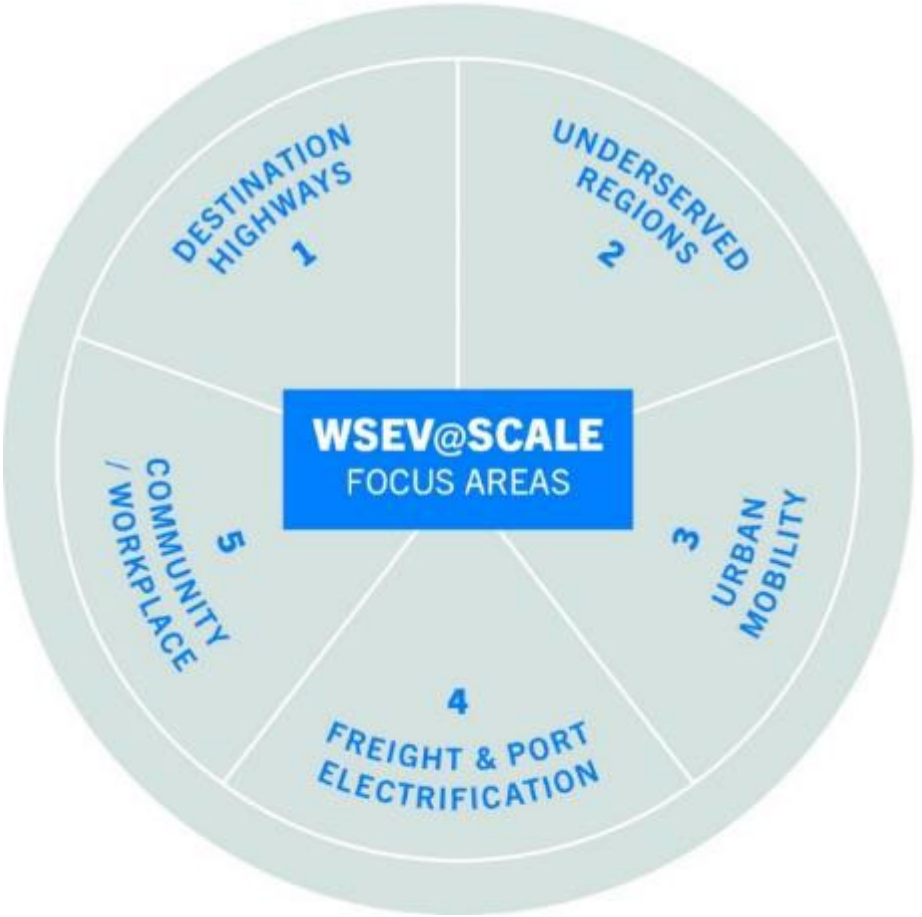
Underserved Regions
- EV TRAINING FOR RURAL WORKFORCE
- RURAL E-BUS TRANSIT HUB
- eCAR SHARE @ AFFORDABLE HOUSING

Urban Mobility
- TNC EV STUDY
- ZERO EMITTING TAXI FLEET
- INTERMODAL HUB

Freight & Port Electrification
- SALT LAKE CITY INTERNATIONAL AIRPORT ELECTRIFICATION
- UTAH INLAND PORT HEAVY DUTY ELECTRIFICATION

Community / Workplace
- eMOBILITY CENTER
- PARK CITY ARTS AND CULTURE DISTRICT
- PACKSIZE WORKPLACE CHARGING CASE STUDY

★ CLEAN CITIES



TNC: Transportation network company

Mid-Atlantic Electrification Partnership

Mid-Atlantic Electrification Partnership

375 CHARGING STATIONS installed throughout the region

175 ELECTRIC VEHICLES light- medium-duty EVs and school buses

25 EDUCATIONAL EVENTS

3 PROJECT YEARS

$14.6M PROJECT BUDGET

$8.7M COST SHARE

25 PROJECT PARTNERS

https://vacleancities.org/mid-atlantic-electrification-partnership

PARTNERS- YEAR 1	
Utilities	Dominion Energy • Potomac Electric Power Company
Clean Cities	Maryland Clean Cities • West Virginia Clean State Program Virginia Clean Cities at James Madison University
EVSE Deployment	Beam • Blink • EVgo • Greenlots Greenspot • Sonny Merryman
Education and Equity	EVNoire
City	Charlottesville, Virginia
EV Infrastructure Planning	Tradepoint Atlantic
National Lab	Argonne National Laboratory
State Agencies	Maryland Department of the Environment Virginia Department of Environmental Quality Virginia Department of Mines Minerals and Energy
Ride Share	Baltimore Gas and Electric Greater Washinton Region Clean Cities Colaition
Ports	Maryland Port Administration • Port of Virginia
Advisors	Electrify America • Rappahannock Electric Cooperative Virginia Tech Transportation Institute

FY21 EV Community Partner Projects (3-year projects launching early 2022)

Applicant	Project Name (DOE Share)	Project Objective	States
Tennessee Technological University	Rural Reimagined: Building an EV Ecosystem and Green Economy for Transforming Lives in Economically Distressed Appalachia ($4M)	• Deploy electric vehicle (EV) charging stations and demonstrate EVs in the most economically distressed regions in rural Appalachia. • Information sharing, outreach, education, and workforce training	KY, WV, OH, TN, VA
Metropolitan Energy Center	EV Market Stimulation in Divested Economies ($5.2M)	• Deploy fleet EVs and charging (e.g., rural and urban municipal fleets, freight yard terminal trucks) • Install public and multi-family housing EV charging including engaging community-based organizations in decision-making	KS, MO
Forth	Affordable Mobility Platform ($5M)	• Deploy shared EVs at affordable housing sites for use by housing residents, housing staff, and the public • Create training and education materials for project replicability	NM, ID, NC, MI, NV, OR, WA, MO
Native Sun Community Power Development	Upper Midwest Inter-Tribal EV Charging Community Network ($6.7M)	• Demonstrate EVs through a Native-led model program including twenty-three Native Nations. • Create fast charging corridors to connect the Tribal reservations with job centers, economic centers, and other critical services.	ND, SD, MN

Margaret Smith,
Technology Manager, DOE Vehicle Technologies Office
Margaret.smith@ee.doe.gov

cleancities.energy.gov
afdc.energy.gov
fueleconomy.gov

State and Local Climate and Energy Program

Federal EPAct State & Alternative Fuel Provider Fleet Program and the Alternative Fuels Data Center

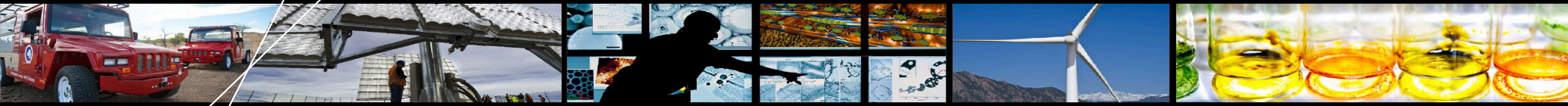
Ted Sears

National Renewable Energy Laboratory

Federal EPAct State & Alternative Fuel Provider Fleet Program

and the

Alternative Fuels Data Center



Ted Sears

January 27, 2022

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.

Agenda

- State and Alternative Fuel Provider Fleet Requirements Under EPAct
- Alternative Fuels Data Center Resources and Tools

Fleet Requirements – State and Alternative Fuel Provider (SFP)

- Energy Policy Act of 1992 (EPAct 92) requires certain SFP fleets to acquire alternative fuel vehicles if:
  - Fleet has **50** non-excluded light-duty vehicles (LDVs) total
  - Fleet has **≥ 20** non-excluded LDVs in a single Metropolitan Statistical Area or consolidated Metropolitan Statistical Area with **≥ 250,000** population in 1980
- Current annual AFV acquisition requirements:
  - States – **75%** of annual non-excluded LDV acquisitions
  - Alternative Fuel Providers – **90%** of annual non-excluded LDV acquisitions
- Alternative Fuel (AF) use requirement
  - Alternative Fuel Providers must use AF when AFV operating in area in which AF is available

Fleet Compliance Options – SFP

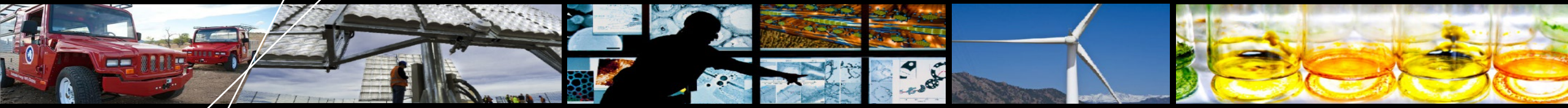
- Initially, fleets could only comply by acquiring AFVs
  - AFVs (think flex-fuel vehicles (FFV), compressed natural gas (CNG), or Propane dedicated or bi-fuel vehicles, and EVs) and Conversions
  - Exemptions available if no appropriate AFV model or AF available
  - Fleets may earn and bank/trade credits for excess acquisitions
- Congress later allowed fleets to meet up to 50% of annual AFV acquisition requirements through purchase for use of biodiesel, if blend **≥20% biodiesel (B20)**
  - One acquisition credit for every **450** gallons of **B100**
- This (AFV acquisition and biodiesel) is termed **Standard Compliance**
  - Energy Independence and Security Act 2007 authorized DOE to allot credit levels for Electric Drive Vehicles (hybrid electric vehicles (HEVs), plug-in hybrid-electric vehicles (PHEVs), MD/HD EVs, neighborhood electric vehicles (NEVs)) and certain vehicle and infrastructure related investments

Credit Allocations Under the 133 Final Rule

Credit Category	Credit Allotment	Limitations/Other
HEV	½ credit	
PHEV	½ credit	
Fuel cell electric vehicle	½ credit	
NEV	¼ credit	Not included in covered LDV count
Medium- or heavy-duty HEV	½ credit	Not included in covered LDV count
Alternative Fuel Infrastructure	1 credit per $25,000 invested*	Maximum of 5 credits if private infrastructure, 10 credits if publicly accessible infrastructure; credit allocated in model year placed into operation
Alternative Fuel Non-Road Equipment	1 credit per $25,000 invested*	Maximum of 5 credits per fleet per model year
Emerging Technology	2 credits for initial $50,000 invested and 1 credit per $25,000 thereafter, or 1 credit per pre-production vehicle*	Maximum of 5 credits if counting based on amount invested, per fleet per model year

* Aggregation of dollar amounts allowed

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

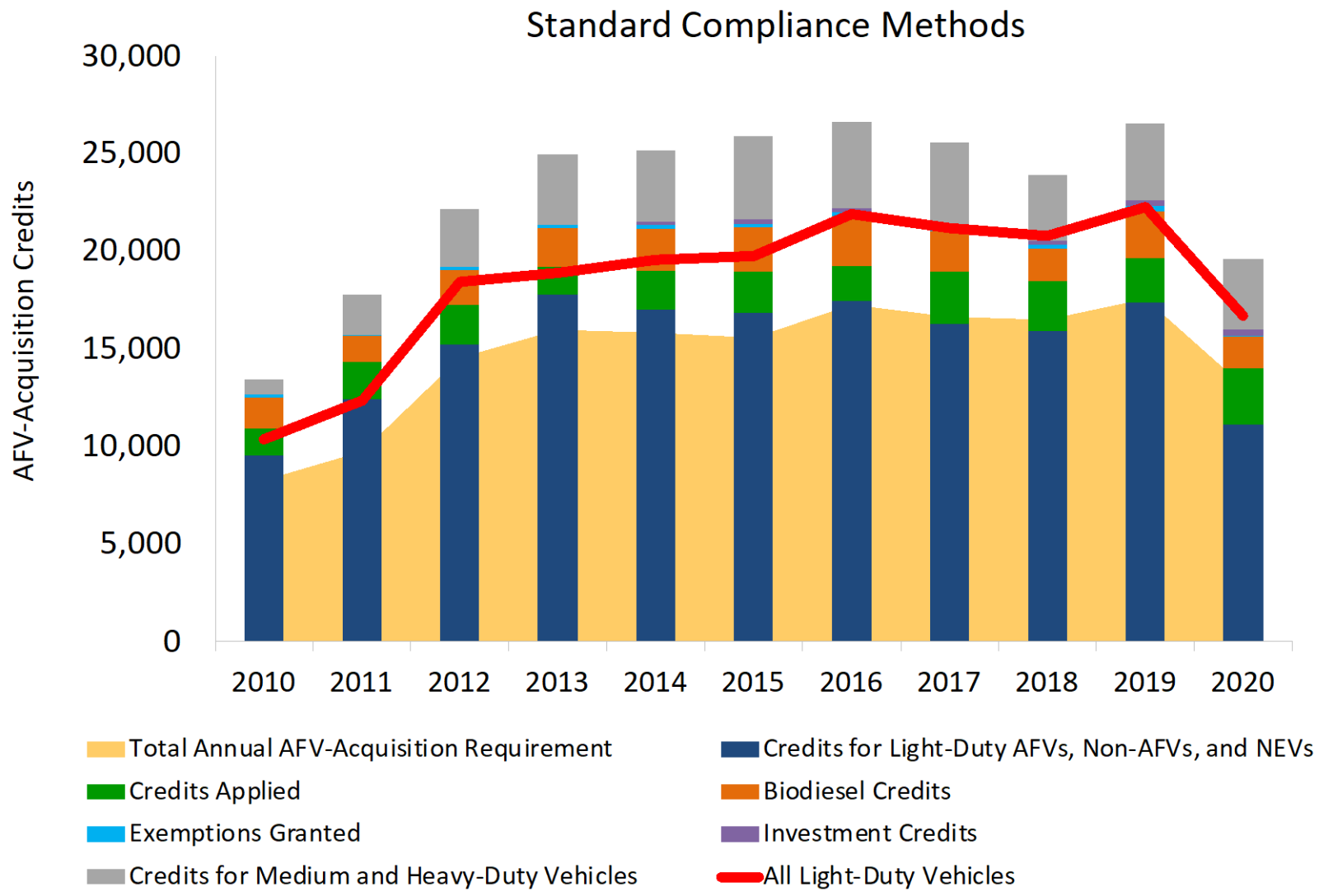


SFP Program Status and Data

SFP Fleet Overall Status

- ~300 fleets submit an annual report each year
- 10-20,000 AFVs acquired annually, most now are FFVs (a few hundred natural gas vehicles/year)
  - Since program began in MY97, 60% FFVs, ~25% Natural Gas Vehicles, ~10% Liquid Petroleum Gas Vehicles
- Over 6M gallons of B100 used annually, several times the amount for which fleets receive credit
- 100% Fleet Compliance
  - Handful of fleets do require some handholding to come into compliance

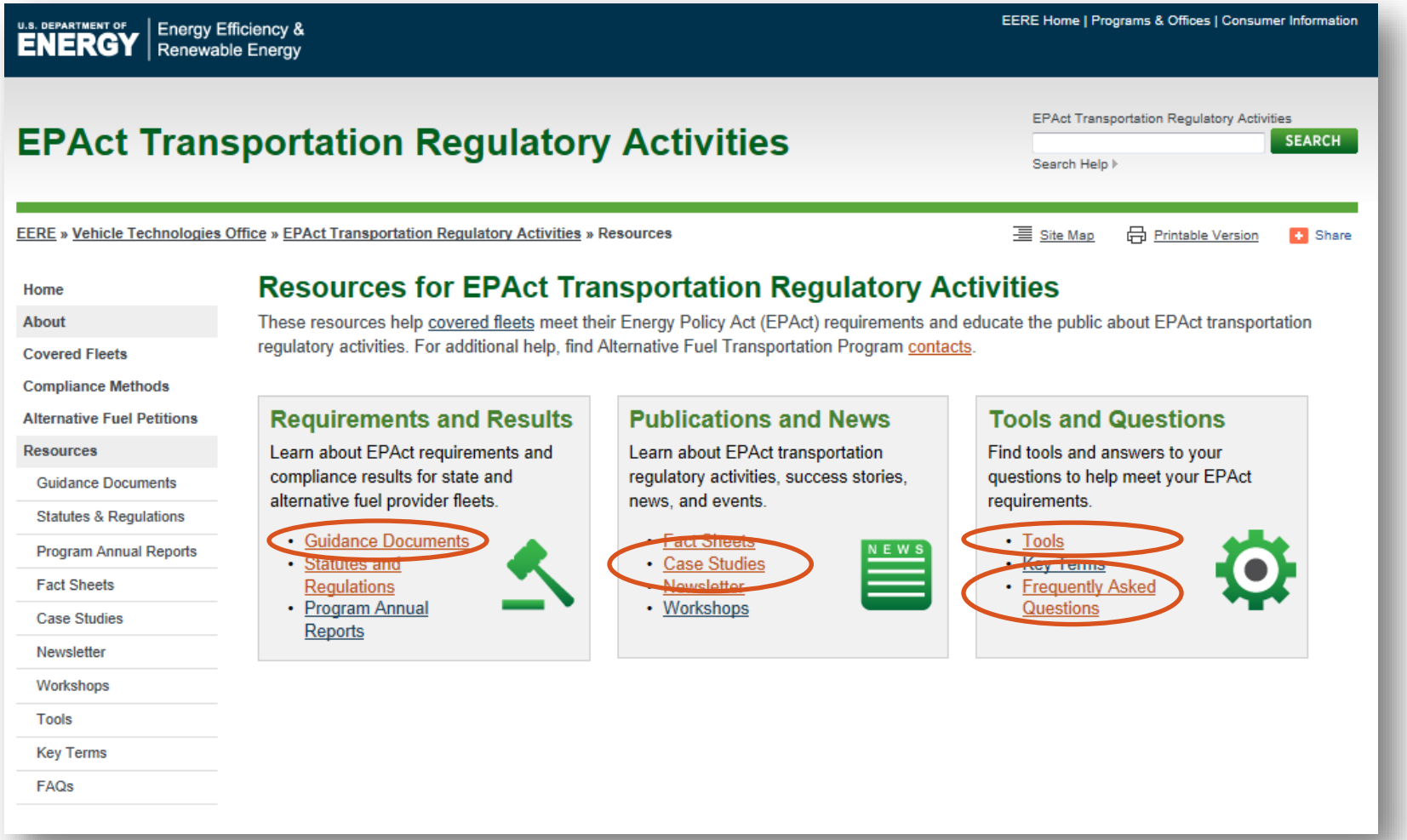
SFP Program Data



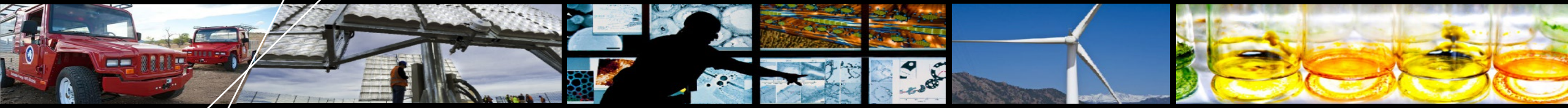
*Purchased credits can be banked for future use.

EPAct Website

www1.eere.energy.gov/vehiclesandfuels/epact/resources.html



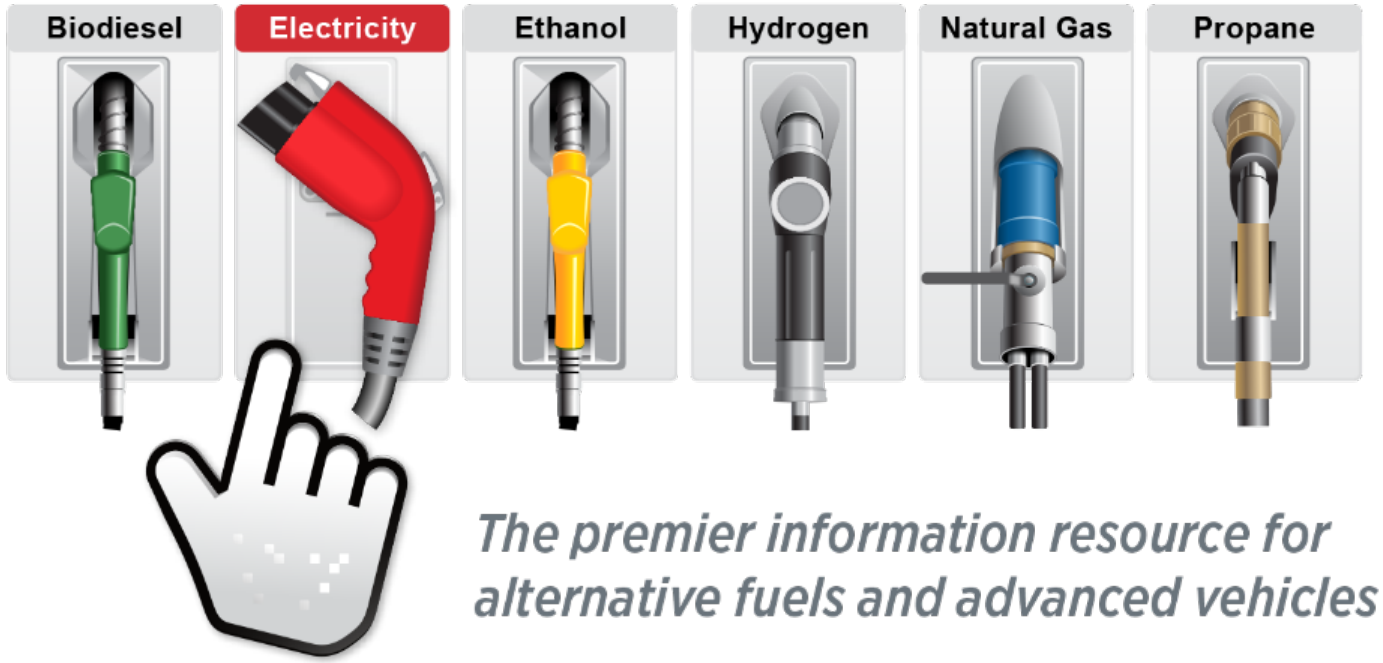
NREL
NATIONAL RENEWABLE ENERGY LABORATORY



Alternative Fuels Data Center (AFDC)

Resources and Tools

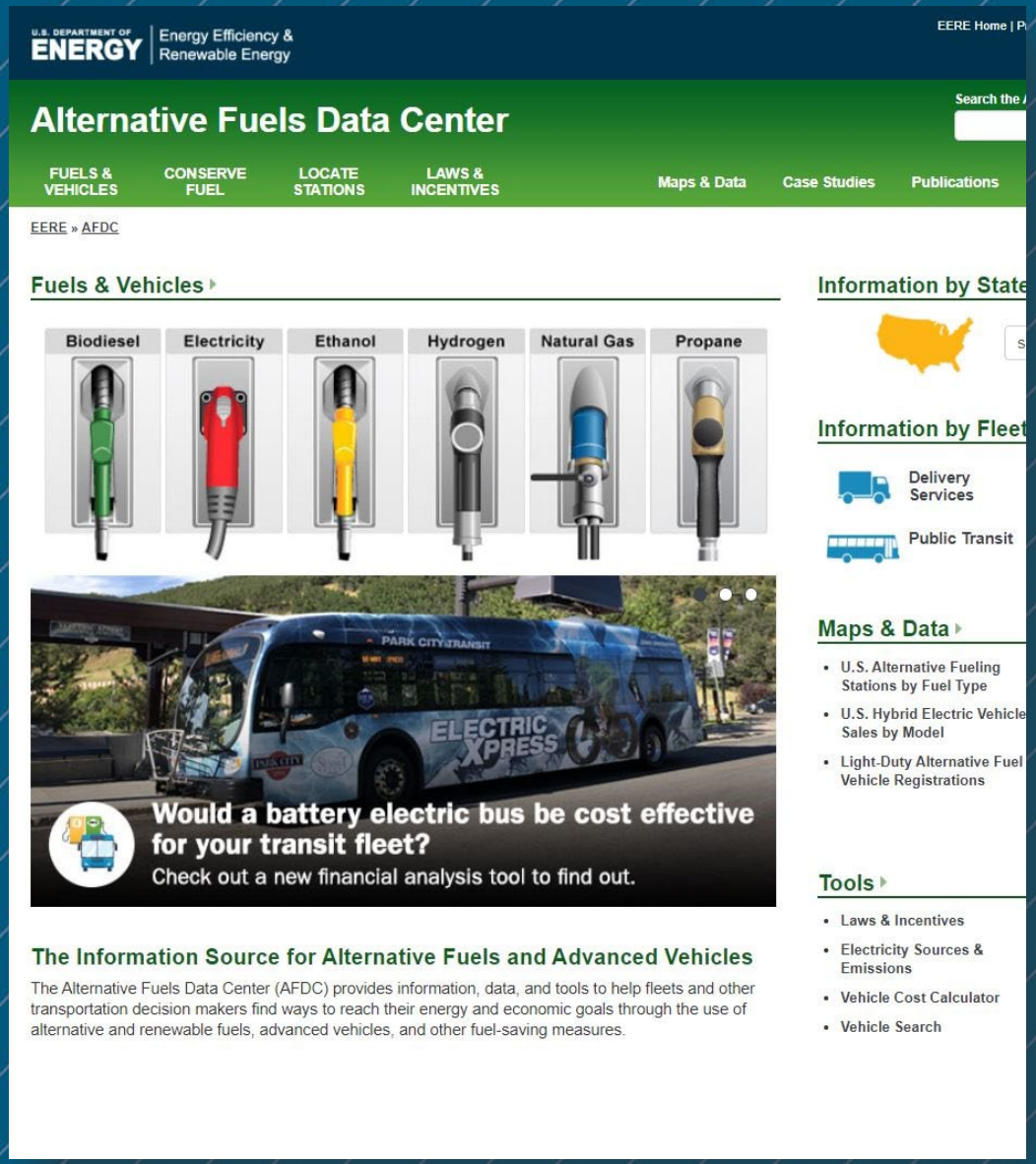
Alternative Fuels Data Center



The premier information resource for alternative fuels and advanced vehicles

afdc.energy.gov

AFDC: Resource Central



AFDC: Go To Resources and Pages to Bookmark

State Information Page – Search!

Find transportation data and information about alternative fuels and advanced vehicles in your state.

Laws and Incentives & Fueling Stations Data

Clean Cities Coalitions

Transportation Fuel Consumption Data

Fuel Production & Bioenergy Production and Infrastructure Data

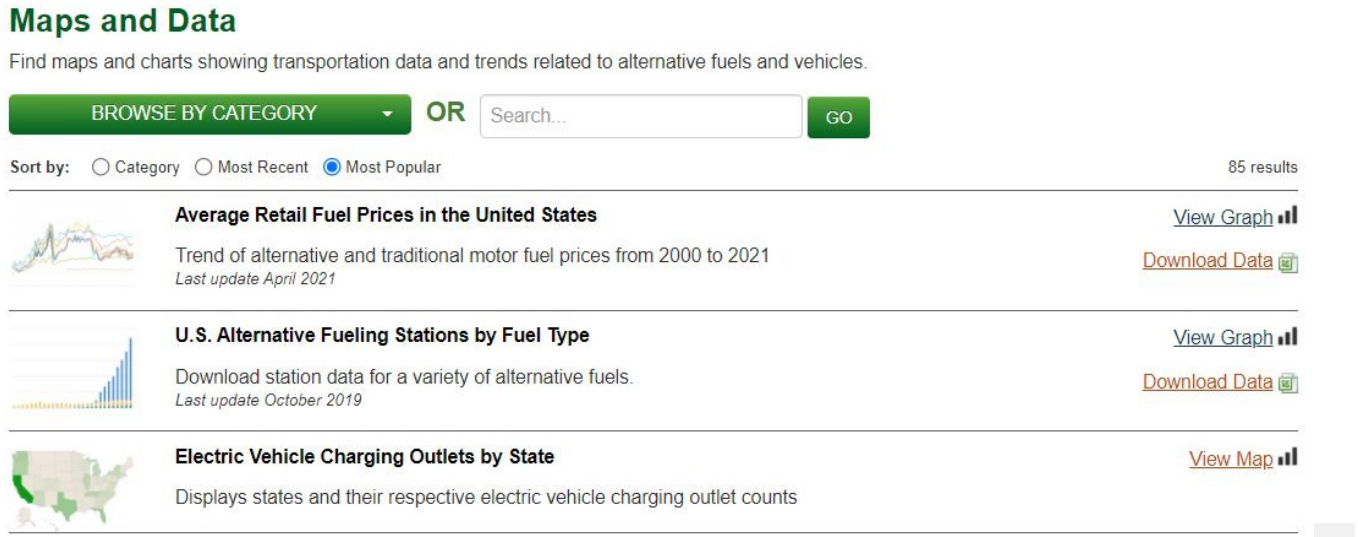
Electricity Sources and Vehicle Emissions

Case Studies on Transportation Projects

afdc.energy.gov/states

Interactive Maps, Charts, and Data

afdc.energy.gov/data/



Types of data:

- **Find maps, graphs, and charts showing transportation data and trends related to alternative fuels and vehicles**
- **Identify information about transportation behavior (e.g., trip making, vehicle miles traveled, commuting)**

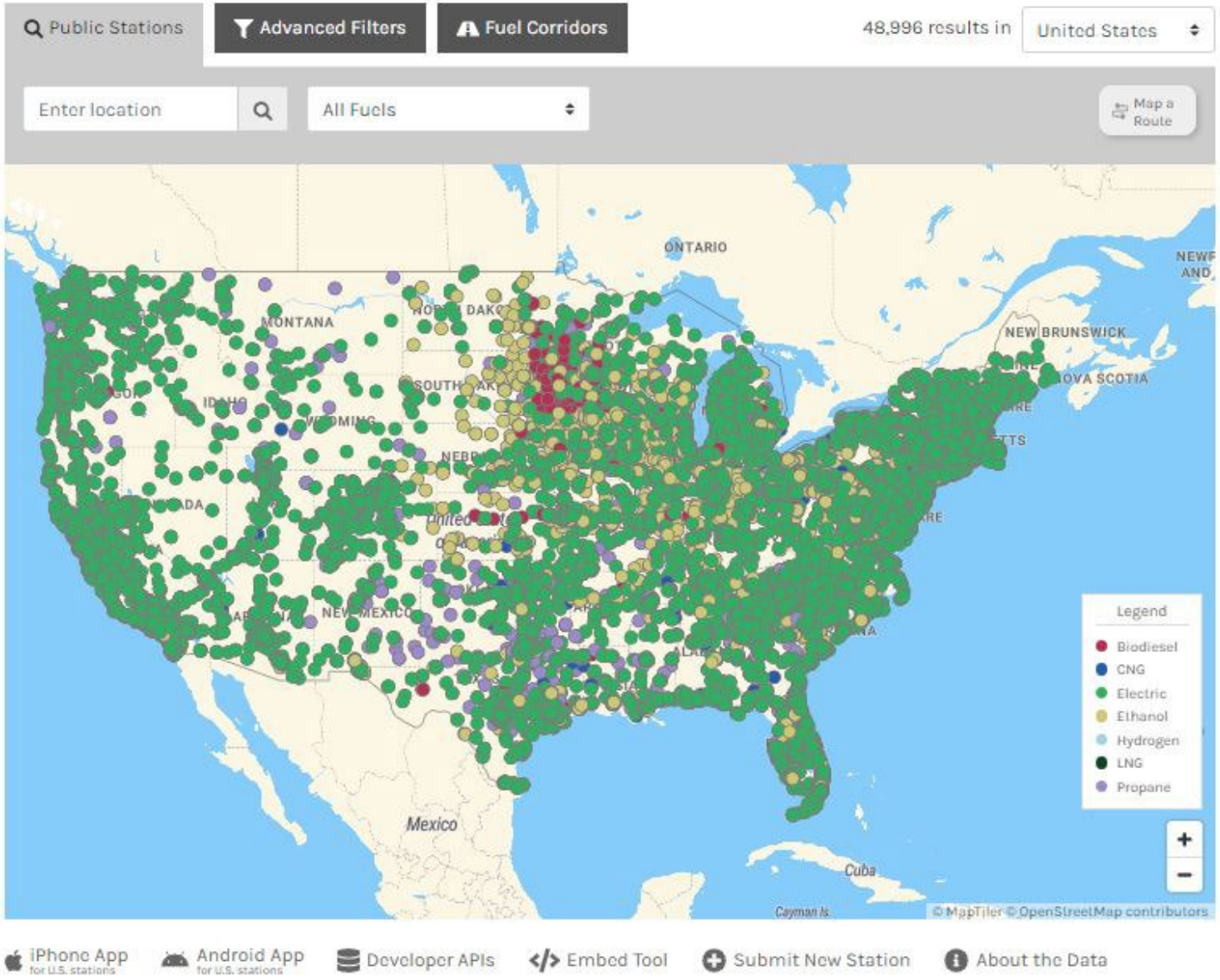
Search and share:

- **Browse by category or keyword search**
- **Sort**
- **Download data and embed**

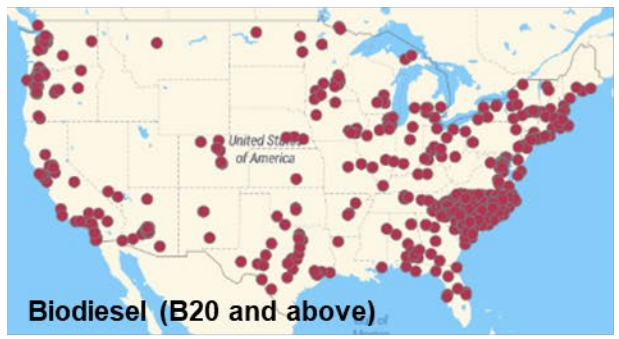
Station Locator

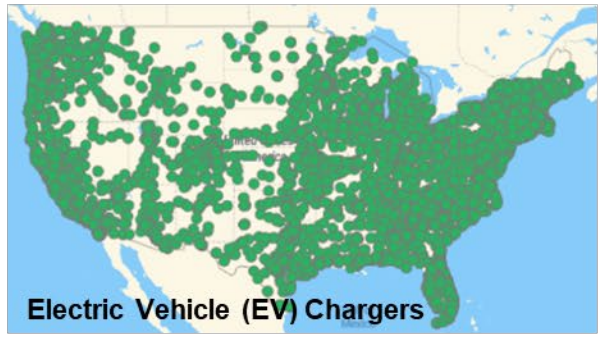
Locate alternative fueling stations and get maps and driving directions.

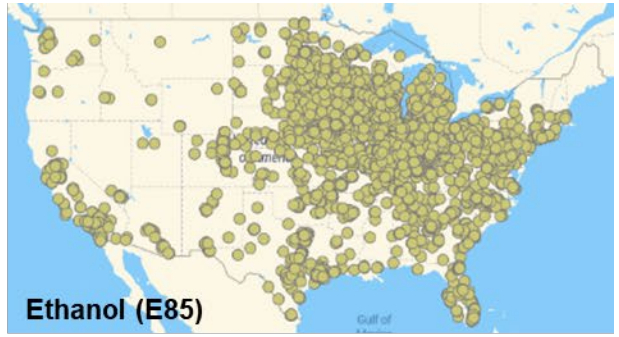
afdc.energy.gov/stations

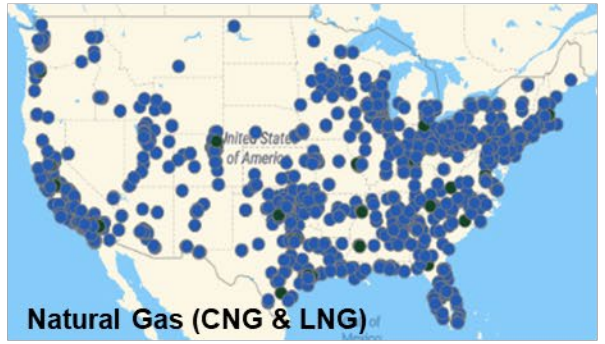


Station Locator Fuel Types

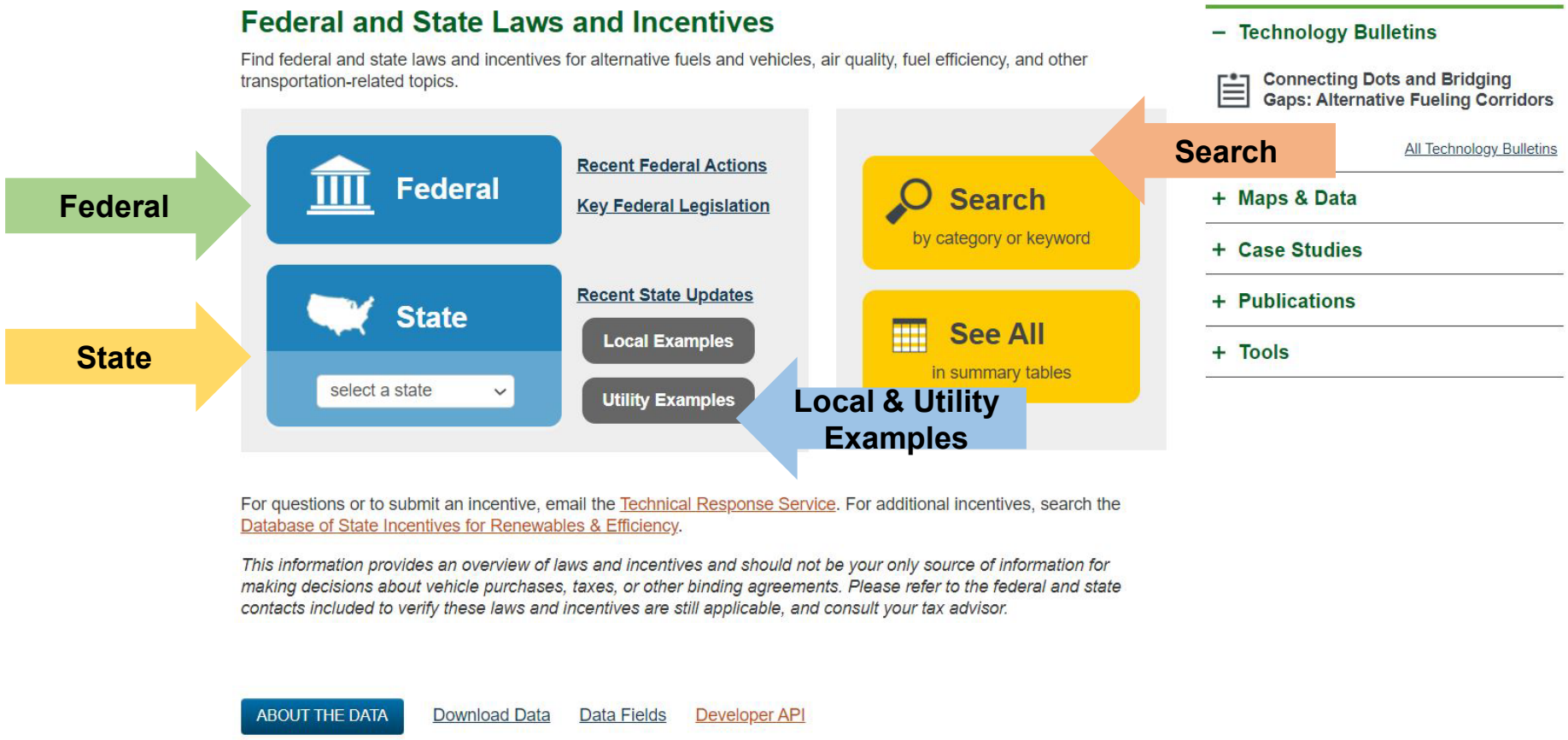






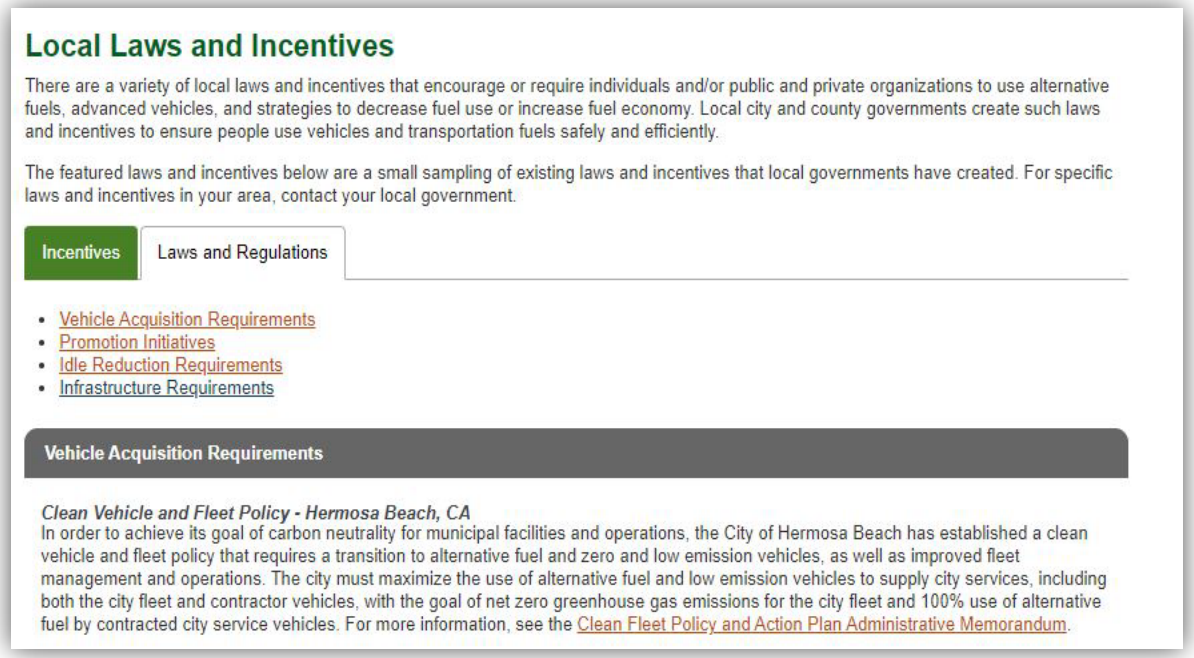


Federal and State Laws and Incentives Database



afdc.energy.gov/laws

Local & Utility Examples



Local Laws and Incentives

There are a variety of local laws and incentives that encourage or require individuals and/or public and private organizations to use alternative fuels, advanced vehicles, and strategies to decrease fuel use or increase fuel economy. Local city and county governments create such laws and incentives to ensure people use vehicles and transportation fuels safely and efficiently.

The featured laws and incentives below are a small sampling of existing laws and incentives that local governments have created. For specific laws and incentives in your area, contact your local government.

Incentives | Laws and Regulations

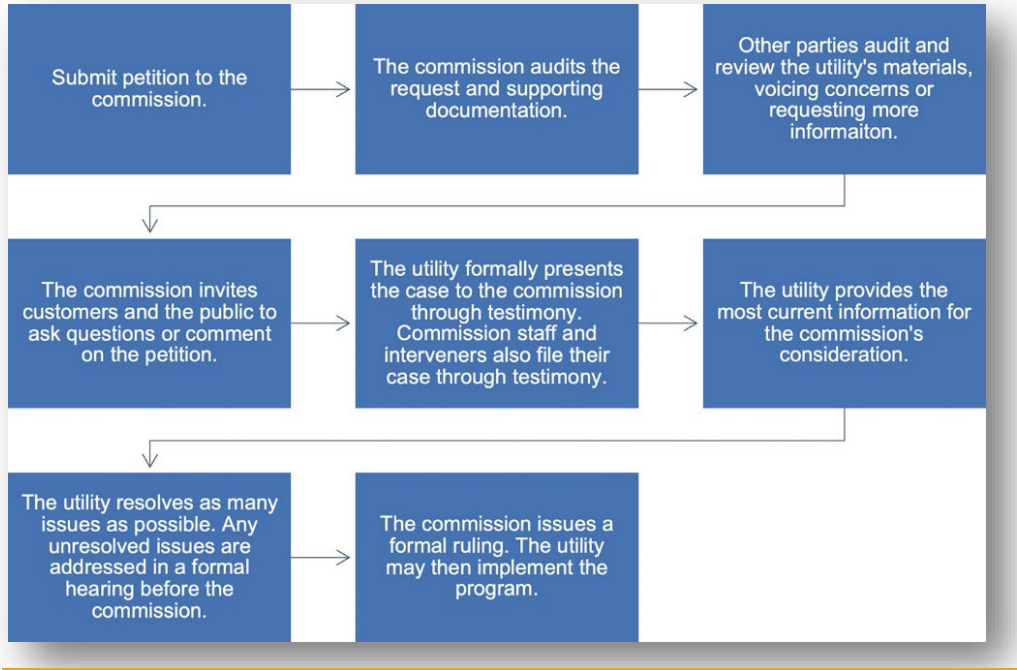
- Vehicle Acquisition Requirements
- Promotion Initiatives
- Idle Reduction Requirements
- Infrastructure Requirements

Vehicle Acquisition Requirements

Clean Vehicle and Fleet Policy - Hermosa Beach, CA

In order to achieve its goal of carbon neutrality for municipal facilities and operations, the City of Hermosa Beach has established a clean vehicle and fleet policy that requires a transition to alternative fuel and zero and low emission vehicles, as well as improved fleet management and operations. The city must maximize the use of alternative fuel and low emission vehicles to supply city services, including both the city fleet and contractor vehicles, with the goal of net zero greenhouse gas emissions for the city fleet and 100% use of alternative fuel by contracted city service vehicles. For more information, see the Clean Fleet Policy and Action Plan Administrative Memorandum.

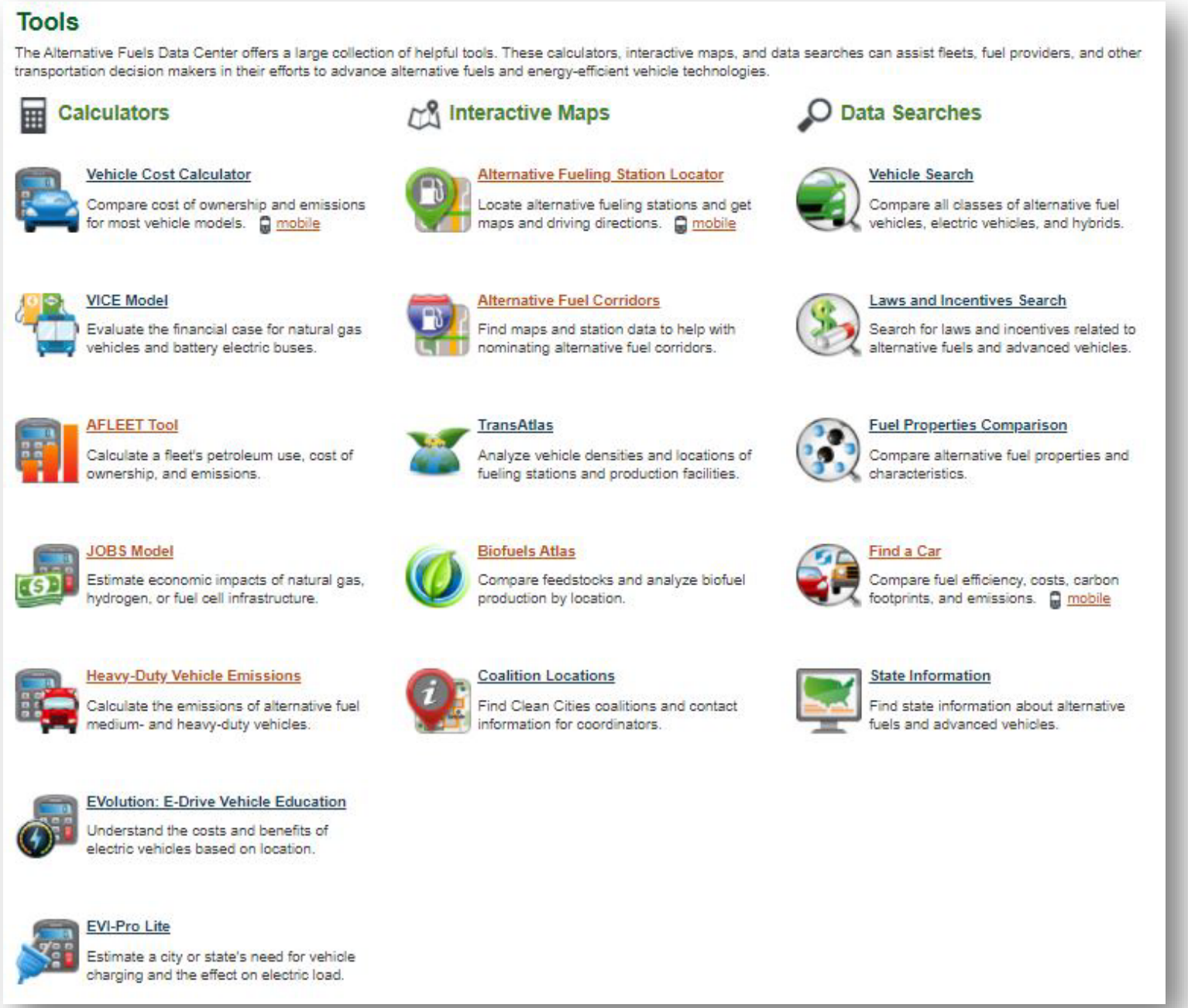
afdc.energy.gov/laws/local_examples



afdc.energy.gov/laws/utility-examples

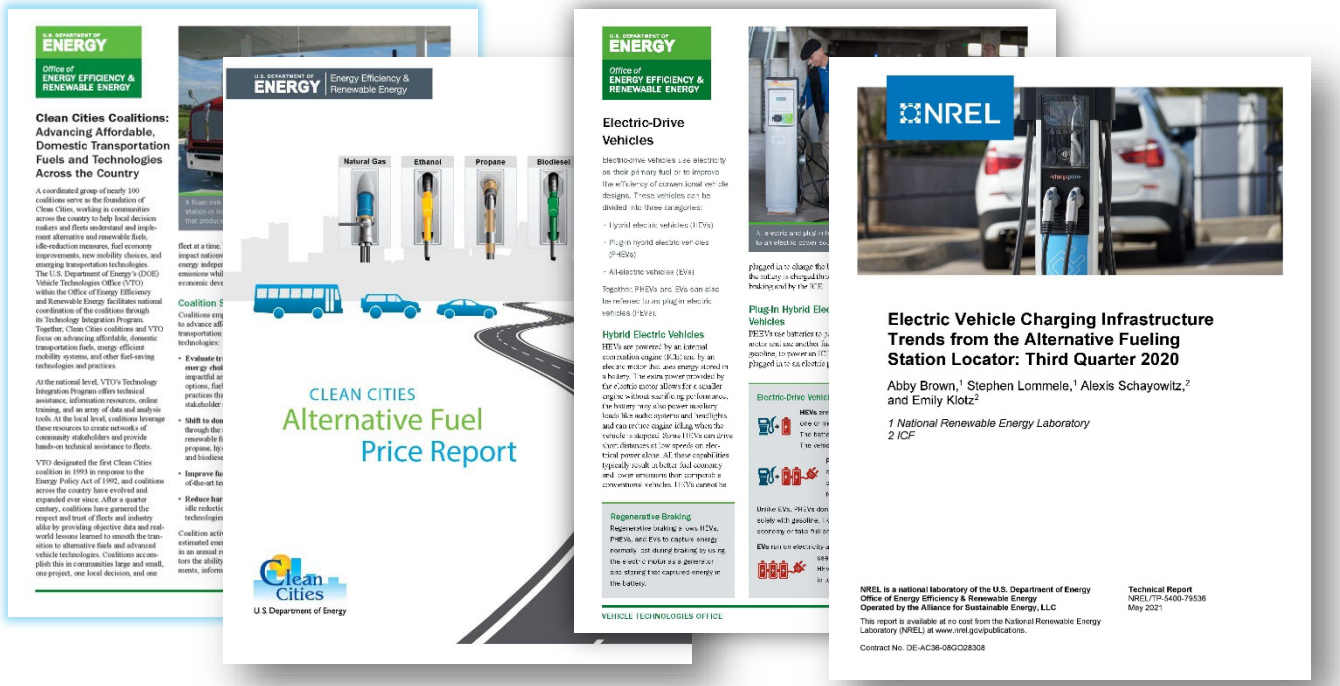
Tools

afdc.energy.gov/tools



JOBS: Jobs and Economic Impacts of Fuel Cells

Publications



afdc.energy.gov/publications

Case Studies

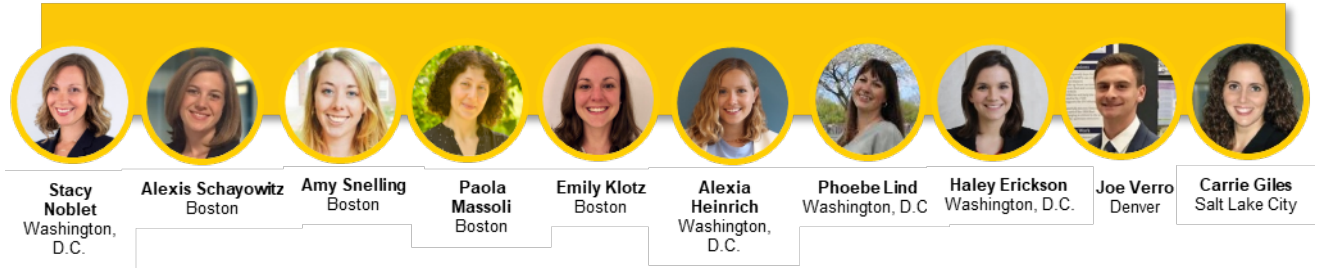
afdc.energy.gov/case

- ✓ Successful alternative transportation technology projects
- ✓ MotorWeek segments
- ✓ Coalition stories
- ✓ Filter by fuel type or application
- ✓ Find Clean Cities YouTube videos

Technical Response Service

Email us at
technicalresponse@icf.com

Leave a voicemail at
800-254-6735



The TRS is here to help you!

- **Serves as a key resource for coordinators, staff, stakeholders, and the general public**
- **Available to help you respond to questions, prep for meetings/events, locate information online, and more**
- **Email or voicemail**
- **48-hour standard response time**

Contacts:

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National Renewable Energy Laboratory

Ted.Sears@nrel.gov

State and Local Climate and Energy Program

Federal EV Procurement Mechanisms

Stephanie Gresalfi

U.S. General Services Administration

EVs and EV Infrastructure: Federal Procurement Mechanisms and Resources

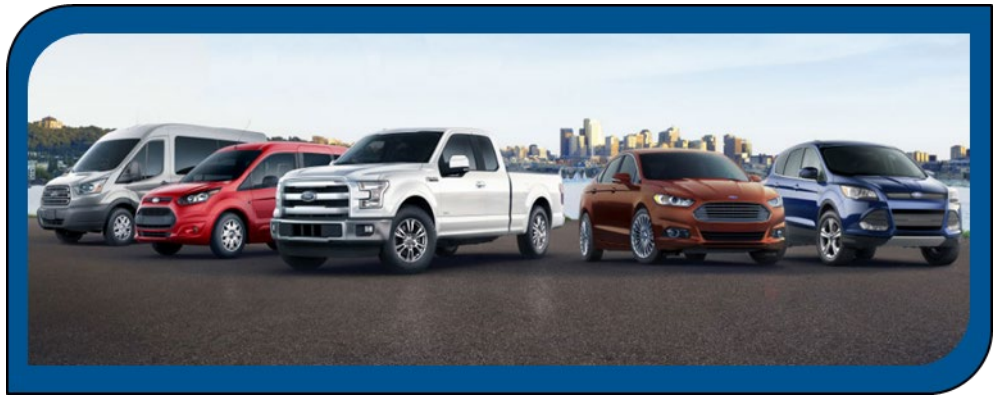
Stephanie Gresalfi, U.S. General Services Administration, Office of Fleet Management

January 27, 2022

Role of GSA

Leverage federal government buying power for effective and efficient government services

GSA Fleet®



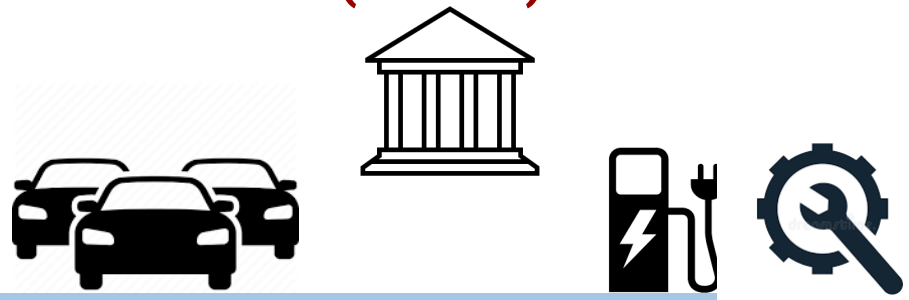
Mandatory source for non-tactical vehicle purchasing for federal agencies & other eligible users; End to end, non-mandatory leasing provider

GSA Advantage!®

Providing access to thousands of GSA-approved contractors and millions of supplies and services at GSA-negotiated prices.

Accessing Electric Vehicles & EV Stations from Federal Sources of Supply

Tribal Organizations (Tribes)



Vehicles & Supplies/Services (MAS)

The Indian Self Determination Act Amendments of 1994 deemed tribal organizations as executive agencies able to access GSA Fleet services to include vehicles (to include ZEVs) accessed through GSA's AutoChoice or leased through gsa.gov/gsafleet and GSA Multiple Award Schedule supplies and services (to include EV Charging Stations)
Authority: Indian Self Determination Act Amendments of 1994; Stafford Act (42 U.S.C. 5121-5207) and 40 U.S.C § 502 (c)

State, Local & Tribal Governments

Vehicles

D.C. Government (40 U.S. Code § 502(a))
All state & local can access when motor vehicles or equipment is used in the performance of counter-drug, homeland security and emergency response activities. Requires a designated State Point of Contact (SPOC) (Sec. 1122 of FY 1994 NDAA**)

Supplies/Services (MAS)

Emergency/disaster preparation, response/major disaster recovery (Stafford Act (42 U.S.C. 5121-5207)); when expending Federal grant funds in response to Public Health Emergencies (42 USC § 247d); IT, law enforcement and security solutions in support of everyday missions (40 U.S.C § 502 (c))

***Note: 1122 Program is managed and approved by the Department of Defense.*

MAS: Multiple Award Schedule
NDAA: National Defense Authorization Act
U.S.C.: U.S. Code

FY22 Awarded Plug-in Hybrids and BEVs – By Vehicle Type

The table below displays the EVs that GSA offers to federal agencies listed by number of configurations and lowest price to aid your negotiations.

Vehicle Type	PHEV	BEV	Fuel Cell	Price Range	FY22 Average Discount Below Invoice
Sedans	1	3	-	$22,293 - $58,422	10.68%
SUVs	4	3	-	$24,474 - $59,092	11%
Van and Light Truck	1	4	-	$21,137 - $57,247	2.87%
Medium-Duty, Heavy-Duty, and Specialty	-	10	-	$35,651 - $976,00	N/A
Bus (Shuttle, School & Transit)	-	22	3	$84,279 - $1,244,287	N/A

Main Brands

Ford, Tesla, Toyota, Nissan, Kia, Chevrolet, Mitsubishi, Hyundai, GMC

Challenges to Overcome

Challenge	GSA Solution
Upfront Costs	Unique Financing Options & Supplier Partnerships
Model Availability	Supplier Relationships Focus on Infrastructure
Coordination & Change	Frequent Training and Assistance with Planning
Infrastructure	EVSE Blanket Purchase Agreement (BPA) & Complimentary Design/Construction Solution

GSA Fleet Support for ZEV Deployment

ZEV Models Mirroring Commercial Marketplace (strong supplier relationships)	Current EVSE BPA & Future EVSE Complete Solution	Leasing Services & Support
Real Property Partnership & Infrastructure Alignment	Live & Recorded Training	Fact Sheets, Guides & Engineering & SME Support

Federal Electrification Resources

GSA Fleet

[GSA's Vehicle Solicitations]

[AFV Guide]

[Zero Emission Vehicle Fact Sheet]

Provides requirements, awarded pricing, make/model which informs Zero Emission Vehicle purchasing decisions & price comparisons

[FEMP EV Resources]

[FEMP Workplace Charging Policy]

[EVSE BPA Awards, RQQ & Product Guide]

Provides information on charging station pricing, data subscription pricing, vendors, policy and manufacturers to inform Electric Vehicle Supply Equipment decisions.

[Green Procurement Complication]

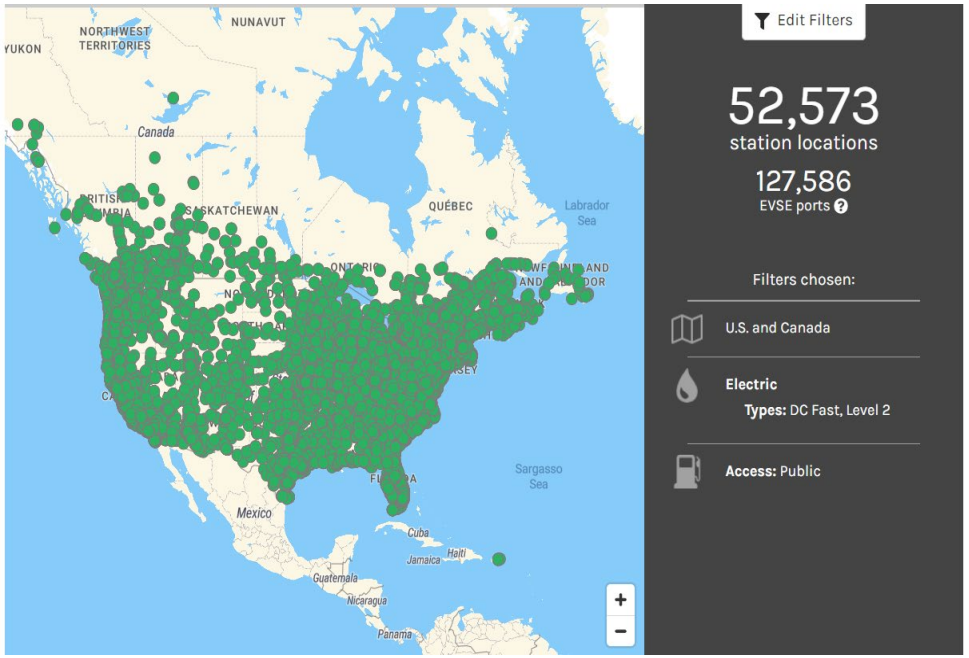
While waiting for ZEV orders, the green procurement guide offers ways to improve the environmental impact of your fleet through checking oil regularly and checking tire pressure to increase vehicle mileage.

Email gsafleetafvteam@gsa.gov for sample statements of work, market research. View GSAAdvantage and search "EV Charging Stations" or email for a full list of EVSE Offerings.

EV Charging Infrastructure Landscape

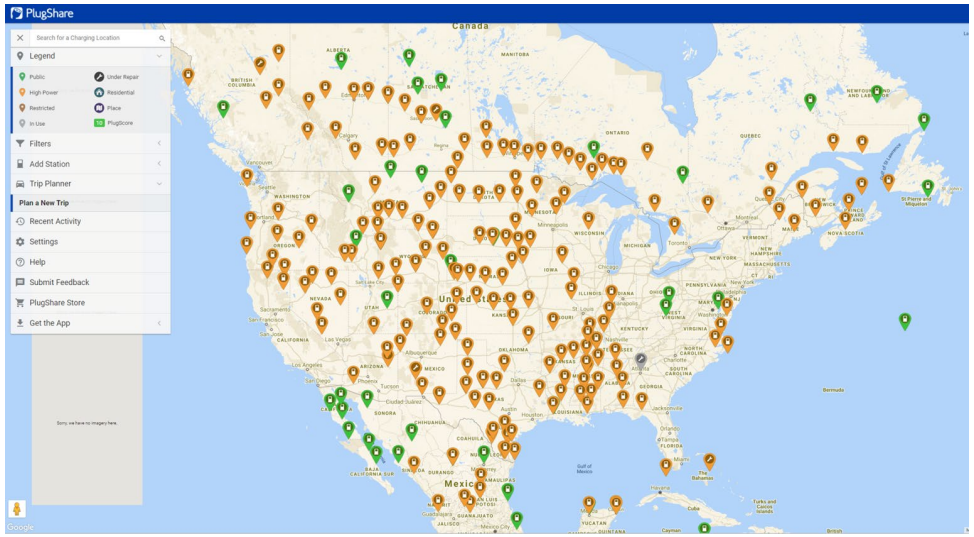
State, local, and tribal governments can access these two charging locators to aid the EV planning transition in their region.

Department of Energy Alternative Fuel Locator



Filter by location, fuel type, status access (e.g., private vs. public), and station status (e.g., planned vs. available)

PlugShare Charger Locator



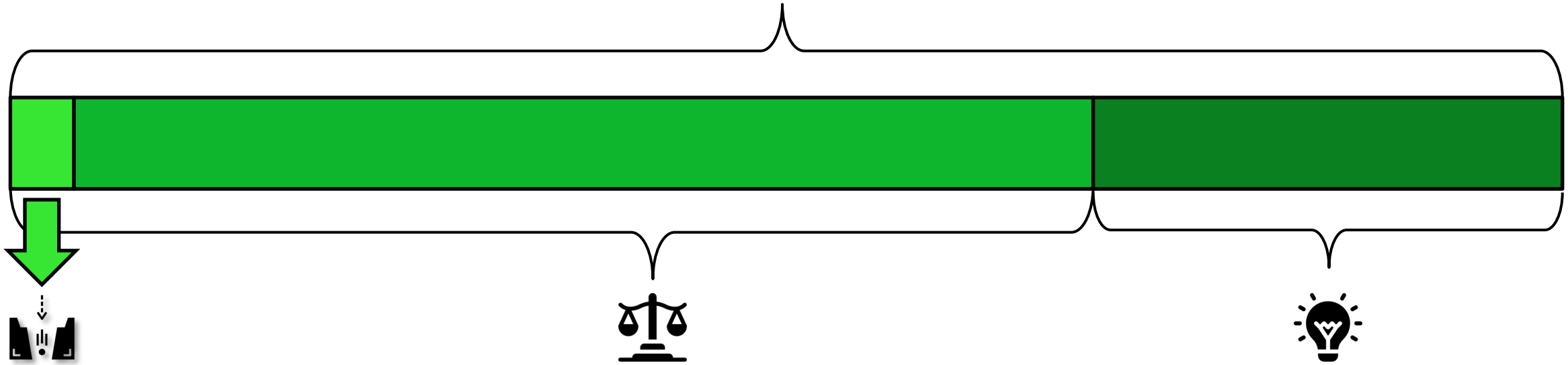
Filter by network, plug type, minimum power, and location type (e.g., hotel, shopping) Also, plan routes!

WEX & Voyager-connected ChargePoint radio-frequency identification (RFID) cards are now accepted as a form of payment at ChargePoint and its roaming networks EVBox, EVgo, evconnect, Flo and Greenlots.

Bipartisan Infrastructure Bill: States Receive $7.5B in EVSE Funding

$7.5B Total

Biden-Harris Electric Vehicle Charging Action Plan
From Bipartisan Infrastructure Law enacted November 15th 2021



10% of $5B ($500M) set-aside each year
Goal: Secretary to provide grants to **fill gaps** in charging network

$5B Formula Funding
Goal: **Build** national charging network

State Fact Sheets detail funding each state will receive

$2.5B Competitive Grants
Goal: Support **innovative** approaches, **rural charging**, improving air quality, and increasing access in **disadvantaged communities**

Upcoming Guidance: *By* ***February 11, 2022****, the Department of Transportation (DOT) will publish guidance for States and cities to strategically* ***deploy charging stations along highways.***

Maximize Funding by Utilizing State and Utility/Private EVSE Incentives

Look for incentives in your city, state or municipality - most support **state/local governments and tribes or are for disadvantaged communities**

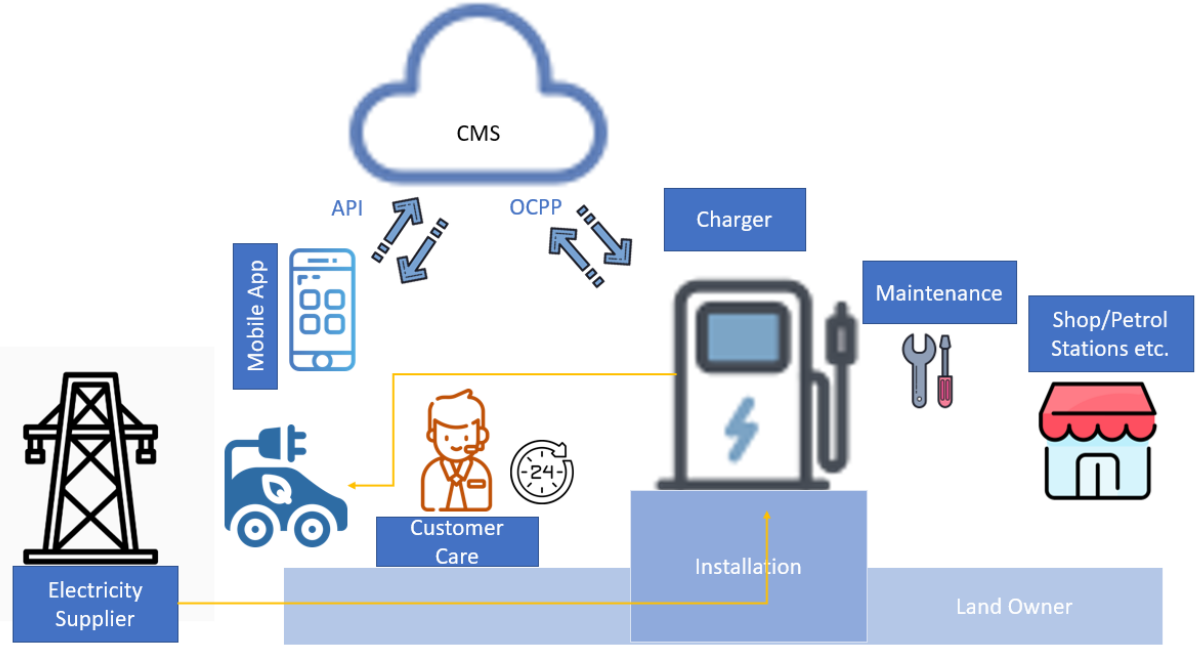
SOUTHERN CALIFORNIA EDISON
Energy for What's Ahead

CHARGE READY TRANSPORT

Clean Energy to Fuel Southern California's Electric Vehicle Truck and Bus Fleets

Utility agreements

Charging as a Service



Closing Remarks

"[We] are not here merely to make a living. [We] are here in order to enable the world to live more amply, with greater vision, with a finer spirit of hope and achievement. [We] are here to enrich the world..."

-Woodrow Wilson

Stephanie Gresalfi

stephanie.gresalfi@gsa.gov

State and Local Climate and Energy Program

Question and Answer Session

Upcoming Webinars!

February 10: Learn about EPA's Tribal Greenhouse Gas Inventory Tool

February 15: Learn about EPA's Local Greenhouse Gas Inventory Tool

February 22: EPA CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA) (registration coming soon)

March 8: Electrification in the Urban Environment, Making Room for Express Delivery (registration coming soon)

www.epa.gov/statelocalenergy/state-local-and-tribal-webinar-series

Connect with the State and Local Climate and Energy Program

Andrea Denny
U.S. Environmental Protection Agency
Denny.Andrea@epa.gov

State and Local Climate and Energy Program

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Sign Up for Our Newsletter | www.epa.gov/statelocalenergy/state-and-local-energy-newsletters

Follow Us on LinkedIn | https://linkedin.com/showcase/epa-state-and-local-climate-and-energy-program