



**Session #5: Charging Strategies &
EVSE Readiness Planning**

June 23, 2022





**SUSTAINABLE
FLEET
TECHNOLOGY**

WEBINAR SERIES 2022

Sessions through December 01, 2022



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CONFERENCE & EXPO 2022

Live in Durham NC: August 30 – September 01, 2022

<https://www.sustainablefleetexpo.com/>



2022 SFT Webinar Series Sponsors



Format

- Q&A at the end
- Submit questions and comments to “Panelists”
- Scheduled for 2:00p-3:00p
- Handout
- Recording



Charging Strategies & EVSE Readiness Planning June 23, 2022

2:00-2:07 **Rick Sapienza, NCCETC**--Introduction and Welcome

2:07-2:17 **Heather Donaldson, Black & Veatch**—General Considerations

2:17-2:29 **Anne Blair, The Electrification Coalition**—Challenges & Opportunities

2:29-2:39 **Mark Stevens, City of Sacramento CA**— Sacramento's Strategy & Lessons Learned

2:39-2:50 **Keith Kerman, New York City DCAS**—NYC's Fleet EV & Charging Initiatives

2:50-? **Q&A**





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Heather Donaldson
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- Managing Director of Electricity Industry Transformation at Black & Veatch Advisory
- 25-year electricity industry veteran, supporting clients as they embrace transformational opportunities
- Leads solution design and delivery in areas of transportation electrification, renewable electric supply and grid modernization
- Previous experience with the California Independent System Operator, Southern California Edison and the California Public Utilities Commission
- Leadership consulting roles with Accenture, The Structure Group and APX
- BS in Electrical Engineering from South Dakota School of Mines & Technology and an MBA from the University of Utah

Charging Strategies & EVSE Readiness Planning

General Considerations

Heather Donaldson

June 23, 2022



Driving Factors for Fleet Electrification Planning



Positive Fleet Electrification Business Case and Savings

Conversion to electric trucks will result in cost savings for fleet owners and operators in select jurisdictions even without incentives.



Transportation Electrification Policy Action and Company Goals Requiring Fleet Conversion

Several jurisdictions are making policies to reduce and, in some cases, eliminate internal combustion engine vehicles and many companies are adopting decarbonization roadmaps including transportation electrification



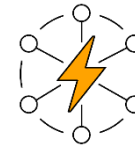
Constrained Electric Fleet Vehicle Supply

There is a large demand for electric trucks especially last mile delivery vehicles with orders needing to be placed over a year in advance



Validate Fleet Electrification Timing and Create a Roadmap

Calculate the business case across locations and use cases to prioritize electrification and select pilots to inform longer-term electrification plan



Incentives & Favorable Electricity Rate Structures

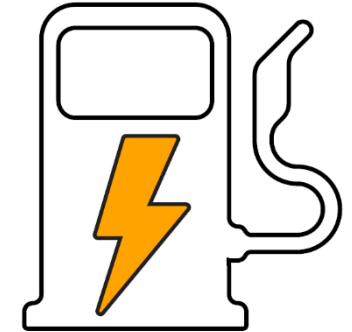
Available funding at Federal and State levels to accelerate transportation electrification and special utility rates aimed at reducing charging costs will only be available for a limited time

Simplistic View of Electrification Planning and Design

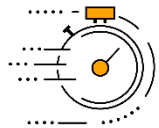
ICE Vehicles



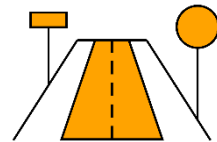
Electric Vehicles



Duty Cycle / Use Case



Time of Vehicle Use



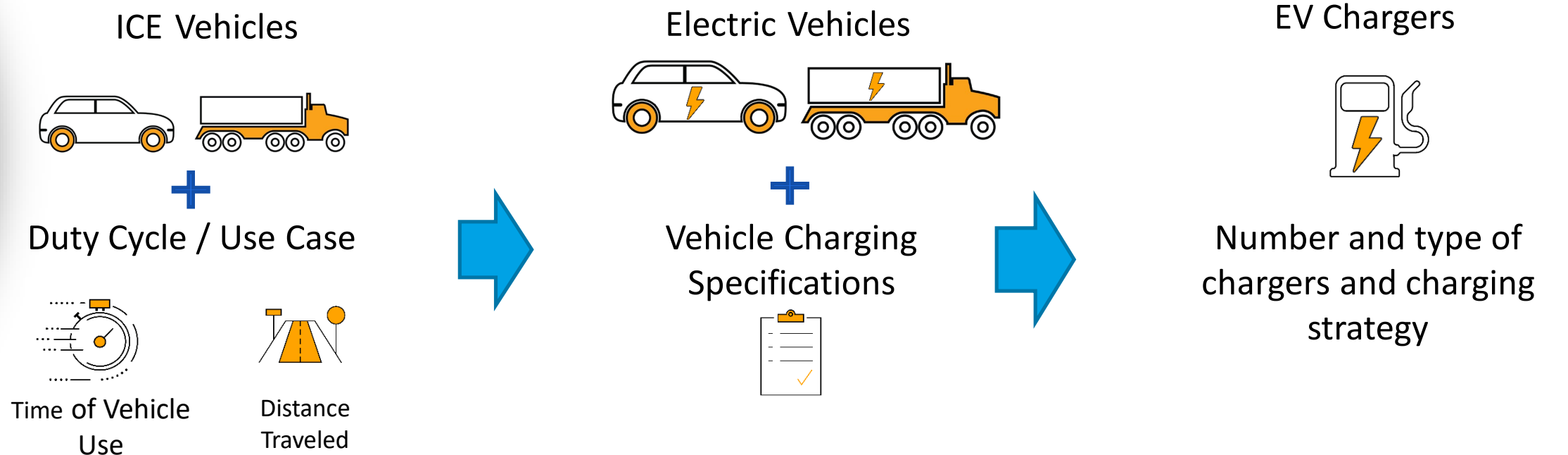
Distance Traveled

Vehicle Charging Specifications



Number and type of chargers and charging strategy

Actual View of Electrification Planning and Design



Additional Considerations

Local Climate
Current & Future Pay Load
Future Range
Future Fleet Type & Size
Charger Use Logistics

State and Local Vehicle Incentives
Federal Incentives
Environmental Credits
Future Vehicle technologies
Ancillary Charging

Utility Programs
Future Utility Rate Changes
Electricity Reliability
Solar + BESS
Future Charging technologies



Summary

- Different drivers are contributing to fleet electrification
- Several factors affect the business case and therefore the EVSE requirements and charging strategy

Thank you!

Contact Us

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Anne Blair

404-849-7929

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- Policy Director at the Electrification Coalition
- Focuses on promoting programs that will transform the transportation sector
- Previous transportation experience with Southeast Energy Efficiency Alliance and Southern Alliance for Clean Energy
- Serves on multiple board including the EV Club of the South, Mothers and Others for Clean Air and EarthShare of Georgia
- Bachelor's Degree from Randolph-Macon Women's College and Master's Degree in Environmental Law and Policy Vermont Law School



Electric Vehicle Charging: Challenges & Opportunities

Anne Blair, Director of Policy



Electrification
Coalition

Who We Are

The **Electrification Coalition** is a nonpartisan, nonprofit organization that advances policies and actions to accelerate the widespread adoption of electric vehicles in order to overcome the economic, public health, and national security challenges caused by our dependence on oil.



EV Adoption Programs Around the U.S.

The **Electrification Coalition** is a nonpartisan, not-for-profit group committed to promoting policies and actions that facilitate the deployment of electric vehicles on a mass scale.



Technical Lead

Climate Mayors EV Purchasing Collaborative



State EV Policy Accelerator

NV, MI, PA, VA, NC, GA, FL



Electrification Advisor

Bloomberg American Cities Climate Challenge



Lead Electrification Partner

Smart Columbus



Project Lead

Drive Electric Northern Colorado
Drive Electric Orlando



Pilot Program Leader

Freight and Goods Delivery Electrification

Understanding the Challenges & Creating Opportunities

Budget Constraints	Capital vs operational expenses; dependency on grants
Difficulty in equity planning	Limited knowledge, tools and capacity to assess needs and deploy infrastructure
Conflicting transportation priorities	Single occupancy/transit/carsharing
Permitting hurdles and delays	Zoning, access
Conflicting Ownership	Siting jurisdiction

Siting Considerations

- 1 Electrical Capacity
- 2 Existing Infrastructure
- 3 Amenities
- 4 Accessibility

Electrical Capacity Considerations

Electrical Load Capacity

The term "electrical load capacity" refers to the total amount of power provided by the main source of electricity for use by the building's circuits and the lights, outlets, and appliances connected to them.



Most homes have an average of 100 – 200 amperage capacity. Small, older buildings may have 200 – 400 amperage capacity.

Level 1 Charging = 110-120V, 15-30 amps

Level 2 Charging = 240V, 30-50 amps

DC Fast Charging = 480V



Proximity to Amenities

Forward-Thinking Planning



Hosts must be able to afford electricity as well as network fees and warranties

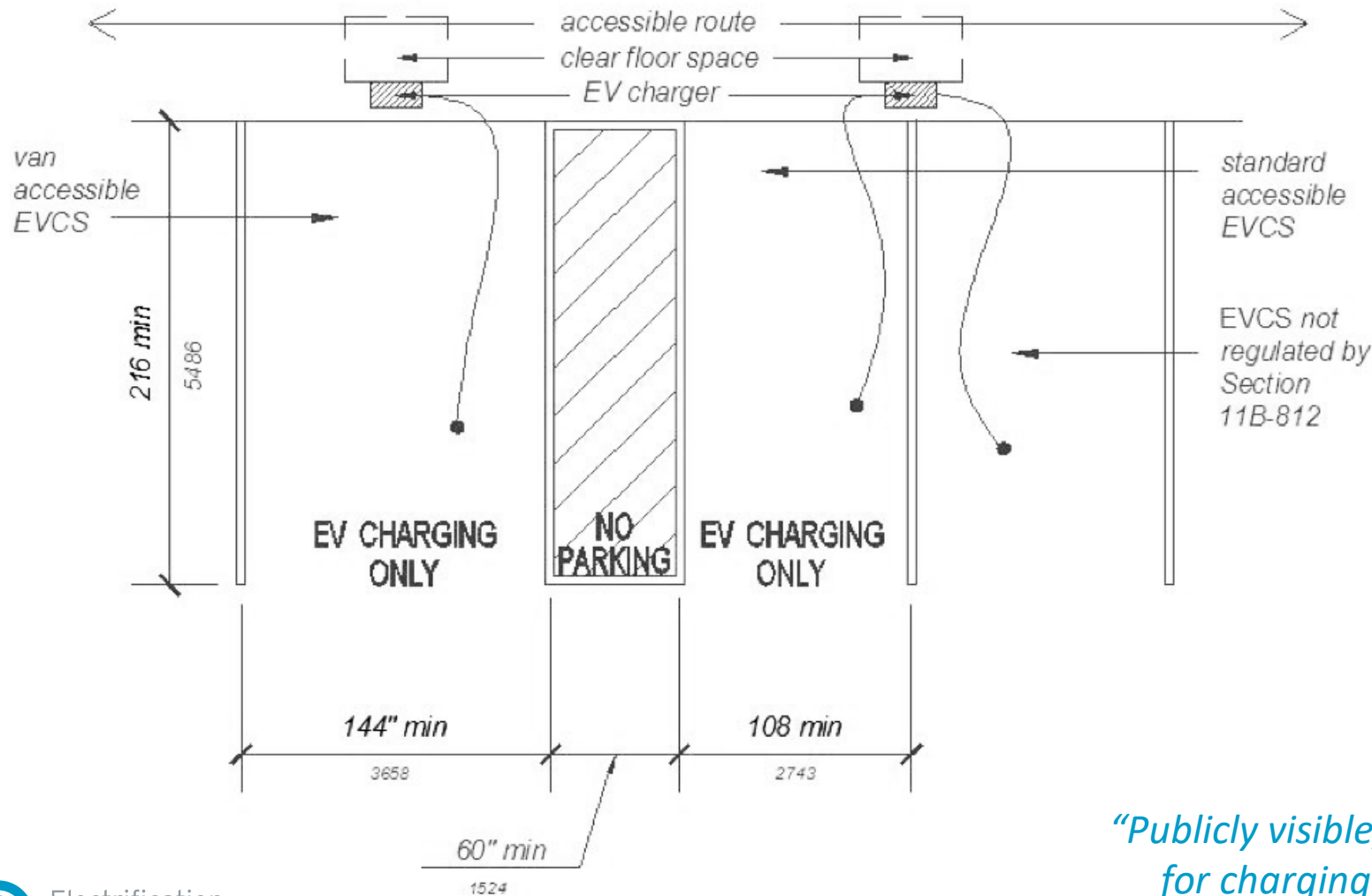


Hosts may collect feedback and data to understand how their charging infrastructure is performing



Hosts must hire people who are capable of charger maintenance or budget for a manufacturer maintenance plan

Accessibility Considerations



- Parking stall should be 8x18 feet for a car and 11x18 feet for a van
- Accessible route width should be a minimum of 36 inches wide
- Maximum 1:20 (5%) running slope and 1:48 (2%) cross slope
- Accessible vehicle spaces 1:48 (2%) in all directions and 90-inch clearance for vans
- Operable with one hand and not requiring grasping, pinching, or twisting of the wrist or force more than 5 lbs
- A ramp or curb-cut must be accessible in order to allow for operation of charging station

“Publicly visible, accessible, and available to drivers for charging (24 hours a day, 7 days a week)”

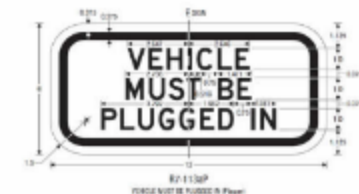
Signage Guidance

- Some cities have developed **standards in their code, or simply guidance** to recommend certain information be included in signage, or specific signs, stencils, etc. to be used
- **Can help ensure consistency** between City-owned chargers and privately-hosted chargers in retail centers, workplaces, etc.



HOW-TO GUIDE:
*electric vehicle
charger installation*

Signage & Paint



EVSE Project Highlights

- San Antonio Zoo: Blink and the city allows for the deployment of 202 Level 2 charging stations and 3 DC fast-chargers throughout the city, furthering the city's Electric Vehicle San Antonio Program (EV-SA).
 - Installed on City property to serve as an amenity and “visible sign that we are committed to clean and technologically advanced transportation choices.”
- Melrose, Mass. installed 15 mounted EV chargers in 2021, and early data suggests that mounting EVSE chargers on existing utility poles will reduce installation costs by as much as 55% -70%.¹⁰
- Los Angeles has installed more than 430 chargers on streetlights, and as of November 2021, at least five other cities had installed charging infrastructure on utility poles or streetlights or were planning pilots for this purpose.



Addressing Community Engagement & Needs

- **Partner with national consultant firms and equity experts** to set up working groups focused on ensuring equity is integrated in deploying public charging infrastructure, engage community groups, chambers, and other institutions in the area. (Richmond, Orlando)
- **Develop suitability analyses** to understand neighborhood needs and best use cases for projects, including infrastructure mapping, including an equity score index combined with community feedback (Indy).
- **Grant outreach and support campaigns:** City and apartment community partnerships to support charging infrastructure grants applications, workshops, newsletters, direct outreach to tenant associations, and apartment associations (Dallas)
- **Explore communal e-mobility strategies** for cities across the U.S. such as expanded EV carshare programs: equity-focused, income-tiered electric **carshare program** Good2Go (Boston) and
- Affordable Mobility Platform (AMP), a partnership with affordable housing agencies to **advance the electrification of transportation in underserved communities**, including EV carsharing and dedicated carsharing chargers can also serve community members, effectively improving the regional charging network (Las Vegas)



Additional opportunities

- Identify innovative financing options to create accessibility to charging projects
- Increase capacity through company partnerships to increase knowledge capacity to support projects
- Community Engagement – Early and often!
- Create and Identify Innovative E-Mobility Solutions: carsharing or infrastructure for transit systems to advance electrification.

Assess & Plan

- Start NOW!
- Find partners in your community
- Talk with your utility about the current state of electricity, distribution in your area
- Identify sites
- Identify funding opportunities
- Continuous learning – educate yourself





Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite

This tool provides a simple way to estimate how much electric vehicle charging you might need and how it affects your charging load profile.

Charging Need

Load Profile

How Much Electric Vehicle Charging Do I Need in My Area?



State



City/Area



Vehicles



Results

Start Over

Your Results

In the Indianapolis area, to support 100,000 plug-in electric vehicles you would need:

2,274 Workplace Level 2 Charging Plugs

1,398 Public Level 2 Charging Plugs
There are currently 196 plugs with an average of 2.5 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

167 Public DC Fast Charging Plugs
There are currently 65 plugs with an average of 4.3 plugs per charging station per the Department of Energy's [Alternative Fuels Data Center Station Locator](#).

Change Assumptions

Plug-in Electric Vehicles (as of 2016): 1,500

Light Duty Vehicles (as of 2016): 1,500,200

Number of vehicles to support

Vehicle Mix

Plug-in Hybrids
20-mile electric range %

Plug-in Hybrids
50-mile electric range %

All-Electric Vehicles
100-mile electric range %

All-Electric Vehicles
250-mile electric range %

Total 100%

EC Resources

www.ElectrificationCoalition.org

- EV Policy Showroom
- SPARK Toolkit and DRVE Tool
- Guidebook: EVs in Rural Communities
- Toolkit: Electrifying Transportation in Municipalities
- Electrification Coalition Business Council
- Charging Infrastructure Webinar Series



National EV Charging Infrastructure Funding (NEVI)

Bipartisan Infrastructure Law

Dedicated EV Funding:

1. \$5 billion for EVSE build-out along highways (NEVI)
2. \$2.5 billion competitive grants; 50% set aside for community grants with priority for rural and underserved communities
3. \$2.5 billion for electric school buses, \$2.5 billion zero emission and low emission buses

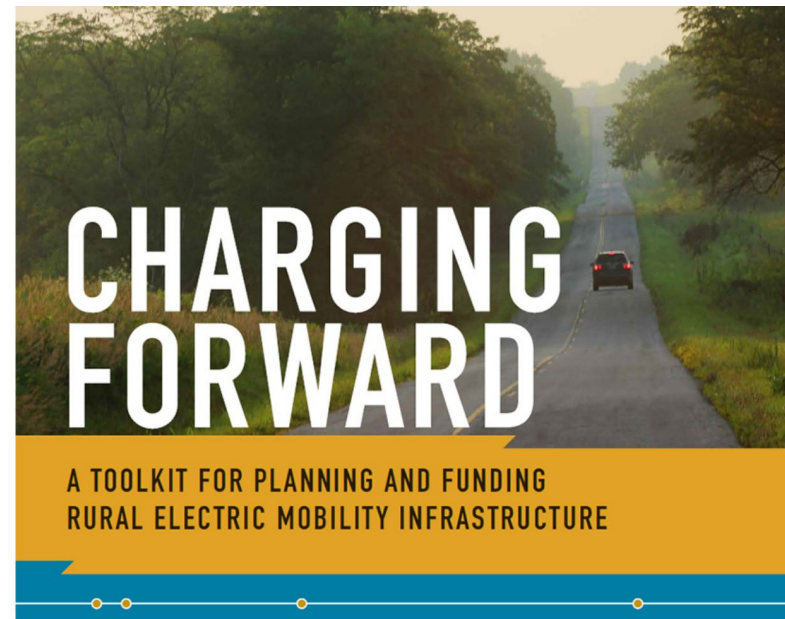


Additional Programs:

- *Section 11115: Congestion mitigation and air quality improvement program
- *Section 11402: Reduction of Truck Emissions at Port Facilities
- *Section 11403: Carbon Reduction Program
- *Section 30018: Grants for Buses and Bus Facilities
- *Section 40107: Deployment of Technologies to Enhance Grid Flexibility
- *Section 40541: Grants for Energy Efficiency Improvements and Renewable Energy Improvements at Public School Facilities







Resources and Support







- New joint office DOE/DOT: driveelectric.gov
 - *technical assistance
- DOT Rural EV toolkit (p. 73-83 EVSE programs); EC Rural Guidebook
- EPA Clean School Bus: epa.gov/cleanschoolbus
 - *technical assistance
- NEVI deployment principles:
 - Reliable
 - Effective
 - Equitable
 - High Quality
 - Connected
 - Affordable
 - 100%



DOT Funding and Financing Programs with EV Eligibilities*

LEGEND

						
Construction and installation of EV charging infrastructure including parking facilities and utilities.						
Workforce development and training related to EV infrastructure.						
EV acquisitions and engine conversions - cars or trucks.						
Planning for EV charging infrastructure and related projects.						
Construction and installation of EV charging infrastructure to support operational, resiliency, national energy security, environmental, and community goals for freight transportation.						
Installation of EV charging infrastructure as part of transit capital projects eligible under chapter 53 of title 49, United States Code.						

	FY 2021 AMOUNT						
FORMULA PROGRAMS							
National Highway Performance Program (NHPP)	\$23.1 B						
Surface Transportation Block Grant Program (STBG)	\$10.2 B						
Congestion Mitigation & Air Quality Improvement Program (CMAQ)	\$2.4 B						
National Highway Freight Program (NHFP)	\$1.5 B						
State Planning and Research (SPR)	\$641.5 M						
Metropolitan Planning (PL)	\$357.9 M						
DISCRETIONARY PROGRAMS							
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) (formerly known as BUILD)	\$1.0 B						
Infrastructure for Rebuilding America (INFRA) Grant Program	\$889.0 M						
Advanced Transportation and Congestion Management Technologies Deployment (ATCMDT)	\$53.3 M						
OTHER ALLOCATED PROGRAMS							
Federal Lands and Tribal Transportation Program (FLTTP)	\$1.0 B						
Highway Infrastructure Program (HIP) (other than for bridges)	\$644.0 M						
Puerto Rico Highway Program (PRHP)	\$74.9 M						
Territorial Highway Program (THP)	\$37.3 M						
INNOVATIVE FINANCE PROGRAMS							
State Infrastructure Banks (SIBs)	Varies						
Transportation Infrastructure Financing and Innovation Act (TIFIA)	Varies						

Disclaimer: Many of these programs are oversubscribed, and EV charging infrastructure competes with many other types of eligible projects.
* All eligibility determinations are fact specific. Limitations may apply. Additional low and zero-emission fuel types also may be eligible under these programs.
Note: Total (in millions and billions, rounded to one decimal place)

Thank you!

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Mark Stevens

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- Fleet Manager City of Sacramento CA
- Started career with Detroit Edison
- Previous fleet manager positions with Pompano Beach FL, Asheville NC
- Innovator and technology champion enhancing fleet operations for efficiency and sustainability
- #1 Green Fleet Award Winner 2019 & #2 Green Fleet Award Winner 2018 100 Best Fleets
- BSME Purdue University

City of
SACRAMENTO

Fleet Management



Charging Strategies & EVSE Readiness Planning

Charging Strategy



Create minimum of 10-year replacement plan

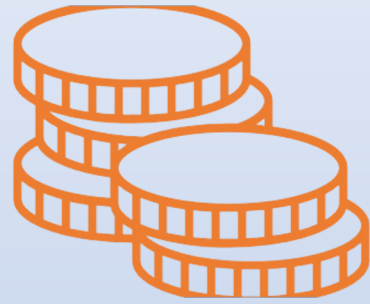


Identify which vehicles can be replaced with EV's

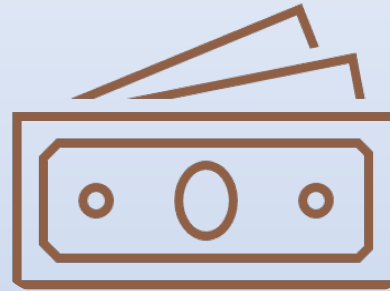


Thorough review of current infrastructure

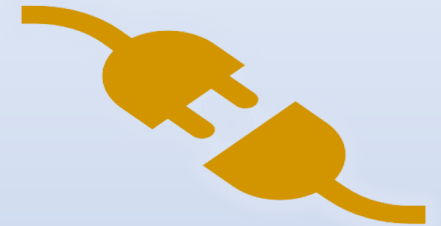
EV Readiness Planning



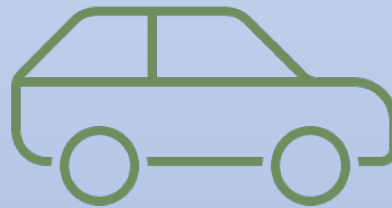
Upfront capital costs



Understanding costs and savings



Infrastructure



Right vehicles



Internal Champions

Upfront Capital Costs

Barriers

- Higher upfront cost of EV's
- Charging infrastructure needs assessment
- Limited capital

Solutions

- Financing models
- Access federal, state and local incentives
- Investigate Utility incentives
- Electrify America

Understanding Costs and EV Savings

Barriers

- Lack of awareness of costs
- Key challenges
 - Real-world range
 - Smart charging
 - Maintenance/Training
 - Battery replacement
 - Resale value
- Managing electrical costs-Peak vs off-peak rates

Solutions

- TCO analysis
- Charge management solutions
- Solar integration & battery storage

Electrical Capacity & Infrastructure

Barriers

- Site capacity unable to support increased needs
- Upfront cost
- Long construction times
- Permits

Solutions

- Upfront planning with internal staff, Electric Utility, & contractors
- Utilize charge management to reduce need for new capacity
- Engage Utility to fund infrastructure
- Access solar & storage to reduce capacity needs

Selecting the Right Vehicle

Barriers

- EV choices are limited
- EV capabilities vs. operational requirements

Solutions

- Meet to determine operational needs and best fits
- Possibly change operations-the way it has always been done

Internal Champions

Barriers

- Limited staff time
- Limited resources
- Limited knowledge
- Lack of goals or guidelines

Solutions

- Ride & drives with employees
- Case studies-identify O&M savings
- Create/update Sustainability Policy
- Consultants

Opportunities for Reducing Operating Costs

- Take advantage of off-peak demand charging rates
 - Program vehicle to start charging when off-peak rates begin
 - Charge Management - Install hardware to program electrical meters during off-peak hours
- Create schedule to alternate vehicle charging to reduce infrastructure- may not need one for one chargers
- Right-size Fleet during replacement with EV's

THE END



Contact Information

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Keith Kerman

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- Deputy Commissioner at the Department of Citywide Administrative Services and NYC's first Chief Fleet Officer
- Services 50 agencies including NYPD, FDNY and DSNY
- NYC operates the nation's largest municipal fleet and the largest electric fleet and charging network in NY State
- Manages shared services, Vision Zero, sustainability, preparedness, and risk initiatives
- Permanent civil servant in his 29th year including 17 with NYC Parks
- Sloan Public Service Award, referred to as the Nobel Prize of NY public service, National Climate Leadership Award from the Climate Registry, C2ES, and Bloomberg Philanthropies, Legendary Lifetime Achievement Award from Government Fleet
- Graduate of Harvard College

Fleet EV and Charging Initiatives

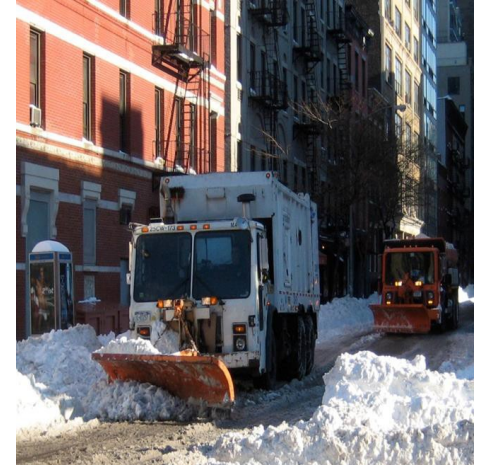
NYC Fleet

**NCSU, Sustainable Fleet Technology Conference
Strategies & EVSE Readiness Planning**

**Keith Kerman, Deputy Commissioner, DCAS NYC
Chief Fleet Officer**

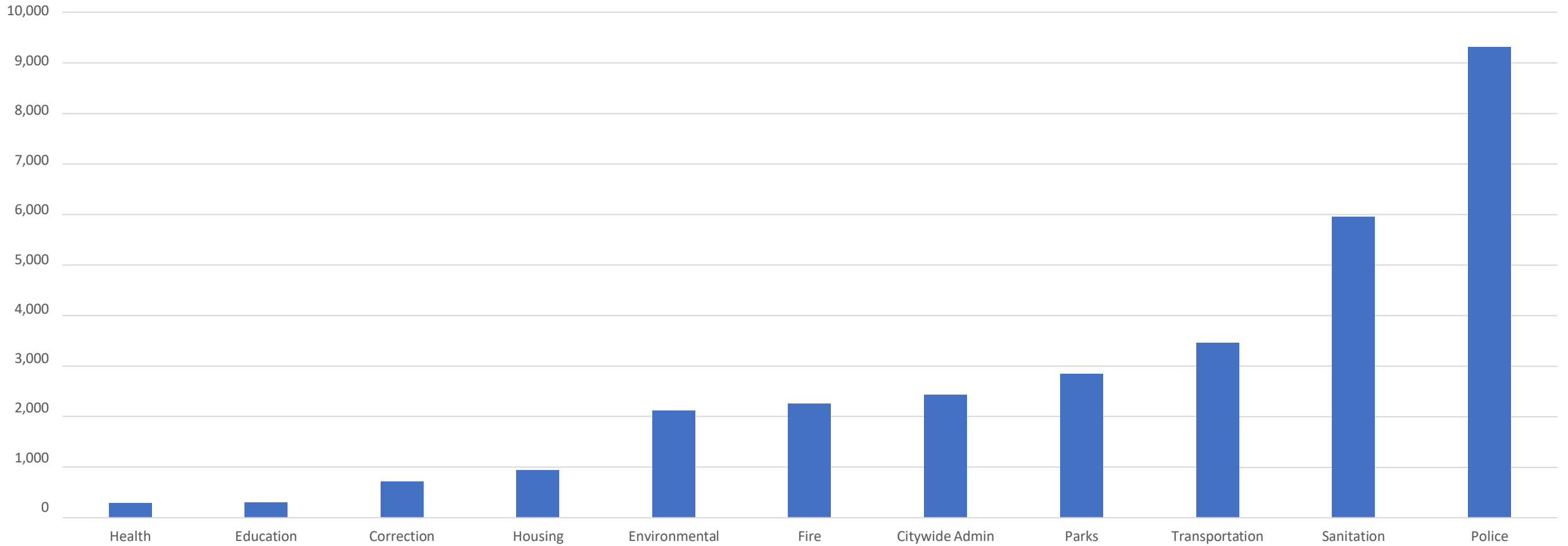
June 23, 2022

NYC Fleet



NYC Fleet

NYC Fleet Size



Electric Vehicle Speed Record

NYC Fleet Newsletter

October 21, 2021 - Issue 367

Eric Ritter, DSNY Mechanic, Eclipses World Speed Record for Electric Vehicles

By: Keith T. Kerman

In 1957, John Glenn set a transcontinental speed record, a major moment in the history of flight, and a signal to the world of the limitless potential for jet aviation.

We are now entering the age of electric transportation, and NYC public servant and Sanitation Truck Mechanic Eric Ritter is again pushing the limits, surpassing the world speed record for electric vehicles at 353 miles per hour (mph) on October 1, 2021.

In his day job, Eric is a truck mechanic for the Special Chassis unit at the DSNY Central Repair Shop (CRS) in Queens. He refurbishes sanitation trucks, replaces motors, fixes hydraulics leaks, and takes on major unit upgrades. He's helping prep the salting fleet now for the upcoming snow season. Eric is one of NYC's behind-the-scenes technical and mechanical experts, keeping our City running every day.



Eric Ritter (center) and others standing in front of the electric vehicle used to surpass the electric vehicle speed record.

- [Spectator view](#)
- [Driver View](#)

NYC Fleet: Clean Fleet and Sustainability

Updated NYC Clean Fleet Plan

[HERE](#)

EO 53: All Electric and Safe Fleet

[HERE](#)

EO 90: Accelerating Electric Fleet Adoption

[HERE](#)



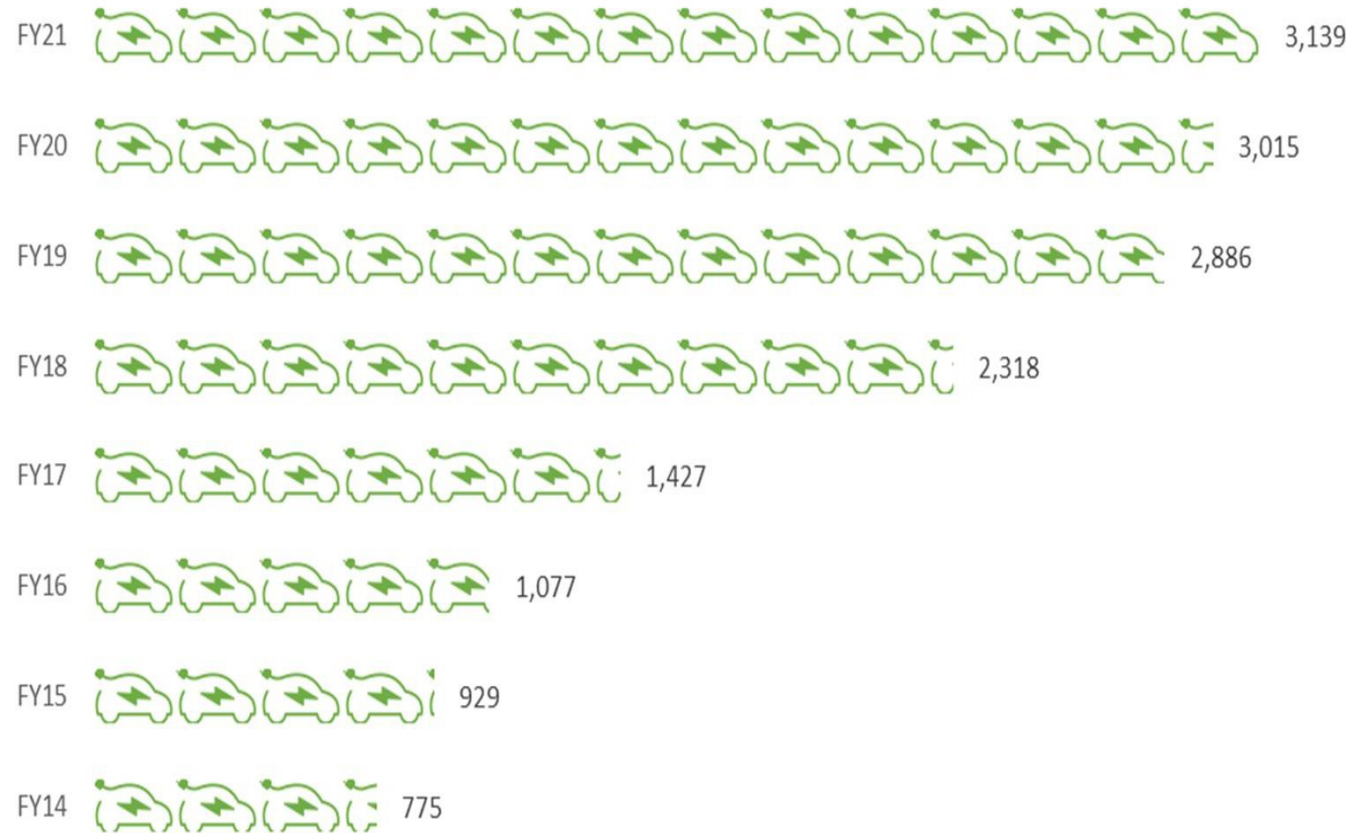
**2021 Clean
Fleet Update**

September 2021



Electrifying the Fleet

NYC Fleet Electric Vehicles



NYC Fleet operates NY's largest plug-in fleet at over 3,100 units with our largest purchase of EVs ever being put in place in 2022, over 1,350 new EVs in total including our largest orders of police EVs and medium duty EVs. Eighty percent (80%) of the new EVs will be BEV as opposed to PHEV.

NYC has committed to all electric light and medium duty units by 2035 and a complete electric fleet by 2040.

DSNY Pilot EV Garbage Truck



World's First EV Street Sweeper



Our First Electric School Buses



[All electric school bus law](#)

[HERE](#)

NYC Fleet: Fleet Sharing

electrek

Exclusives Autos Alt. Transport Autonomy Energy > YouTube Facebook Twitter Instagram RSS

DECEMBER 3, 2016

New York City is buying 80 all-electric Chevy Bolt EVs at a good discount for a shared fleet initiative

Fred Lambert - Dec. 3rd 2016 12:37 pm ET @FredericLambert

79 Comments Facebook Twitter Pinterest LinkedIn Reddit



While the Chevy Bolt EV is currently only available in California and Oregon, it will soon make its way to the east coast thanks to a deal between GM and the city of New York. The de Blasio administration is ordering 50 all-electric Chevy Bolt with the first ones set to arrive in the spring and the order is expected to go up to 80 vehicles by the end of the fiscal year.

After a discount from GM and federal incentives, the city of New York is getting the vehicles at a very attractive price.



All Electric Citywide Fleet Share



All Electric Medium Duty

Ford to Launch Electric Transit Cargo Van

November 12, 2020 by Jerry Hirsch, @Jerryhirsch [↗](#)



All Electric Pick Ups



NYPD Non-Pursuit EV Fleet



NYPD Pursuit EV Units



NYC orders nearly 200 Mustang Mach-Es for police and first responders

'A critical step towards our goal of a fully electric fleet'

By Makena Kelly | @kellymakena | Dec 30, 2021, 12:28pm EST

City Makes Largest Electric Vehicle Purchase for Law Enforcement and Emergency Response to Date, Takes Another Step Towards Achieving an All-Electric Municipal Fleet

December 29, 2021

New York City's Historic Investments Help Divest from Fossil Fuels and Reduce Emissions

NEW YORK – Today the New York City Department of Citywide Administrative Services (DCAS) announced that it is placing an order for 184 all-electric Ford Mustang Mach-E Sport Crossover Utility Vehicles for law enforcement and emergency response use. The new electric crossovers, purchased as part of the City's largest electric vehicle (EV) purchase to date, are slated for use by the New York Police Department (NYPD), the New York City Sheriff's Office, the Department of Correction, the Department of Parks and Recreation, the Department of Environmental Protection, NYC Emergency Management, DCAS Police, and the Office of the Chief Medical Examiner. The new electric vehicles will replace gas-powered vehicles currently in the City fleet. The new all-electric crossovers will be received by the City by June 30, 2022.

NYPD Mach E Launch



NY's Largest EV Charging Network

Google Maps



NYC Fleet EV Charging Network as of 10/08/2021



Total 1,071 Electrical Charging Ports

- 891 Charging Ports
- 89 Solar Carports (- 3 Solar Public Charging)
- 90 DC Fast Chargers (- 11 DC Fast Public Charging)
- 1 Mobi Mobile Charger



Dawn M. Pinnock, Commissioner
Keith T. Kerman, Deputy Commissioner
and Chief Fleet Officer

NYC Fleet Newsletter

March 14, 2022 - Issue 383

DCAS Launches Installation of 200 New EV Fast Chargers

By: Keith T. Kerman

In December 2020, DCAS completed its first 100 electric vehicle (EV) fast charger installations, stemming from a capital project launched in May 2019. Currently, Fleet operates 103 50-kilowatt fast chargers at 12 agencies. This includes 11 sites hosted by NYC Parks and DCAS that are open to the City's fleet and also to the [general public](#).



DCAS has now received the green light to begin the installation of an additional 200 fast chargers on City-owned agency sites. This is part of a long-term plan to have 1,776 EV fast chargers operational by 2030, as we move to an all-electric fleet. The target date for project completion is Dec. 31, 2023. DCAS got the first project done on time and on budget and will work to install twice as many chargers in the same timetable for this second phase.

At the end of this project, 15 agencies will be operating fast chargers. Where the site configurations allow, additional NYC Parks and DCAS locations will be operated as general EV charging hubs.

11 Public Charging Sites [HERE](#)

Build EV Charging, Level 2, Fast, Solar



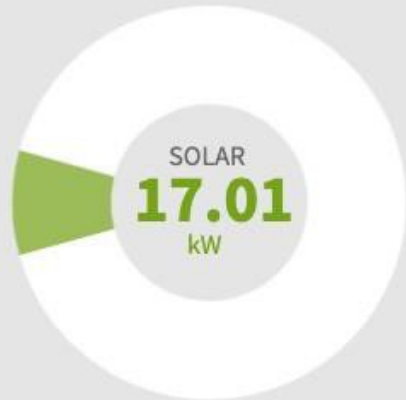
Equipment Resiliency and Backup Power



Fleet as Producer of Power



CURRENT PROFILE TIME : 07/09/2020 15:50



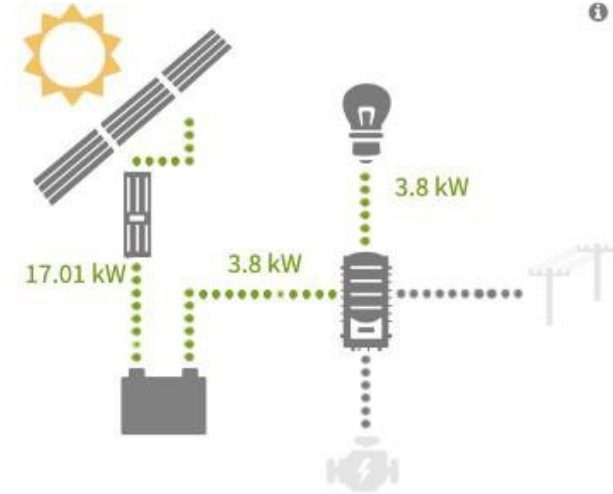
Right Now, You are

PRODUCING

Solar 17.01kW

Load 3.8kW

POWER FLOW



The Day Of



07/09/20



TODAY

Solar
199kWh

To Load
16.6kWh

Partnering with Con Edison

City of New York Receives Funding from Con Edison to Install Fast Electric Vehicle Chargers

September 8, 2021

Funding Will Help Support the Installation of 100 Fast Chargers to Power City Vehicle Fleet, Public Use

NEW YORK – The NYC Department of Citywide Administrative Services (DCAS) and Con Edison today announced, on World Electric Vehicle Day, that Con Edison has awarded an initial \$250,000 to the City of New York towards a portion of its planned installation of 100 fast electric vehicle chargers. The fast chargers will service City of New York fleet vehicles and at least 10 will be available for public use. The funding from Con Edison, part of its *PowerReady* program, provides incentives to offset the cost of electric infrastructure associated with installing level-2 and DC fast electric vehicle chargers. The funding announced today will reimburse costs for 15 fast chargers across six locations in Brooklyn, Manhattan, Queens, and Staten Island. Fast charging is up to seven times faster than level 2, or slow charging, and the use of these chargers will extend charging capabilities for City trucks and emergency vehicles. The funding announced today is the first award out of a total of \$1.3 million in awards DCAS could potentially receive from Con Edison to support 39 of the City of New York's 100 fast chargers. Ninety of these fast chargers have been placed in operation so far in the last year.

The City of New York's municipal vehicle fleet includes 2,350 on-road electric vehicles and 796 off-road electric and solar units, and the entire fleet will be all-electric by 2040. To support this transition, the city currently has 1,061 electric vehicle charging ports to service its fleet. This network is the largest charging network in New York state and includes level-2 chargers, level-3 fast chargers, a mobile charger, and the nation's largest network of 89 free-standing solar charging carports. The award from Con Edison will support the completion of the City's first 100 fast chargers as well as help DCAS further expand the charging network.

Reducing Maintenance Costs with EV

[HERE](#)

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Mar 19, 2019 - Energy & Environment

EV maintenance costs in NYC run lower than gas-powered cars



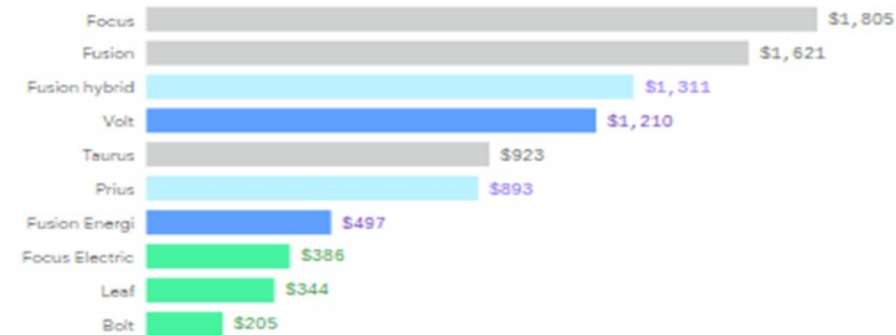
Ben German, author of *Generate*



The New York City government's maintenance costs for its electric vehicle fleet were much less per automobile than its gasoline-powered cars, city data released this month shows.

Average maintenance cost for NYC municipal vehicles in 2018

By car energy type: ● Gasoline ● Hybrid ● Plug-in hybrid ● Electric



Date: NYC Department of Citywide Administrative Services; Chart: Andrew Witherpoon/Forbes

Why it matters: Municipal and corporate vehicle fleets are a growth area for EVs, and not just for environmental reasons. That's the upshot of the latest edition of a newsletter I'd never seen until yesterday: the [NYC Fleet Newsletter](#) from Citywide Administrative Services.

EV Training for Mechanics and First Responders



Dawn M. Pinnock, Commissioner
Keith T. Kerman, Deputy Commissioner
and Chief Fleet Officer

NYC Fleet Newsletter

February 4, 2022 - Issue 379

GM Conducts Electric Vehicle Training for City Mechanics

By: Keith T. Kerman

With 2,398 on-road and 793 off-road electric and solar units in operation, and 978 plug-in replacement units on order, New York City's electrification of the City fleet is well underway. Through the transition, our fleet staff are adjusting to the new maintenance and servicing methods that these vehicles need.

Electrification is a major transition for operators and agencies alike, as electric vehicle (EV) charging and range management take on critical importance. However, in the long run, [EVs hold the prospect of greatly reduced maintenance costs](#) compared to their gas powered counterparts, and NYC's fleet staff are critical to supporting this transformation.

Our City's 1,333 mechanics and service workers will be adjusting to new maintenance, servicing, and crash management requirements. All this entails—battery management, crash protocols, charger servicing, and regenerative braking—will pose new dimensions for the City's servicing professionals. To date, our City's mechanics have met every challenge with sustainable fleet options, including biofuels, hybrids, natural gas, and our early electric efforts, so we have no doubt this transition will be successful.



Volvo donates electric SUV to FDNY for extrication training

FDNY will use the donated Volvo XC40 Recharge to gain hands-on experience in occupant extrication from battery electric vehicles

Aug 8, 2021

By FireRescue1 Staff

MAHWAH, NJ — Volvo Car USA donated a fully electric [XC40 Recharge vehicle](#) to the FDNY to help further the cause of post-accident safety involving battery electric vehicles (BEV).

While FDNY has been saving lives in conventionally powered vehicles for decades, the rise of all-electric vehicles presents new challenges. BEVs feature a large primary battery and high voltage wiring that may change where first responders should attempt to cut into the vehicle. Additionally, a car with as much ultra-high-strength steel as a Volvo XC40 Recharge requires specialized extrication procedures.



DCAS FY22/FY23 EV Initiatives

- 200 additional 50 KW Grid Connected Fast Chargers for agencies by end of FY23
- 57 Mobile Fast Chargers, Battery Storage Units, by FY23.
- 77 Additional Solar Carports, Summer 2022
- 350 EV Cargo vans, Central Replacement Purchase for All Agencies.
- \$25 Million Expense EV Replacement Plan for All Agencies in FY23
- EV Repowering Initiative, Truck Retrofits to BEV
- Support of School Bus Electrification with 75 Fast Chargers
- Purchase of Level 2 Chargers, 204 sites with 305 charging ports, July 2022
- Market Research on Next Stage Resilient Charging
 - *Vehicle to grid, emergency failsafe, IT security, inter-operability, flexible charge cards, higher charging speeds, battery storage, maintenance and component reliability, managed charging*
- Making More Efficient Use of Existing PHEVs and Chargers (EVSE).
- EV Pickup, Small Truck, Box Van, other bids

More Electrification: NYC Fleet, Parks, NYPD



NYPD goes electric

Author
Keith Kerman, Deputy
Commissioner, Chief Fleet
Officer, Department of Citywide
Administrative Services

The New York City Police Department operates the largest police fleet in North America and is leading the way on implementing hybrid and all-electric vehicles for law enforcement.

[HERE](#)

electric



Top:
NYC's 30,000 strong existing electric
fleet includes sedans, SUVs, and
minivans.

Electric New York

New York City is to transition to an all-electric city fleet by 2040. The executive order from Mayor Bill de Blasio also requires the city to procure the safest possible vehicles.

[HERE](#)

emissions



NYC Parks leads the charge

Author
Keith Kerman, Chief Fleet
Officer and DCAS Deputy
Commissioner, NYC

How NYC Parks Department has transformed its fleet of vehicles and equipment to ensure that New Yorkers and tourists enjoying the city's parks can also enjoy their clean air.

[HERE](#)

DCAS EV Stickers



NYC Fleet: The Future



Contact

For more information, go to the NYC Fleet website:
<http://www.nyc.gov/html/dcas/html/employees/fleet.shtml>

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DCAS

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