Reducing the Carbon Footprint of Municipal and School Fleets Webinar

June 23rd, 2021

Agenda and Speakers

Brian McDermott
Fire Chief, City of Paterson
City of Paterson Goes EV

Jim DeVico
Information Technology Coordinator/Manager, Township of Edison
Improve Fleet Operations Through the Use of GPS and Telematics

Josh Rosenberg
Data Associate, Atlas Public Policy
Fleet Analysis DRVE Tool

Victoria Carey
Senior Project Officer, New Jersey Economic Development Authority
Ecosystem Development and Incentives for Zero-Emission Medium- & Heavy-Duty Vehicles

Andrea Friedman
Supervisor, Electric Vehicle Programs, NJDEP
Fleet Electrification Resources from NJDEP

Cathleen Lewis
E-Mobility Programs Manager, NJBPU
Driving EV Adoption

What is Sustainable Jersey?

Certification program for municipalities and schools

- **Tools, resources, and guidance** to help municipalities and schools become more sustainable
- **Grants and funding** for municipalities and schools
- **Regional Hubs**

Sustainable Jersey Energy Actions

	Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles (AFVs)
Facilities Operations	• Energy Tracking and Management • Energy Efficiency for School/Municipal Facilities • Behavior-Based Energy Conservation Programs	• On-Site Solar Energy • On-Site Geothermal • On-Site Wind Energy • Buy/Purchase Renewable Energy	• Fleet Inventory • Purchase AFVs • Sustainable Fleets (schools)
Community Energy Use	• Residential Energy Efficiency Outreach • Commercial Energy Efficiency Outreach	• Renewable Government Energy Aggregation • Make Your Town Solar Friendly • Community-Led Solar Initiatives • Municipally Supported Community Solar	• Make Your Town EV Friendly • Public EV Charging Infrastructure

Fleet Planning

Fleet Management Framework

From Federal Energy Management Program

www.energy.gov/eere/femp/femp-best-practices-fleet-management-framework

Know What You Have

Fleet inventory – document listing age and usage of all vehicles in fleet

Telematics – vehicle monitors that generate fleet usage reports and can include route optimization

Vehicle Identification Number (if applicable)	Vehicle Type (bus, truck, sedan, segway, scooter, etc)	Year	Make	Model	Fuel Type (Gasoline, Diesel, Propane, etc)	Odometer Reading at end of Baseline Year	Miles Traveled in Baseline Year	Annual Fuel Usage in Baseline Year	Fuel Units (Gallons, GGE, kWh)	Annual Fuel Cost in Baseline Year	Average Fuel Efficiency in Baseline Year (miles per fuel unit)
1FM5K8AR4GGA97132	SUV	2016	FORD	EXPLORER	GAS	43,195	12,929	1,429.38	Gallons	$2,817.72	9.045
1FM5K8AR8GGA97134	SUV	2016	FORD	EXPLORER	GAS	63,629	16,467	1,592.57	Gallons	$3,075.95	10.340
1FM5K8AR7GGA97125	SUV	2016	FORD	EXPLORER	GAS	48,872	18,142	1,822.74	Gallons	$3,473.62	9.953
1FM5K8AT0HGB15400	SUV	2017	FORD	EXPLORER	GAS	48,835	26,339	2,987.49	Gallons	$5,835.08	8.816
1FM5K8AT6HGB15399	SUV	2017	FORD	EXPLORER	GAS	52,007	30,281	3,419.03	Gallons	$6,620.67	8.857
1FM5K8AR2GGA97131	SUV	2016	FORD	EXPLORER	GAS	72,298	20,285	2,156.71	Gallons	$4,106.83	9.406
1FM5K8AR0GGA97130	SUV	2016	FORD	EXPLORER	GAS	68,337	17,719	1,906.02	Gallons	$3,593.30	9.296
1FM5K8AT6HGB15398	SUV	2017	FORD	EXPLORER	GAS	39,607	23,147	2,631.51	Gallons	$5,059.43	8.796
1FM5K8AR4GGA97129	SUV	2016	FORD	EXPLORER	GAS	79,402	24,581	2,626.44	Gallons	$5,078.70	9.359
1FM5K8AT9JGA44168	SUV	2018	FORD	EXPLORER	GAS	9,516	8,408	1,149.04	Gallons	$2,354.92	7.317
1FM5K8AT2JGA46229	SUV	2018	FORD	EXPLORER	GAS	13,106	12,975	1,634.79	Gallons	$3,311.42	7.937
1FM5K8AT9JGA46227	SUV	2018	FORD	EXPLORER	GAS	9,803	9,606	1,237.50	Gallons	$2,465.61	7.762
1FAHP2MT3JG104334	SEDAN	2018	FORD	TAURUS	GAS	1,788	1,188	128.91	Gallons	$258.24	9.216
1FAHP2MT4JG105976	SEDAN	2018	FORD	TAURUS	GAS	3,626	3,126	312.67	Gallons	$625.33	9.998
1FM5K8AT8JGA37132	SEDAN	2018	FORD	TAURUS	GAS	3,189	2,580	324.48	Gallons	$657.53	7.951
1FAHP2MT2JG105975	SEDAN	2018	FORD	TAURUS	GAS	4,406	2,331	434.44	Gallons	$865.56	5.366
1FM5K8AT0JGA44169	SUV	2018	FORD	EXPLORER	GAS	5,274	3,774	590.66	Gallons	$1,189.67	6.389
1FM5K8A7JGA46226	SUV	2018	FORD	EXPLORER	GAS	17,891	16,291	2,055.46	Gallons	$4,161.66	7.926
1FM5K8AT0JGA46228	SUV	2018	FORD	EXPLORER	GAS	12,062	11,880	1,398.52	Gallons	$2,798.44	8.495
1FM5K8AT9JGA46230	SUV	2018	FORD	EXPLORER	GAS	7,838	7,538	961.83	Gallons	$1,910.47	7.837
1FM5K8AT5JGA46225	SUV	2018	FORD	EXPLORER	GAS	25,809	23,309	1,831.72	Gallons	$3,718.05	12.725
1FM5K8AT5JGA44166	SUV	2018	FORD	EXPLORER	GAS	9,653	9,339	1,304.33	Gallons	$2,591.05	7.160
1FM5K8AT7JGA44167	SUV	2018	FORD	EXPLORER	GAS	6,669	6,529	835.06	Gallons	$1,717.66	7.819
1FM5K8AT4HGB07820	SUV	2017	FORD	EXPLORER	GAS	50,905	30,176	3,301.98	Gallons	$6,402.02	9.139
1FM5K8AR2GG97128	SUV	2016	FORD	EXPLORER	GAS	69,000	26,367	2,422.34	Gallons	$4,700.80	10.885
1FM5K8AR0GGA97127	SUV	2016	FORD	EXPLORER	GAS	71,178	17,552	1,790.49	Gallons	$3,423.69	9.803
1FM5K8AR9GGA97126	SUV	2016	FORD	EXPLORER	GAS	64,229	18,703	2,062.61	Gallons	$3,952.66	9.068
1FM5K8AT8HGB07819	SUV	2017	FORD	EXPLORER	GAS	37,081	18,309	2,173.92	Gallons	$4,274.96	8.422

1. Full Vehicle Inventory | 2. Vehicle CH4 & N20 | 3. Fleet Summary

Sustainable Jersey's Fleet Inventory Worksheet included in the Fleet Inventory Action

Green Fleet Strategies

- **Preventive Maintenance**
  Increases vehicle efficiency
- **Discourage Idling**
  Reduce harmful local air pollution and fuel waste
- **Rightsizing**
  Encouraging fleet users to use smallest/most efficient vehicle appropriate for job
- **Retiring Vehicles**
  Reduce size of fleet by retiring inefficient and underused vehicles
- **Reduce/Consolidate Trips**
  Plan to use as few vehicles as possible
- **Fleet Electrification**
  Use fleet analysis to select vehicles to replace with electric vehicles

EV Considerations – Total Cost

Purchase price of vehicle
(with incentives)

+ Fuel cost
lightweight EV fuel cost
in NJ is 51.4% less*

+ Maintenance
average between 20 – 25% less**

= Total Cost of Ownership

When comparing the cost of an EV with a traditional vehicle consider **Total Cost of Ownership**.

*University of Michigan. *Relative Costs of Driving Electric and Gasoline Vehicles in the Individual U.S. States*. 2018.
http://umich.edu/~umtriswt/PDF/SWT-2018-1.pdf

** New York City. *Reducing Maintenance Costs With Electric Vehicles.* 2019.
https://www1.nyc.gov/assets/dcas/downloads/pdf/fleet/NYC-Fleet-Newsletter-255-March-8-2019-Reducing-Maintenance-Costs-With-Electric-Vehicles.pdf

EV Considerations

Vehicle Miles Travelled
Select vehicles that:

- Are driven enough to allow lower fueling and maintenance costs to offset higher vehicle price
- Have enough downtime to be charged between duty cycles

Parking and Charging

- Where will vehicle be parked?
- Will charging infrastructure be available?

What do the fleet users think about adding EVs to the fleet?

Will fleet users embrace the new technologies?

- Arrange a test drive/demo
- Outreach to fleet users

Users may have information about vehicle usage that can inform vehicle purchases

Sustainable Jersey Webinar
Join the EVolution! - EV Charging information

Procurement Guidance

Sustainable Jersey Alternative Fuel Vehicle Procurement Guide

Includes guidance for capturing tax credits and procurement options

- Fleet Leasing
- Purchasing Cooperatives/Government Contracts
- Direct Purchase Options
- Service Contracts/Shared Service

https://www.sustainablejersey.com/fileadmin/media/Actions_and_Certification/Actions/Energy/Sustainable_Jersey_Alternative_Fuel_Vehicle_Procurement_Guide.pdf

Sustainable Jersey
Version 1.0

Alternative Fuel Vehicle Procurement Guide
November 2019

Alternative Fuel Vehicle (AFV) Procurement Guide

This guidance document provides information and resources for municipalities and school districts looking to add alternative fuel vehicles (AFVs) to their fleets. This guide includes strategies for procuring alternative fuel fleet vehicles at the best pricing and with the least amount of staff time spent on procurement logistics. Although tax incentives for electric vehicle and other alternative fuel vehicles that are available to individual purchasers for plug-in vehicles are generally not available directly to municipalities and school districts, this guide offers insights on how these incentives can be realized.

The four procurement methods covered in the document are:

- Fleet Vehicle Leasing
- Purchasing Cooperatives / Government Contracts
- Direct Purchase
- Service Contracting / Shared Services

The guide also includes information on funding and incentives for alternative fuel vehicles and electric vehicle charging stations.

Fleet Vehicle Leasing

Fleet vehicle leasing is a popular method for local governments (including municipalities and public school districts) to procure alternative fuel vehicles. Because the vehicle purchaser is the leasing company and not the municipality/school district, the leasing company can benefit from the available tax incentives. Often the leasing company builds the tax savings into the leased price of the vehicle so that the municipality/school district sees the discount in the leasing price. Several of the purchasing cooperatives included below have contracts with fleet leasing companies for electric and hybrid vehicles.

There are two basic fleet leasing contract models, Lease to Own and Set Term. The most advantageous model for your entity will depend on the goals of the municipality/school district. Characteristics of each model are:

Lease to Own: Higher monthly payment, but paying into principal for eventual ownership. Also allows installation of aftermarket products for specialized vehicles. Used for the full range of fleet vehicle types, but this option is almost always used for heavy duty vehicles.

Set term/mileage lease: A lease contract where a set time frame and mileage are laid out in the contract. Car is turned in to dealer at end of term. Mostly used for passenger class vehicles. The advantage of the lower monthly leasing price and the limited term allows municipality/school district to "pilot" electric and plug-in hybrid vehicles.

The EV Smart Fleets Public Sector Fleet EV Procurement Examples report includes a case study on leasing electric vehicles.

Page 1

Sustainable Fleets for Schools

- Healthier Air
- Reduced CO2 emissions
- Quieter
- Less expensive O&M

- Nation's largest fleet
  - 480,000 school buses in operation
- Largest form of mass transit
- Alternative fuel vehicles cost more than diesel
- Save 40-50% on fuel costs

City of Paterson Goes EV

Brian J. McDermott
Fire Chief

Personal Statement

- The Fire Chief manages EV? Why?
- Innovative Leadership; Let people think
- I owe it to my kids….and yours
- Build on frustration; I've had enough
- We are a distressed City. This should be the last thing you push for.

This is Why

My Process….Nothing New, Just for us it is

- Recognize the need and get angry that nothing is moving
- Fully assess your fleet, with photos, to show the deplorable condition and focus on safety, cost savings and liability reduction.
- Prepare a cost analysis and schmooze your leaders to gain buy-in so they allow you to take charge and affect change
- Find great people like sustainable Jersey who motivate you. Listen to their thoughts and receive guidance.
- Pay attention and speak up at meetings
- Seek expert help. I'm a Fire Chief remember?

BUSIEST AMBULANCE

DEPARTMENT	BUSIEST AMBULANCE	RUNS
1. Chicago, IL	A10	7,772
2. St. Louis, MO	M10	7,569
3. Baltimore City, MD	M16	7,263
4. San Diego, CA	M1	7,216
5. Paterson, NJ	AMB91	6,838

Can you imagine the Carbon Footprint of this vehicle?

More Process

- Review cooperatives for availability and what fits price and functionality
- Review grant opportunities
- Assess property for infrastructure upgrades.
- Where to start to keep people happy and centralize infrastructure. My focus is DOH, because where else could you send a better message. They will be the launch pad. Then Community Improvement, because the name speaks for itself.
- Figure where to start with your first ask. In my case a $200k bond turned into $700k due to recognition, trust and buy-in from a supportive BA
- Begin the purchase and look for grants everywhere.

Paterson Fire Department Future?

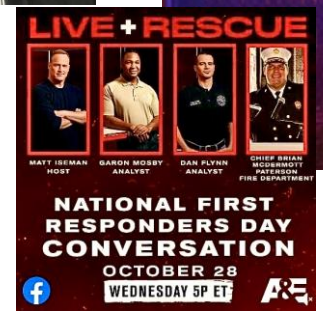
O.R.T.

City Vehicles

Infrastructure

Giving Back

Make Change



Represent Positively

Command the Fight

Perform for those that Protect

For Our Youth to Thrive

Thank you for your time

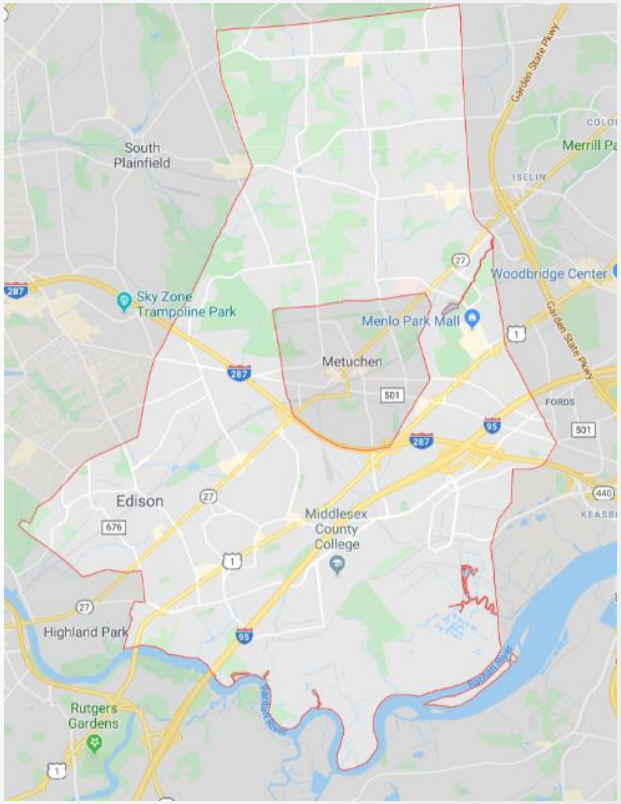
I’d love partners in this, just sayin’

Township of Edison New Jersey

Improve Fleet Operations Through the Use of GPS and Telematics

Presented by Jim DeVico, CGCIO
Information Technology Manager
Phone: 732.404.8662
jdevico@edisonnj.org

About the Township



- 32 Square Miles
- 110,000+ residence
- 5th most populated town in NJ
- 1250 miles of roadway
- Fleet of 400 vehicles including public safety
- 1 Mil visitors and commercial employees during the week

Our Challenges

- Numerous Complaints
  - Snow plowing and property damage
  - Salting
  - Speeding and idling
  - Garbage/recycling pick up
- Tracking Our Fleet Operations
  - Idling
  - Fuel consumption
  - Wear and tear relative to usage
  - Lack of use

GPS and Telematics

- Track and log vehicle movement
- Track and log driver actions
- Monitor vehicle “health”
- Monitoring fuel consumption

Information Technology's Role

- To evaluate the best user friendly system and manage the implementation of it.
- Train key leaders and users of the systems use including benefits and shortcomings.
- Maintain the system ensuring vehicle telematics devices are kept up to date and properly installed.
- Play a key role facilitating communications and information sharing between departments
- Assist with custom reporting and data evaluation
- Take the lead to insure all vehicles and departments are in compliance with system deployment

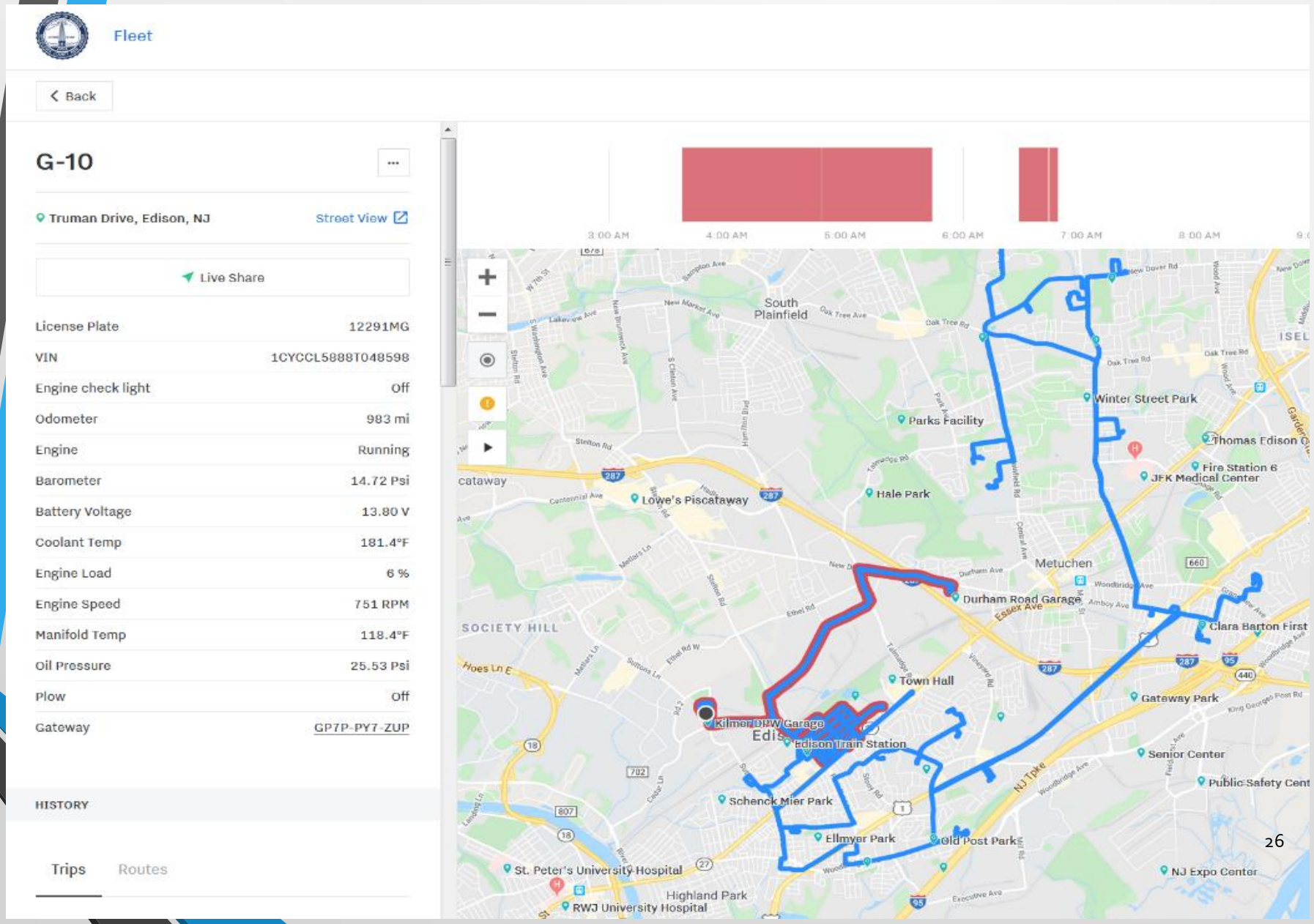
Winter Weather

- 30-50 complaints per storm regarding property damage
  - Average of 50% were false claims or not township vehicles
  - Significant reduction of insurance claims and payouts
  - Complaints regarding streets not getting plowed or inadequately plowed
  - Confirmed complaints triggering a re-evaluation of routes
  - 70% were not true; often people expectations were unrealistic.

Winter Weather

- Re-evaluated routes
  - Routes became more efficient reducing man hours and reducing overtime costs
  - Reduced demand and stress on staff during long storms
  - Reduced wear and tear on vehicles
  - Extended life of plow blades
  - Reduced salt and brine usage by 35%
    - Reduced overlapping routes
    - Used appropriate vehicles on certain roads
    - Timed routes vs storm

Examples of Plowing Telematics



Fleet Maintenance

- More effectively monitor vehicles for preventative maintenance
- Drivers don’t always report faults or check engine lights
- Real time watch vehicle faults and immediate notifications to fleet dept. when faults occur
- Reduced repair costs and improve vehicle uptime

Examples of Vehicle Faults

Proximity Reports Maintenance

Search vehicles | Tags | Faults (1) | 11 vehicles

VEHICLE	CURRENT DRIVER	MAKE/MODEL	BATTERY VOLTAGE	ENGINE HOURS	ODOMETER (MI)	CHECK ENGINE LIGHT	FAULTS
C-17-21	-	FORD/Explorer	14.6	–	18,227	Off	P0030 – HO2S Heater Control Circuit Bank 1 Sensor 1
ER-10	3920 - Robert Farinick	FREIGHTLINER/114SD	15.8	3,365	27,029	Off	TxId: 3 SPN: 190 FMI: 2 (Erratic, Intermittent, or Incorrect) Count: 127
ER-7	-	FREIGHTLINER/114SD	14.8	5,026	36,325	Warning, Protect, and Emissions	TxId: 61 SPN: 5018 FMI: 18 (Low—moderate severity) Count: 7
Engine 1	-	FREIGHTLINER/M2	13.8	3,369	36,176	Protect	TxId: 61 SPN: 3719 FMI: 31 Count: 3
Engine 6	-	-	0.3	1,666	17,299	Protect	TxId: 0 SPN: 3720 FMI: 15 (High—least severe) Count: 1
Engine 9	-	-	0.3	1,407	16,011	Protect	TxId: 0 SPN: 3720 FMI: 15 (High—least severe) Count: 1
G-11	3927 - Ryan Naiduk	FREIGHTLINER/114SD	12.7	8,551	73,807	Off	TxId: 33 SPN: 6918 FMI: 7 (Not Responding Properly) Count: 1
G-16	-	FREIGHTLINER/M2	0.6	3,722	32,897	Protect and Emissions	TxId: 0 SPN: 3216 FMI: 20 (Data Drifted High) Count: 1
S-3	-	FORD/F-450	–	–	63,327	Off	P0471 – Exhaust Pressure Sensor "A" Circuit Range/Performance
SC-4	-	FORD/E-450	–	–	113,121	On	P0191 – Fuel Rail Pressure Sensor Circuit Range/Performance Bank 1
TC-2	3320 - Nikolas Mpletsakis	FORD/F-450	–	–	95,459	Off	P0088 – Fuel Rail/System Pressure - Too Hi

Feedback

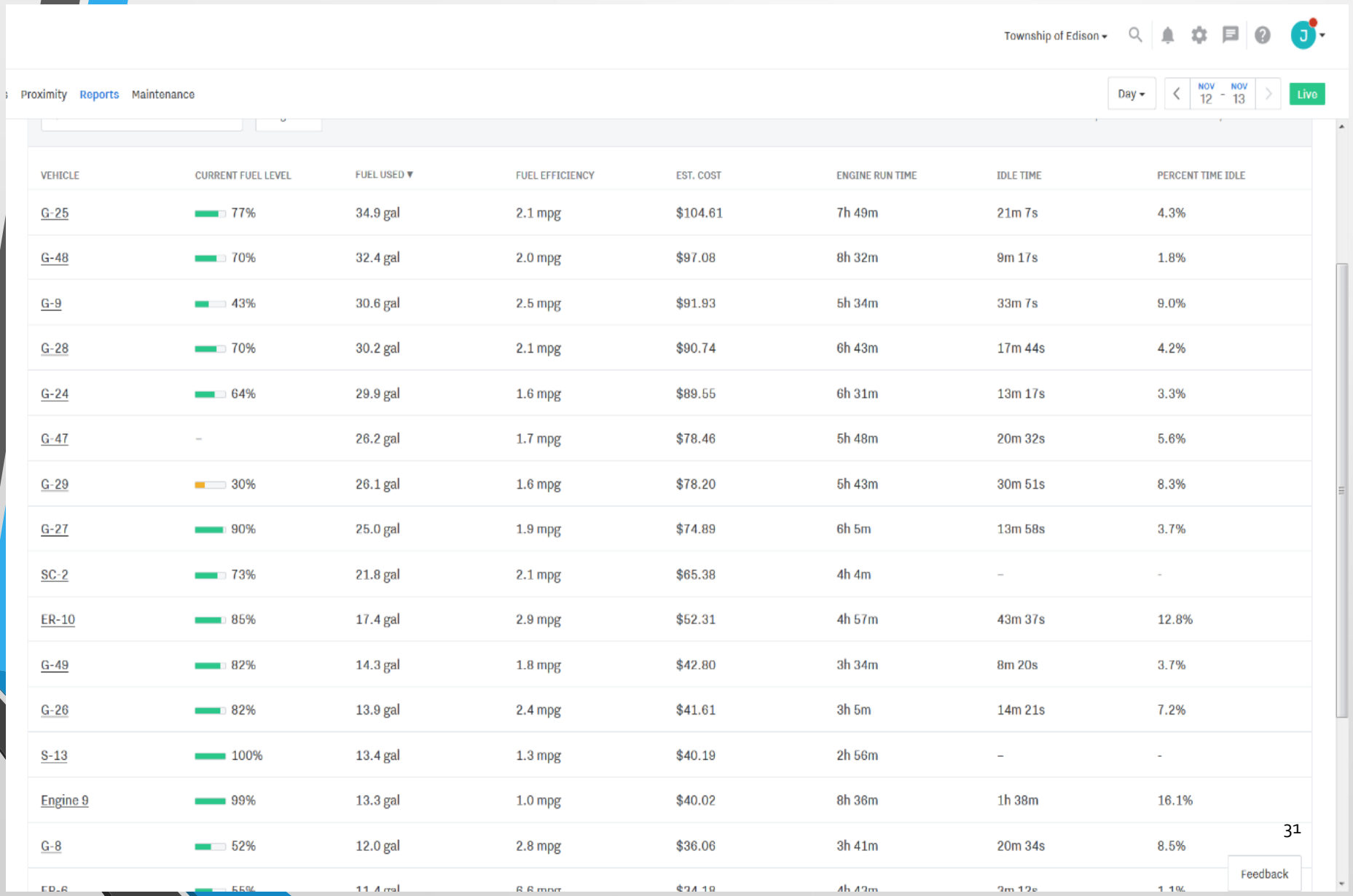
Fleet Usage

- Study on vehicle usage relative to age and repair costs
  - Identified low use, high maintenance cost vehicles and retired them
  - Found brand new vehicles with very low usage.
- Reduced our overall fleet by 35%
  - Reduced insurance costs
  - Reduced parts and labor expense
  - Reduced fuel consumption (new vehicles had better fuel economy)

Fuel Consumption and Staff behavior

- Fuel Usage Study
  - Found vehicles idling for hours during inappropriate times
  - Reduced overall fuel consumption by 30%
- Staff Behavior
  - Took long routes to job sites
  - Found various parks and buildings crews crisscrossing town going from job site to job site

Examples of Fuel Usage



VEHICLE	CURRENT FUEL LEVEL	FUEL USED ▼	FUEL EFFICIENCY	EST. COST	ENGINE RUN TIME	IDLE TIME	PERCENT TIME IDLE
G-25	77%	34.9 gal	2.1 mpg	$104.61	7h 49m	21m 7s	4.3%
G-48	70%	32.4 gal	2.0 mpg	$97.08	8h 32m	9m 17s	1.8%
G-9	43%	30.6 gal	2.5 mpg	$91.93	5h 34m	33m 7s	9.0%
G-28	70%	30.2 gal	2.1 mpg	$90.74	6h 43m	17m 44s	4.2%
G-24	64%	29.9 gal	1.6 mpg	$89.55	6h 31m	13m 17s	3.3%
G-47	–	26.2 gal	1.7 mpg	$78.46	5h 48m	20m 32s	5.6%
G-29	30%	26.1 gal	1.6 mpg	$78.20	5h 43m	30m 51s	8.3%
G-27	90%	25.0 gal	1.9 mpg	$74.89	6h 5m	13m 58s	3.7%
SC-2	73%	21.8 gal	2.1 mpg	$65.38	4h 4m	–	-
ER-10	85%	17.4 gal	2.9 mpg	$52.31	4h 57m	43m 37s	12.8%
G-49	82%	14.3 gal	1.8 mpg	$42.80	3h 34m	8m 20s	3.7%
G-26	82%	13.9 gal	2.4 mpg	$41.61	3h 5m	14m 21s	7.2%
S-13	100%	13.4 gal	1.3 mpg	$40.19	2h 56m	–	-
Engine 9	99%	13.3 gal	1.0 mpg	$40.02	8h 36m	1h 38m	16.1%
G-8	52%	12.0 gal	2.8 mpg	$36.06	3h 41m	20m 34s	8.5%
ER-6	55%	11.4 gal	6.6 mpg	$34.18	4h 42m	3m 12s	1.1%

Feedback

Summary

- Initially reduced fleet from 320 vehicles to 248 after the first year of deployment
- Reduced annual insurance expense by 20%
- Realized a savings of $300,000 in repairs over 3 years
- GPS and vehicle telematics can be an excellent window into fleet usage and health as well as employee behavior
- Did not use the collected data as a means of discipline.

Summary

- Having a connected fleet allowed department directors and Supervisor to monitor their team's activities in real time.
- Information Technology Division in a central component to ensuring the data is accurate, fleet telematics is working and up to date, and assisting departments with retrieving and manipulating data for analysis.

Jim DeVico, CGCIO
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DRVE
A sophisticated tool to analyze all vehicles in a fleet.
Built by Atlas Public Policy in Washington DC. Supported by the Electrification Coalition
ATLAS
PUBLIC POLICY

About Atlas Public Policy

DC-based policy-tech firm started in 2015

We equip businesses and policymakers to make strategic, informed decisions through the greater use of technology that aggregates publicly available data.

Our Key Focus Areas

- **Access**: Collect and disseminate publicly available information.
- **Interpret**: Create technology to spur insights and conduct data driven analysis.
- **Empower**: Strengthen policymakers, businesses, and non-profits' ability to meet emerging challenges and identify and seize opportunities.

Overview

Assess electrification potential of a fleet

Empower community to run their own analysis

Present results in a clear and understandable format

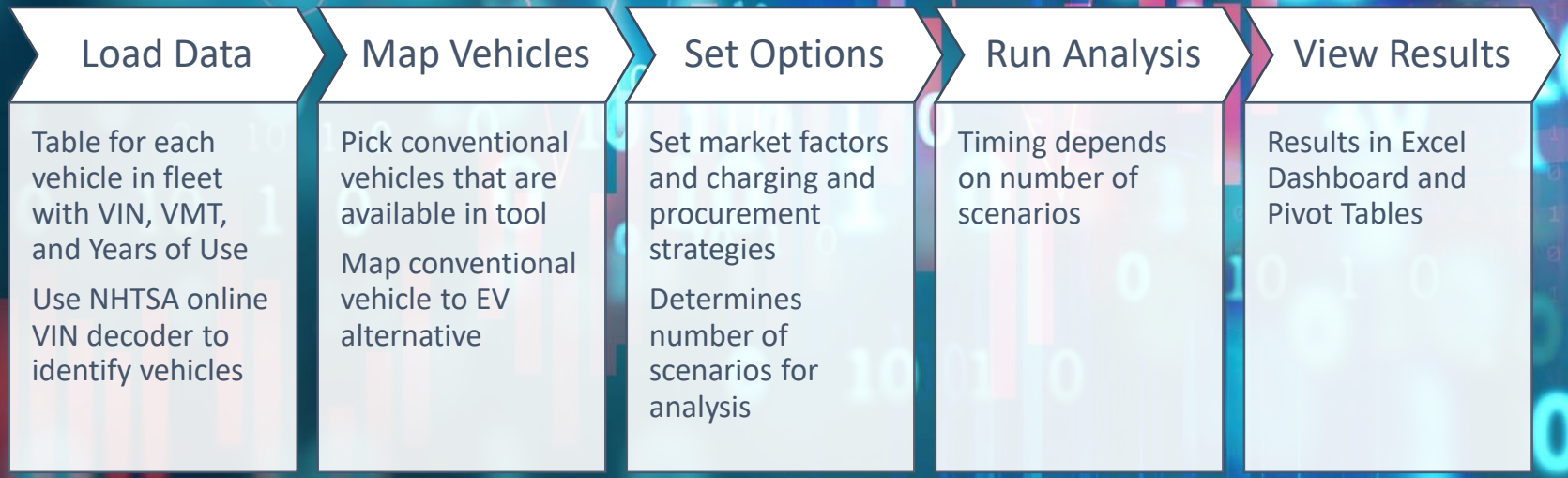
DRVE at a High Level

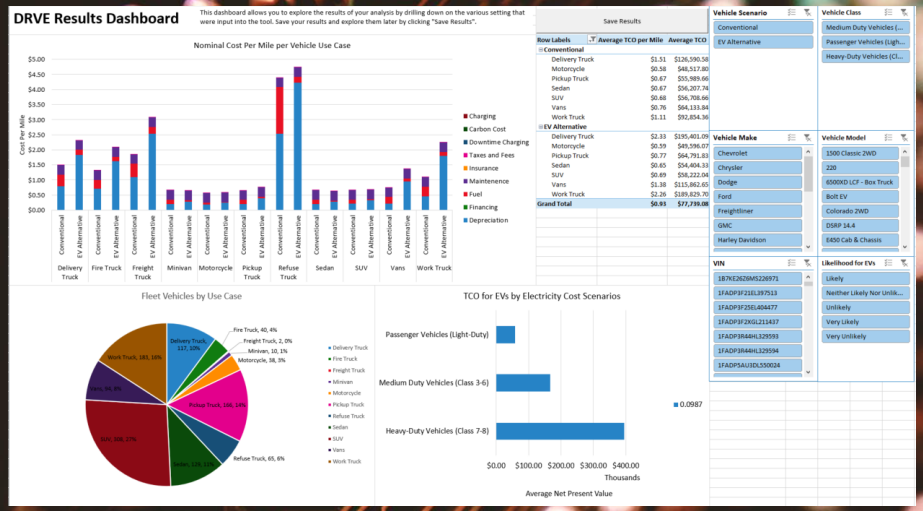
Near-term Procurement Opportunities	Savings assessment for specific vehicles at the VIN level Count of vehicles by use case where electrification offers savings
Average Lifetime and Per-Mile Cost by Model	Comparison of average per-mile cost by model and use case, including charging infrastructure Average lifetime cost/savings by EV model
Emissions Comparisons by Use Case	Per mile GHG and criteria pollutant emissions of EVs and conventional vehicles Comparisons of emissions for specific models or averages for vehicle classes
Impacts on Savings Potential with Different Settings/Models	Results presented with data filters to compare impact of adding or removing different inputs Shifts in savings potential when comparing different vehicle mappings

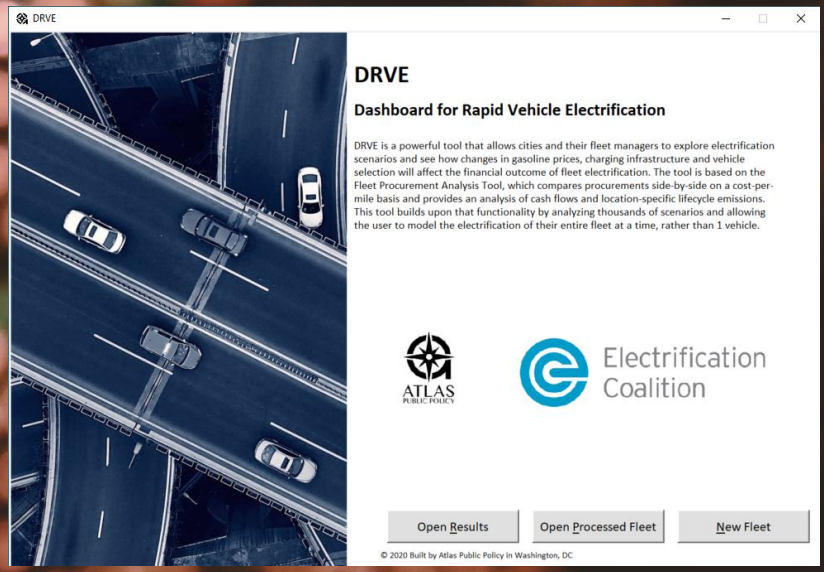
Key Data Inputs Required for the Analysis

 Fleet Inventory and Usage Data	VINs, odometer readings, and years in use
 Fuel Cost Data	Average gasoline, diesel, and electricity prices
 Operational Cost Data	Per vehicle or average maintenance costs
 Availability of Tax Credits and Rebates	Tax credit or rebate eligibility and amounts/percentages

DRVE Fleet Assessment Process



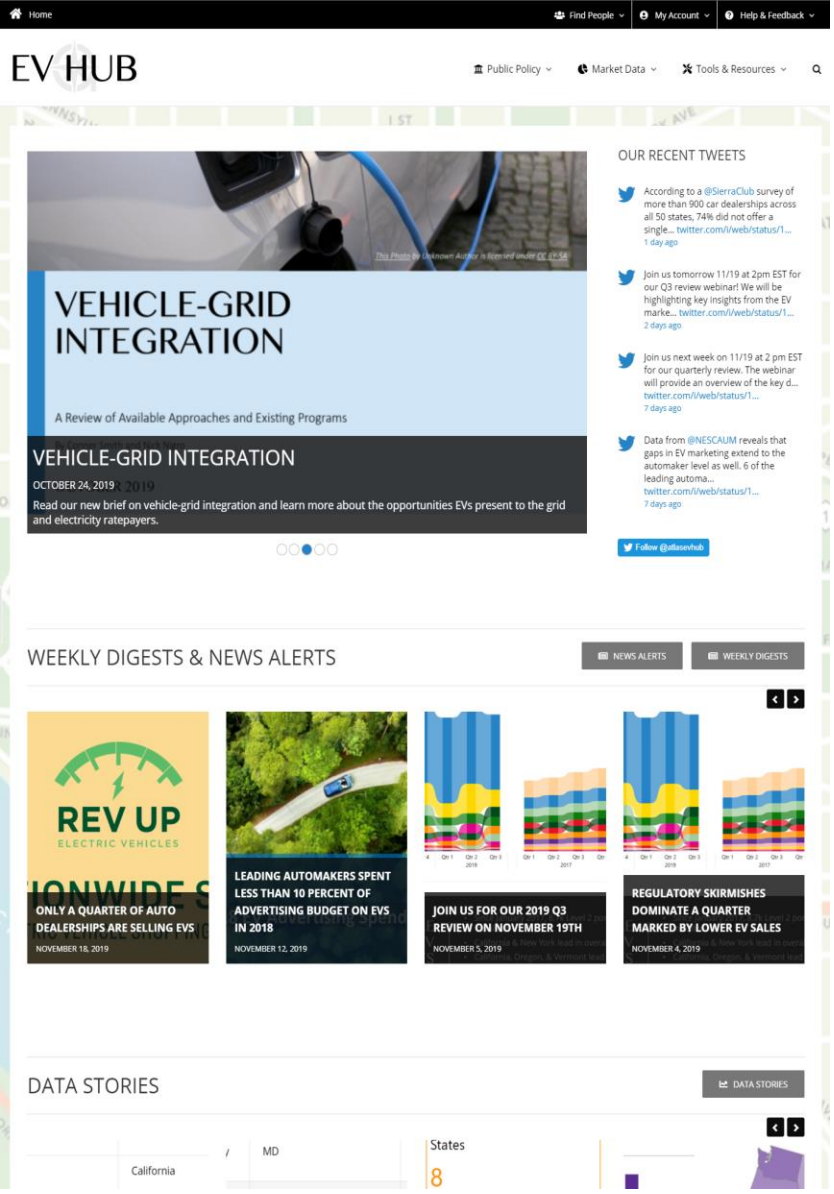




DRVE in Action

Staying Up to Date

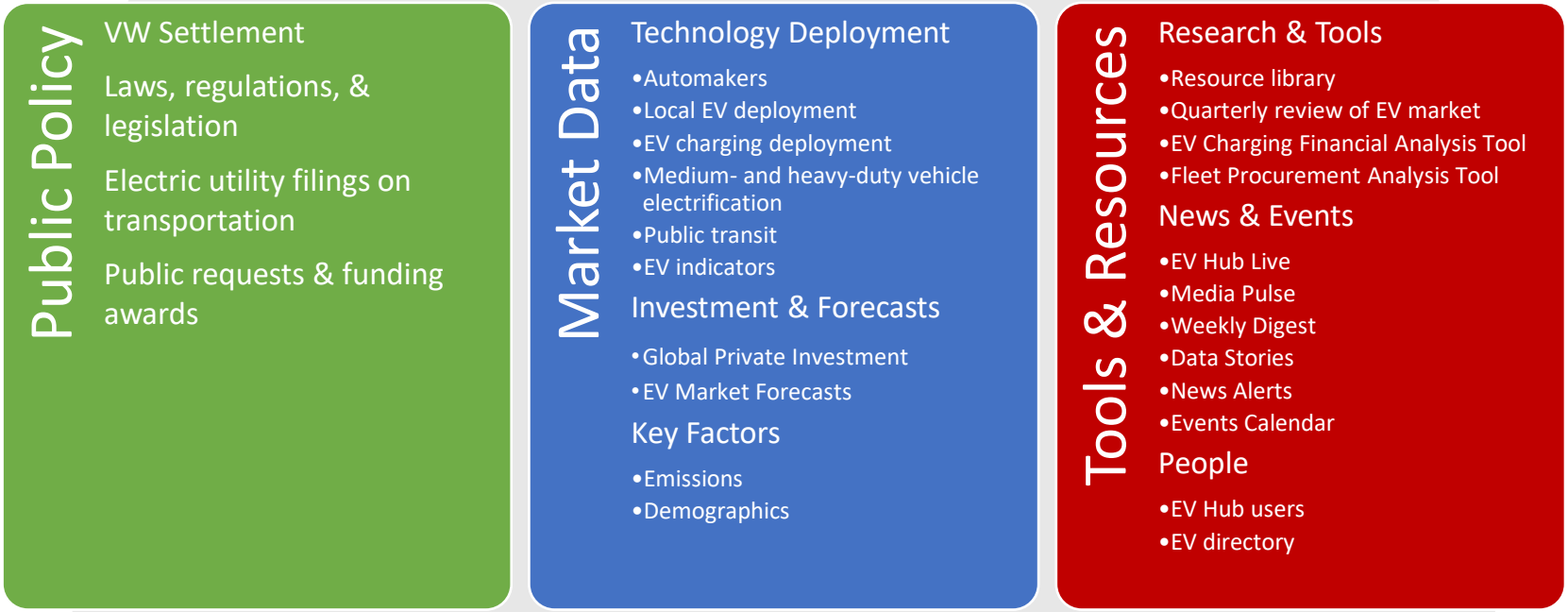
- DRVE is constantly updated with new features, improvements, and vehicle options
- Join our mailing list to stay up to date on new releases.
- Contribute to the tool! Email us feedback, suggestions, or vehicle additions: drve@atlaspolicy.com



ABOUT THE ATLAS EV HUB

- The EV Hub gives stakeholders from across the EV industry quick access to key data and information on the market, policies and regulations, and activities by the EV community
- A one-stop shop for businesses, policy professionals, and the advocacy community to learn more about what's going on in the EV market
- A comprehensive platform for the EV community: www.atlasevhub.com

Free access for public agencies and Clean Cities Coordinators!



EV Hub Features

Links and Sources

1. DRVE Download & User Guide: https://atlaspolicy.com/rand/dashboard-for-rapid-vehicle-electrification-drve/
2. DRVE Tutorial Video: https://www.youtube.com/watch?v=kAYcTEevRdQ
3. Atlas EV Hub: https://www.atlasevhub.com/
4. Atlas EV Hub Registration: https://www.atlasevhub.com/ev-hub-registration/

ATLAS PUBLIC POLICY

Josh Rosenberg
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Ecosystem development and incentives for zero-emission medium- & heavy-duty vehicles

June 23, 2021

Victoria Carey – Senior Project Officer
vcarey@njeda.com

NJEDA
ECONOMIC DEVELOPMENT AUTHORITY

Transitioning our MHDVs to zero-emission alternatives is critical to becoming a stronger and fairer New Jersey

Transportation accounts for 42% of NJ's emissions, with a quarter coming from medium- and heavy-duty vehicles (MHDV) that impact overburdened communities disproportionately

In meeting our zero-emission MHDV and grid targets, **we can reduce net emissions especially in environmental justice communities**

By pursuing the zero-emission MHDV transition, **we can create jobs and reduce costs, increasing economic opportunity**

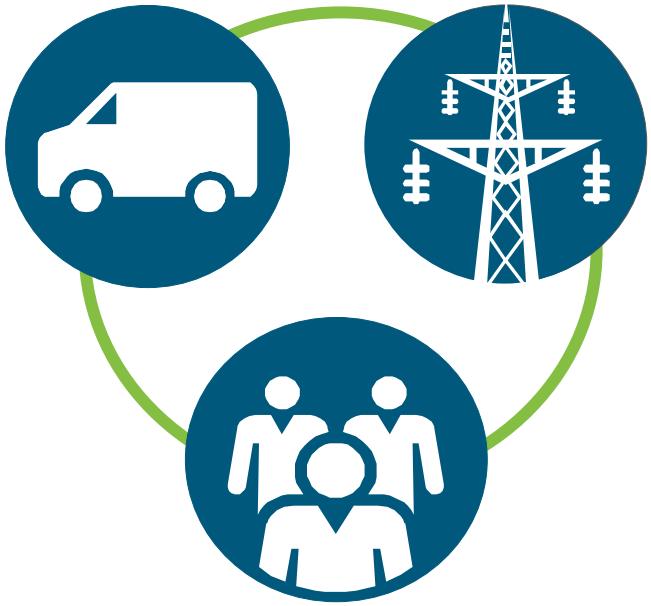
A cohesive financial, strategic, and regulatory tool set coordinated across government and industry – and driven by communities' self-identified needs – is key to meaningfully achieving our goals

Various tools and incentives are necessary to address the ZE MHDV transition at the intersection of environment, energy, and economy

Accelerated ZE MHDV adoption, with equitable access and impact

For example…

- Tax incentives: credits, sales, & gas
- Grants, vouchers, and rebates
- Financing; second-hand programs
- Non-financial incentives
- Implement regulations and standards



ZE MHDV-enabling grid modernization

For example…

- Infrastructure financing
- Make ready support
- Design of market mechanisms
- Streamlining of processes
- Implement regulations and standards

Support for people and businesses in the green economy

For example…

- Direct incentives and grants
- Standards development and adoption
- Green Jobs Council work
- Technical assistance
- Expand existing programs
- Foster innovation by supporting research institutions

NJ EDA

NJ ZIP: Zero-emission Incentive Program – At a glance

Voucher Pilot for Medium Duty Vehicles

What is NJ ZIP?

NJ ZIP is a first come, first served voucher pilot program, launched April 2021

What is the purpose of this program?

Reduce the upfront cost of buying a zero-emission medium-duty vehicle, leveraging RGGI funding

How much voucher funding is available?

$15M initially, with $5M set aside for small businesses and funding is still available!

Vouchers range from $25,000 - $100,000, with bonuses available for:

- small businesses
- women-, minority-, and veteran-owned businesses
- NJ manufacturers
- Vendors who provide technical training

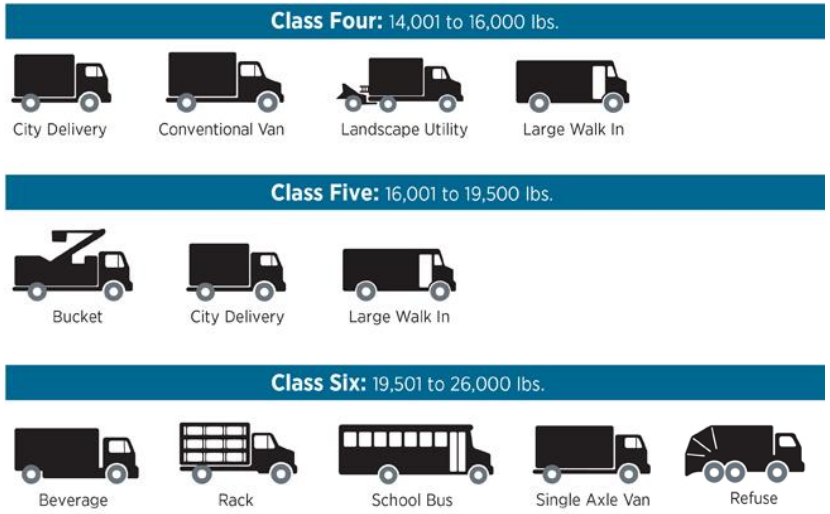
NJ ZIP program overview: Common questions

What is 'medium-duty'?

For this program, any vehicle between Class 2b – Class 6, by weight (GVWR)

Class	GVWR	Voucher
Class 2b:	8,501 – 10,000 lbs	$25k
Class 3 :	10,001 – 14,000 lbs	$55k
Class 4 :	14,001 – 16,000 lbs	$75k
Class 5 :	16,001 – 19,500 lbs	$85k
Class 6 :	19,501 – 26,000 lbs	$100k

Trucks, buses, vans, specialty vehicles, etc. are all eligible in these ranges.



Examples from FHWA

NJ ZIP program overview: Common questions

What is 'greater Camden' or 'greater Newark'?

The overburdened communities within or intersected by a 10 mile radius circle centered on Newark or Camden

Greater Camden area: Bellmawr, Camden, Cherry Hill, Cinnaminson, Collingswood, Delran, Deptford, Gloucester, Lawnside, Lindenwold, Magnolia, Maple Shade, Merchantville, Mount Ephraim, Mount Laurel, Palmyra, Paulsboro, Pennsauken, Riverside, Somerdale, Stratford, Voorhees, Washington, West Deptford, Westville, Woodbury, Woodlynne

Greater Newark area: Bayonne, Belleville, Bloomfield, Carlstadt, Carteret, Clark, Clifton, Cranford, East Newark, East Orange, East Rutherford, Elizabeth, Glenridge, Guttenberg, Harrison, Hillside, Hoboken, Irvington, Jersey City, Kearney, Kenilworth, Linden, Little Falls, Livingston, Lyndhurst, Maplewood, Millburn, Montclair, Moonachie, Newark, North Arlington, North Bergen, Nutley, Orange, Passaic, Rahway, Roselle, Roselle Park, Rutherford, Secaucus, South Orange, Springfield, Summit, Union City, Verona, Wallington, Weehawken, West New York, West Orange, Winfield, Woodridge

NJ ZIP program overview: Common questions

How do I calculate my potential voucher amount?

You don't have to! The application auto-calculates. But for example…

You are a small, women- and veteran-owned NJ business. You need to buy (1) Class 3 vehicle to add to your fleet. You find an approved Vendor who sells a zero-emission version, and get a quote of $115,000 pre-voucher for the vehicle.

Voucher amount = (Base voucher amount x Small business bonus) + Woman-owned business bonus + Veteran-owned business bonus

Voucher amount = ($55,000 x 1.25) + $4,000 + $4,000

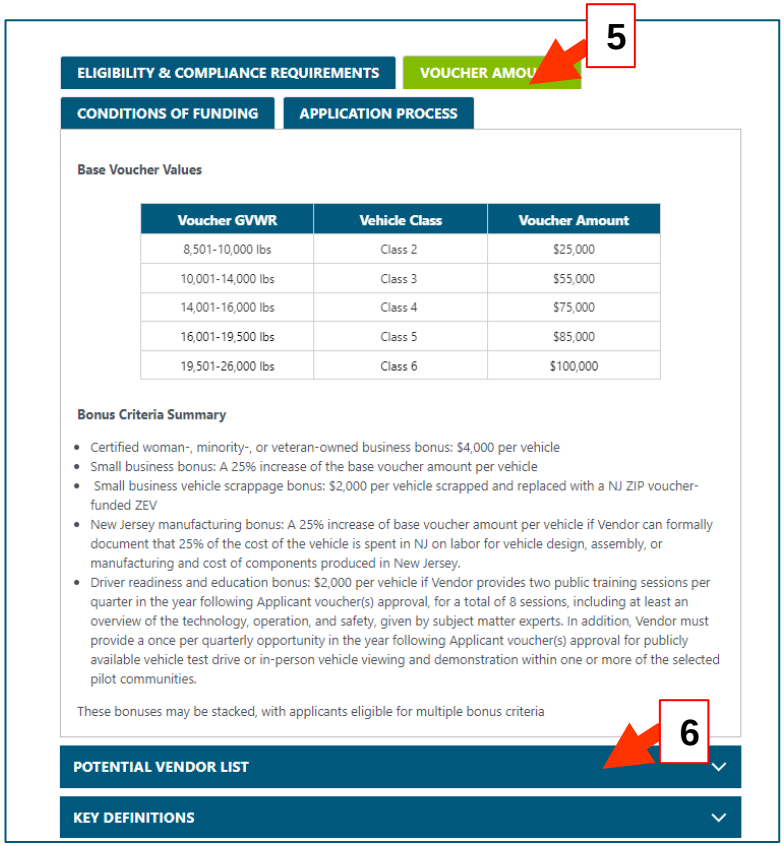
Voucher amount = $76,750

Upfront cost to buyer = $115,000 - $76,750 = $38,250 final cost with voucher

NJ ZIP program overview: Common questions

Where can I learn more?

https://www.njeda.com/njzip/ and https://www.njeda.com

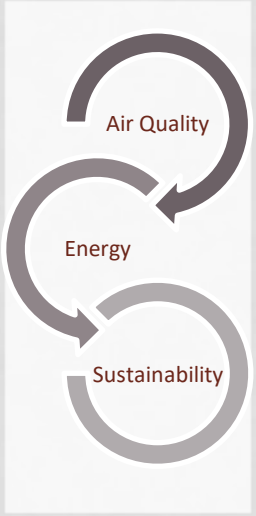


DIVISION OF AIR QUALITY

AIR QUALITY, ENERGY, AND SUSTAINABILITY

Fleet Electrification Resources from NJDEP

SUSTAINABILITY JERSEY 6/23/21



Andrea Friedman, Supervisor – Electric Vehicle Programs
NJDEP Division of Air Quality

FLYER:
EV resources for local government

Includes:

Incentives
Procurement Tools
Policy & Planning Support
Sustainable Jersey Resources
Resources for Residents

Download from

www.drivegreen.nj.gov/local resources.pdf

It Pay$ to Plug In

DEP's Grant Program for EV Charging Stations

Up to $4,000 per port for **Level 2 chargers** at **public places**, **multi-family homes,** and **workplaces (including fleets)**

First-come first-served. We are accepting applications now.

Apply online:

www.drivegreen.nj.gov/plugin.html

It Pay$ to Plug In

Grants for public fast chargers

Competitive solicitation. Stay tuned for future funding rounds.

Electric Shared Mobility Program Grants

Funding for electric shared mobility projects like electric car sharing and ride hailing services.

Programs that benefit overburdened communities will be prioritized.

Competitive solicitation. Stay tuned for future funding rounds.

Jersey City's new public ride-share service with VIA hits the road 3 / 5

One of 15 vehicles part of the City's new public ride-share service.

Diesel Electrification Grants



Grants for local governments to replace medium- and heavy-duty diesel vehicles with electric.

Examples: school buses, transit buses, garbage trucks, shuttle buses. Includes associated charging equipment.

Overburdened communities will be prioritized.

Competitive solicitation. Stay tuned for future funding rounds.

Follow us on social media

Instagram drivecleannj

Facebook NJDEPAQES

Twitter @NewJerseyDEP

Join our listserv for updates and funding announcements

www.state.nj.us/dep/stopthesoot/sts-listserv.htm

Visit our Website for more EV info

www.drivegreen.nj.gov

Contact me at:

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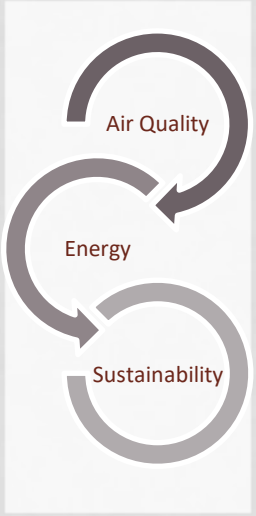


NJ BPU:

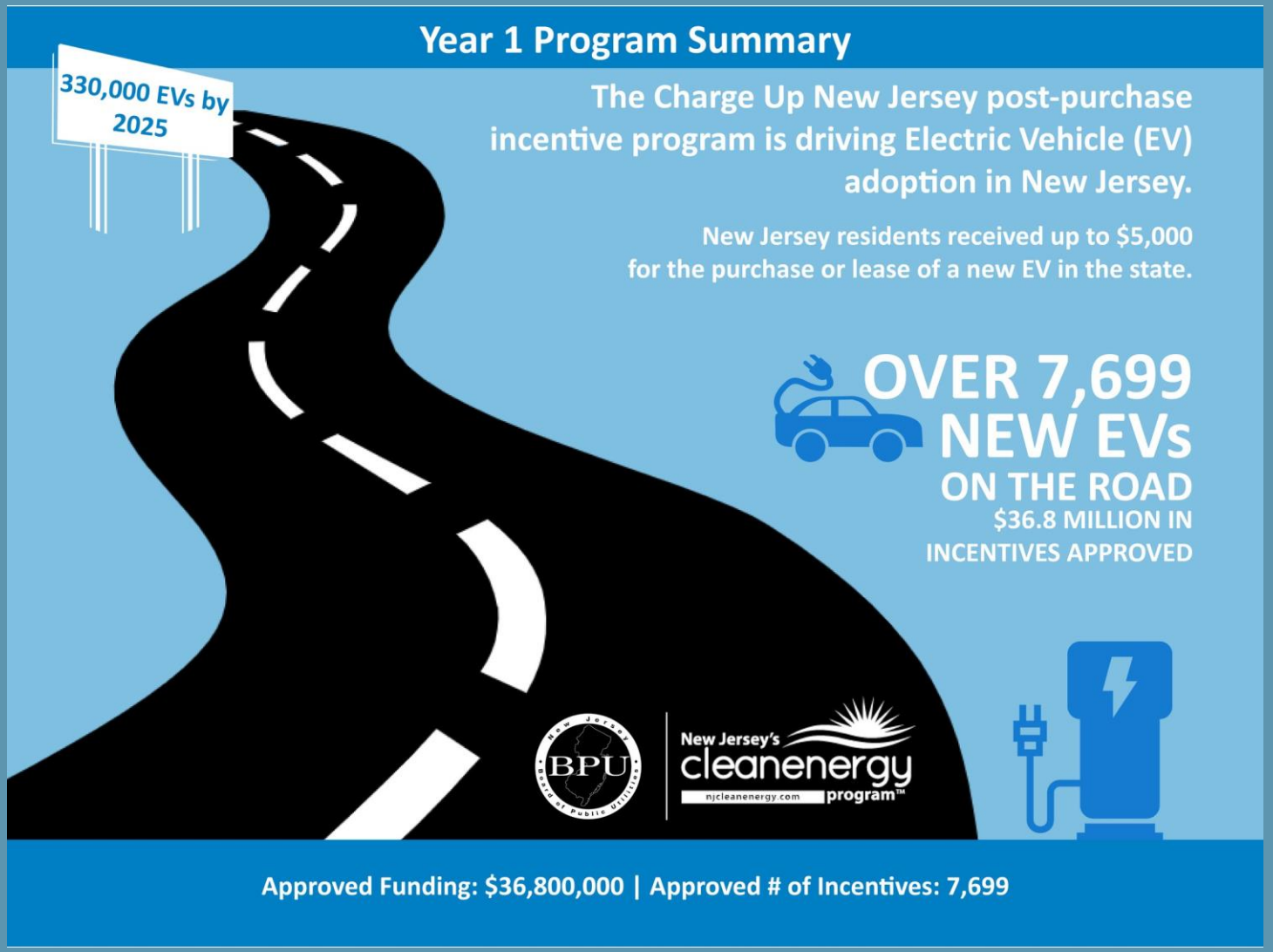
Driving EV Adoption

Sustainable Jersey

June 23, 2021

EV Goals

- At least 330,000 registered light duty EV by December 2025;
- At least 2 million registered light duty EVs by December 2035;
- At least 85 percent of all new light duty vehicles sold or leased in the State shall be plug-in electric vehicles by December 2040
- At least 25 percent of State-owned non-emergency light duty vehicles shall be EVs by December 2025
- 100 percent of State-owned non-emergency light duty vehicles shall be plug-in electric vehicles by December 2035



Charge Up New Jersey – Year One

Year One

- Plug-In Electric or Plug-In Hybrid Vehicle
- Must be purchased or leased in the State of New Jersey
- Must be registered in NJ to a NJ licensed driver
- MSRP must be less than $55,000
- $25/emile up to $5,000 Post-Purchase Incentive
- Purchased between January 17, 2020 –
- December 15, 2020

Proposed Year Two *

- Plug-In Electric or Plug-In Hybrid Vehicle
- Must be purchased or leased in the State of New Jersey
- Must be registered in NJ to a NJ licensed driver
- MSRP must be less than $55,000
- $25/emile up to $5,000 for vehicles with MSRP under $45,000
- $25/emile up to $2,000 for vehicles with MSRP between $45,000-$55,000
- Point-of-Sale Incentive
- Purchased after the FY22 launch until funding is exhausted

*On May 19th NJBPU released a Straw Proposal outlining the Year 2 Incentives. Final requirements and incentive levels will be included in the Board's FY22 Budget.

EV Charging Goals

- At least **400 DC Fast Chargers** shall be available for public use at no fewer than 200 charging locations in the State by December 2025
- At least **1,000 Level Two chargers** shall be available for public use across the State by December 2025
- At least **15percent** of all multi-family residential properties in the State shall be equipped with EVSE for the routine charging of plug-in electric vehicles by December 2025.
- At least **30 percent** of all multi-family properties shall be equipped for electric vehicle charging by December 2030.
- At least **20 percent** of all franchised overnight lodging establishments shall be equipped with EVSE for routine electric vehicle charging by guests of the establishment by providing Level Two EVSE by December 2025.

Public Charging

- Utility Filings
  - Make Ready Incentives

- Fast Charging
  - PSEG - 1200
  - ACE - 100

- Level 2
  - PSEG - 3500
  - ACE - 1500+

Clean Fleet Program

- Electric vehicles are now included on the State Purchasing Contract under Award T0099
- Clean Fleet Electric Vehicle Incentive Program
  - Designed to encourage local and state governments to add EVs to their fleet
    - $4,000 per battery electric vehicle (maximum of 2); and
    - $1,500 for one Level-Two EV charging station
- Grants awarded on rolling basis until June 2021, or until funding expended
- Questions? EV.programs@bpu.nj.gov

More Information

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Visit
NJ CleanEnergy.com **Newsletter**
NJ CleanEnergy.com/NEWSLETTER
Listservs
NJCleanEnergy.com/LISTSERVS

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Municipal and School Fleets

Fleet Inventory

- Evaluate current vehicle use
- Fleet planning exercise

Purchase Alternative Fuel Vehicles

- Code enforcement vehicles
- Police vehicle fleet
- Light and heavy-duty

Sustainable Fleets
(Sustainable Jersey for Schools)

Runnemede's new EV and EV Chargers!

Community Adoption of EVs

Public EV Charging Infrastructure

Make Your Town EV Friendly

- Zoning Ordinance
- Parking Ordinance
- First responder training
- EV Outreach
  - Local Employers
  - Multi-family Dwellings

Ribbon Cutting Ceremony: Secaucus unveils new EV charging station

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New Jersey's cleanenergy program™ — njcleanenergy.com

PSEG Foundation

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Maschio's Food Services, Inc.

Upcoming Opportunities - Municipal

https://www.sustainablejersey.com/grants/sustainable-communities-cycle/

2021 Sustainable Jersey Grants Program Virtual Announcement Event

Jun 29, 2021, 12:00 PM to 1:00 PM https://www.facebook.com/SustainableJersey

Upcoming Opportunities - Schools

School Food Waste Pilot Program

This program consists of technical assistance in partnership with the Rutgers Cooperative Extension Food Waste Team and a $25,000 grant to purchase a composting system for the school building.

Deadline June 25

https://www.sustainablejerseyschools.com/grants/school-food-waste-pilot-program/

Become an EmPowered School!

Sustainable Jersey is partnering with New Jersey Natural Gas (NJNG), South Jersey Gas (SJG) and the Alliance to Save Energy (the Alliance) to bring the EmPowered Schools program to 67 schools within the NJNG and SJG service territories.

https://www.sustainablejerseyschools.com/grants/empowered-schools/

Questions?

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