



*Green Communities Division
Webinar*

March 31, 2021

COMMONWEALTH OF MASSACHUSETTS

*Charles Baker, Governor
Kathleen Theoharides, Secretary
Patrick Woodcock, Commissioner*

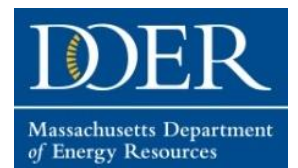
Tackling Municipal Vehicle Fuel Use

Green Communities Division

The energy hub for ***all*** Massachusetts cities and towns,
not just designated Green Communities.



*Helping Massachusetts Municipalities Create a Clean,
Affordable, and Resilient Energy Future*

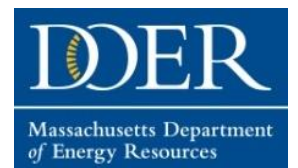


Green Communities Division - Programs & Resources for Municipalities

- Green Communities Designation and Grant Program
- MassEnergyInsight energy tracking and analysis tool
- Municipal Energy Technical Assistance
- Website filled with tools & resources
www.mass.gov/orgs/green-communities-division
- Email updates via e-blasts – Sign up by sending an email to:
join-ene-greencommunities@listserv.state.ma.us



*Helping Massachusetts Municipalities Create a Clean,
Affordable, and Resilient Energy Future*



Green Communities Regional Coordinators

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:



WERO – SPRINGFIELD: Mark Rabinsky
Mark.Rabinsky@mass.gov
413-755-2232
617-823-4588 - cell



NERO – WILMINGTON: Neal Duffy
Neal.Duffy@mass.gov
978-694-3315
857-276-8654 - cell



CERO – WORCESTER: Kelly Brown
Kelly.Brown@mass.gov
508-767-2703
617-780-8144 - cell



SERO – LAKEVILLE: Lisa Sullivan
Lisa.M.Sullivan@mass.gov
508-946-2822
617-312-4018 - cell

Upcoming Events



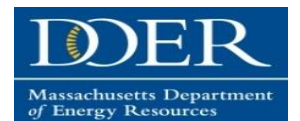
- April 9: Block 1
 - *Competitive Grant deadline*
- April 15: Webinar
 - *“Working with Utilities’ New Construction Programs”*

Recording & Presentation

- The webinar is being recorded and will be available on our website in approximately 48 hours at:
www.mass.gov/orgs/green-communities-division-massdoer
- Click on the camera icon top right of your screen to save any slides for future reference
- Use the Q & A icon on your screen to type in questions



Helping Massachusetts Municipalities Create A Greener Energy Future



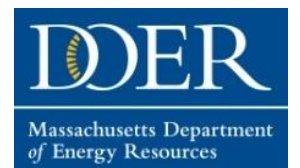
Poll Question #1

We would like to get a sense of our audience today. Please indicate the option that best reflects your role:

- **Municipal/school staff**
- **Elected official or volunteer**
- **Energy consultant or vendor**
- **Other**



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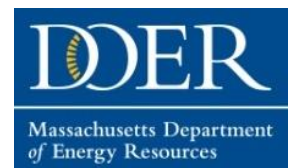


Today's Presentation

- **Kate Hanley**, Sustainability Director, Concord, MA
 - Concord's "Electric-First" Vehicle Policy
- **Erin Bostwick**, MA EVIP Coordinator, MassDEP
 - Updates on Electric Vehicle Incentive Program
- **John Liriano**, Clean Cities Coordinator, DOER
 - MA Clean Cities updates and MOR EV for trucks



*Helping Massachusetts Municipalities Create a Clean,
Affordable, and Resilient Energy Future*



Town of Concord

“Electric-first” Sustainable Fleet Policy



March 31, 2021

Kate Hanley



In 2020, we launched Sustainable Concord, our climate action roadmap.



Energy



Built
Environment



Natural
Resources



Preparedness



Mobility

OUR PLAN

will be comprised of
climate and resilience
actions organized into
5 elements



ACTION NAME

Implement a long-term plan to electrify school and municipal vehicle fleets.

IMPLEMENTATION STEPS

PLANNING CONSIDERATIONS

TIME FRAME

KEY PARTNERS

1. Conduct a fleet baseline by reviewing the existing vehicles, identifying mileage, fuel use, duty cycle and age. Review any past projects involving vehicle electrification for any best practices, such as the 2016 electric school bus pilot program with Concord Public Schools and funding from MassCEC.

2020-2021

- Sustainability Division
- Town Departments
- School District

2. Update Town Vehicle Policy to be an electric-first policy.

2020-2021

- Select Board & Town Manager
- Planning Board
- Public Works
- Fire-Rescue
- Police
- Schools
- Finance

3. Use fleet analysis to develop a vehicle transition plan.

- a. Develop a prioritized list of vehicles for replacement.
- b. Identify electric vehicle options that meet needs of current fleet vehicles.
- c. Identify other opportunities for efficiencies by adjusting routes or operational practices.
- d. Identify procurement implications, including vehicle costs, procurement method, and infrastructure requirement.

2021-2022

- Sustainability Division
- Town Departments
- School District

4. Identify priority locations (e.g. Schools, Municipal Buildings, Community Centers) for charging infrastructure.

- a. Conduct an electrical assessment of the sites to see if any infrastructure upgrades will be required to meet current and future charging demands, considering the addition of new fleet EVs.

2021-2025

- Town Departments
- School District
- CMLP Engineering
- Concord Public Works
- Town Facilities Division

Update Town Vehicle Policy to be an electric-first policy.

Battery-electric vehicle (BEV)

Plug-in hybrid electric vehicle
(PHEV)

Hybrid vehicle

Fuel-efficient standard vehicle

The fleet policy is **electric-first**, meaning that electric vehicles shall be prioritized when the Town purchases or leases motor vehicles for its municipal operations.

The policy includes other components to improve sustainability of fleet including:

- Fuel efficiency requirements for standard vehicles
- Limits on transfers between departments
- Anti-idling
- Consideration of fleet and vehicle size
- Reduce VMT
- Vehicle maintenance

Updating the town's vehicle policy was a team effort.



Keys to success were demonstrating feasibility and connection to goals.

- ✓ Drew from other community's policies as examples of best practices
- ✓ Started with our existing fleet policy to maintain important components
- ✓ Engaged with Green Communities team early
- ✓ Engaged with fleet operators and municipal light plant early

- ✓ Demonstrated successful implementation of EVs in fleet
- ✓ Highlighted department head support, especially police department and light plant
- ✓ Outlined cost-effectiveness with grants, rebates, and reduced maintenance and operating costs
- ✓ Stressed the connection to Concord's climate goals



Concord's fleet of electric vehicles continues to expand.



Step 1: Policy adopted. Step 2: Implementation and planning.



The new policy went into effect January 1st.
Now we focus on implementation and planning for a future fully electric vehicle fleet.

- ☐ Ongoing engagement with town departments to deploy EVs, especially medium-heavy duty and special equipment
- ☐ Continued investment in charging infrastructure
- ☐ Fleet electrification study to start in 2021
- ☐ Community-wide EV education and outreach

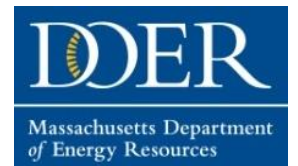
Poll Question #2

How many EVs and/or hybrid vehicles does your community/school district have?

- 0
- 1-5
- 5-10
- 10+



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Massachusetts Electric Vehicle Incentive Program (MassEVIP)

March 31, 2021



Erin Bostwick
Massachusetts Department of
Environmental Protection

MassEVIP Program Overview

Direct Current Fast Charging Program (DCFC)

- \$1.5M allocated
- Competitive program, up to \$50,000 per charger

Workplace & Fleet Charging (WPF)

- \$2.5M allocated
- Rolling program, up to \$50,000 per address

Multi-Unit Dwelling & Educational Campus Charging (MUDC)

- \$1.5M allocated
- Rolling program, up to \$50,000 per address

Public Access Charging (PAC)

- \$1.5M allocated, in addition to the prior \$2M
- Rolling program, up to \$50,000 per address

Fleets

- ~\$1.0M allocated
- Rolling Program, up to 25 vehicles

MassEVIP Charging Programs

DCFC

- Direct Current Fast Charging stations
- Must be publicly accessible
- Up to 100% of eligible costs on government property
- Up to 80% of eligible costs on non-government property
- Up to 60% of eligible costs for chargers at educational sites

WPF

- Level 1 & 2 charging stations
- Up to 60% of eligible costs
- Public, private and non-profit non-residential workplaces with 15+ employees on-site
- Public, private and non-profit employers with 15+ employees in MA at fleet garage location

MUDC

- Level 1 & 2 charging stations
- Up to 60% of eligible costs
- Multi-unit dwellings with 5+ units
- Campuses with at least 15 students on-site

PAC

- Level 1 & 2 charging stations
- Up to 100% of eligible costs on government property
- Up to 80% of eligible costs on non-government property

Eligible & Ineligible Costs:

DCFC, WPF, MUDC & PAC

Hardware

- A console wired into the electrical supply
- A cable and connector to plug into the EV
- Cable management strategy (e.g., coil, retractable, etc.)
- Mounting, either pedestal or wall.
 - Pedestal: hard wired to a wall and typically includes a mounting plate
 - Wall: hard-wired to a wall and typically includes a mounting plate
- Separate payment module
- Shipping/Freight for "Costs Covered"

Installation

- Upgrading the electric supply
- Construction costs related to installation (including ADA EV Parking space)
- Signage and pavement painting

Ineligible

- Land/parking space purchase or lease
- Software subscription
- Warranty
- Taxes
- Internet connection or cell signal
- Planning or permitting for the project
- Shipping/Freight for "Costs not Covered"
- Bollards, curbs, wheel stops, setbacks, bumper guards
- Electricity consumption and demand charges
- Preventative and corrective maintenance on EV charging station
- Others as determined by MassDEP



MassEVIP Fleets Program

- ❑ Open to public entities only
- ❑ Funding to purchase or lease electric vehicles
 - ❑ Up to \$7,500 for Battery Electric Vehicles (BEVs)
 - ❑ Up to \$5,000 for Plug-in Hybrid Electric Vehicles (PHEVs)
 - ❑ \$750 for Zero emission Electric Motorcycles (ZEMs)
- ❑ Charging station funding now available under the Workplace and Fleet Charging program

MassDEP is committed to advancing equity, diversity, and environmental justice through its public investments

- ❑ MassDEP reserves the right to ensure equitable distribution of MassEVIP funding geographically across the Commonwealth and among eligible applicants
 - ❑ DCFC program reserves a minimum of \$200,000 for projects in each of the four MassDEP regions

- ❑ Selected criteria to be considered in evaluating DCFC applications:
 - ❑ Project is in an environmental justice area, as defined by Massachusetts
 - ❑ Applicant, site host or vendor is a certified business listed with the Supplier Diversity Office
 - ❑ Project promotes equitable geographic distribution across the state

Frequently Asked Questions (FAQ)



Accessibility requirements: for DCFC, WPF, MUDC, and PAC programs, at least 5% of the site's EV charging parking spaces must be accessible to persons with disabilities

Contact Jeffrey Dougan, Assistant Director at the Massachusetts Office on Disability at jeff.dougan@mass.gov for assistance



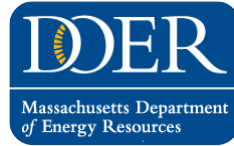
Combining funding from MassEVIP and utility programs: allowed so long as combined reimbursements do not exceed 100% of the costs. Installation costs from MassEVIP are not available to applicants participating in a utility program



Timeline for rolling programs: MassDEP reviews applications within 30 days of submission; final approval pending submission of any missing information from applicant

Resources

- ❓ MassEVIP Direct Current Fast Charging Program - <https://www.mass.gov/how-to/apply-for-massevip-direct-current-fast-charging-incentives>
- ❓ MassEVIP Workplace & Fleet Charging Program - <https://www.mass.gov/how-to/apply-for-massevip-workplace-charging-incentives>
- ❓ MassEVIP Multi-Unit Dwelling & Educational Campus Charging Program - <https://www.mass.gov/how-to/apply-for-massevip-multi-unit-dwelling-educational-campus-charging-incentives>
- ❓ MassEVIP Fleets Program - <https://www.mass.gov/how-to/apply-for-massevip-fleets-incentives>
- ❓ MassEVIP Public Access Charging Program - <https://www.mass.gov/how-to/apply-for-massevip-public-access-charging-incentives>



MOR-EV
Massachusetts Offers Rebates
for Electric Vehicles

Massachusetts Clean Cities

Reducing fuel Use in Municipal Fleets – March 2021

Presenter: John Liriano Contact: john.liriano@mass.gov

Massachusetts Clean Cities (MACC)

MACC mission is to advance the **energy, economic, and environmental security** of Massachusetts by supporting local decisions to adopt practices that contribute to the **reduction of petroleum consumption in the transportation** sector. MACC strives to:

- Raise awareness about the opportunities and benefits of using alternative fuels and advanced transportation technologies
- Provide members and stakeholders with continuing education opportunities and reliable informational resources
- Committed to air quality and environmental stewardship



MA CCC is part of a nationwide partnership sponsored by the U.S. Department of Energy (DOE) Clean Cities Program



Massachusetts Clean Cities

We work with the U.S. DOE on creating **tools** that can assist you with your efforts to advance alternative fuel and energy-efficient vehicle technologies.

Visit to get started:

<https://afdc.energy.gov/tools>



Calculators



[Vehicle Cost Calculator](#)

Compare cost of ownership and emissions for most vehicle models. 📱 [mobile](#)



[VICE Model](#)

Evaluate the financial case for natural gas vehicles and battery electric buses.



[AFLEET Tool](#)

Calculate a fleet's petroleum use, cost of ownership, and emissions.



[JOBS Model](#)

Estimate economic impacts of natural gas, hydrogen, or fuel cell infrastructure.



[Heavy-Duty Vehicle Emissions](#)

Calculate the emissions of alternative fuel medium- and heavy-duty vehicles.



[EVOlution: E-Drive Vehicle Education](#)

Understand the costs and benefits of electric vehicles based on location.



[EVI-Pro Lite](#)

Estimate a city or state's need for vehicle charging and the effect on electric load.



Interactive Maps



[Alternative Fueling Station Locator](#)

Locate alternative fueling stations and get maps and driving directions. 📱 [mobile](#)



[Alternative Fuel Corridors](#)

Find maps and station data to help with nominating alternative fuel corridors.



[TransAtlas](#)

Analyze vehicle densities and locations of fueling stations and production facilities.



[Biofuels Atlas](#)

Compare feedstocks and analyze biofuel production by location.



[Coalition Locations](#)

Find Clean Cities coalitions and contact information for coordinators.



Data Searches



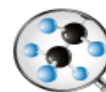
[Vehicle Search](#)

Compare all classes of alternative fuel vehicles, electric vehicles, and hybrids.



[Laws and Incentives Search](#)

Search for laws and incentives related to alternative fuels and advanced vehicles.



[Fuel Properties Comparison](#)

Compare alternative fuel properties and characteristics.



[Find a Car](#)

Compare fuel efficiency, costs, carbon footprints, and emissions. 📱 [mobile](#)



[State Information](#)

Find state information about alternative fuels and advanced vehicles.

Massachusetts Clean Cities

Upcoming Events:

- **AYRO Ride and Drive**
 - **Dates:** Tuesday, April 6th - Thursday, Thursday April 8th
 - **Location:** Hilton Boston Back Bay | [40 Dalton Street](#) | [Boston, MA 02115](#)
 - **Register:** Email kevin.orourke@ayro.com and schedule your demo.
 - **Description:** AYRO will be displaying three low-speed compact configurable **electric vehicles**, a pick-up truck, box truck, and mobile vaccination truck.
- **Listening Sessions**
 - **Dates:** TBD
 - **Location:** Virtual
 - **Contact:** John.liriano@mass.gov
 - **Description:** We are looking to **connect with multi-unit dwelling property owners** who have installed EVSE to share their experiences. The information gathered will be used to inform US DOE & MA DOER on policy and program creation and implementation.



Massachusetts Offers Rebates for Electric Vehicles (MORE-EV)

- Funded by the DOER and administered statewide by the Center for Sustainable Energy (CSE)
- MOR-EV provides rebates of up to \$2,500 for the purchase or lease of battery electric vehicles and fuel-cell electric vehicles and up to \$1,500 for plug-in hybrid electric vehicles (non-public customers)
- Vehicles eligible for the program:
 - Battery Electric Vehicle (BEV)
 - Fuel Cell Electric Vehicle (FCEV)
 - Plug-in Hybrid Electric Vehicle (PHEV)

MOR-EV
Massachusetts Offers Rebates
for Electric Vehicles



The purchase price of the vehicle as reflected on the purchase or lease agreement must be under \$50,000. The purchase price includes, but is not limited to, optional features, any applicable delivery and documentation charges. The purchase price does not include sales tax

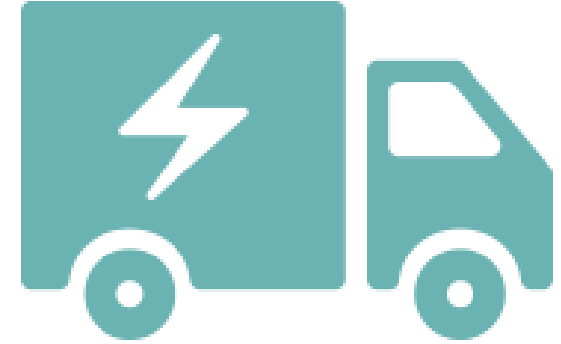


MOR-EV

Massachusetts Offers Rebates
for Electric Vehicles

MOR-EV Trucks

- **Purchases or leases of battery electric and fuel-cell electric vehicles** with a sales price of more than fifty thousand dollars (\$50,000) and having a gross vehicle weight rating (GVWR) of more than 8,500 pounds made on or after February 16, 2021 are eligible for a rebate or voucher in the MOR-EV Trucks Program.
- **Public fleets eligible to apply**
- Parties can apply for a rebate or voucher following purchase and registration of the medium/heavy duty vehicle(s) in Massachusetts. The amount of the rebates and vouchers under the MOR-EV Trucks Program are determined by the vehicle GVWR and applicable Block that the purchaser qualifies for under the program.
- Medium Duty & Heavy Duty (MD/HD) on-road vehicles are eligible for the program -
 - Buses
 - Vans
 - Trucks (Freight, Box, Pick Up, etc.)





MOR-EV

Massachusetts Offers Rebates
for Electric Vehicles

MOR-EV Trucks

- Who is offering MD/HD vehicles?
 - SEA Electric, Peterbilt, Freightliner, Tesla, Rivian, Ford, Chevy, Nikola, Lordstown, Bollinger, Alpha Motor, Atlis Motor, Canoo, and more!
- When will they be available?
 - Many are available for pre-order now with some delivering by the end of the year





MOR-EV

Massachusetts Offers Rebates
for Electric Vehicles

MOR-EV Trucks

- **Rebates are for lighter vehicles, <14,000lbs (purchase reimbursement)**
 - Rebates processed like the current MOR-EV program, paid following registration
- **Vouchers are for heavier vehicles, > 14,000lbs (fund reservation)**
 - Vouchers are available to both direct purchases and purchases through third-party bulk orders
- **Third Party Bulk Purchases**
 - Designated owner's agents and/or representatives may aggregate a bulk purchase on the behalf of multiple customers with those customers' express permission.
- **EJ Adder**
 - Parties which can demonstrate the vehicle is registered within, or operates more than 50% of the time within, census block groups that meet the State's Environmental Justice Income Criteria may be eligible for a rebate worth ten percent (10%) more than the current rebate block value.
 - EJ adder incentive recipients using the operational location qualification will be required to provide DOER with 3 years of annual operations verification.



MOR-EV

Massachusetts Offers Rebates
for Electric Vehicles

MOR-EV Trucks

- MOR-EV Trucks incentives are structured as a declining block rebate/voucher incentive
 - The incentives will **decline over time** to incentivize early adopters
 - Rebate values will decline 15% following each full block
 - Rebates will remain static at block 3 values until DOER completes a program review.

GWR (lbs)	Block Size (# Veh)	Remaining Rebates/ Vouchers in Current Block	Block Decline Rate (%)	Value: Block 1	Value: Block 2	Value: Block 3
8,501 – 10,000	200	200	15%	\$7,500	\$6,375	\$5,419
10,001 – 14,000				\$15,000	\$12,750	\$10,838
14,001 – 16,000	100	91	15%	\$30,000	\$25,500	\$21,675
16,001 – 19,500				\$45,000	\$38,250	\$32,513
19,501 – 26,000				\$60,000	\$51,000	\$43,350
26,001 – 33,000	50	50	15%	\$75,000	\$63,750	\$54,188
33,001 +				\$90,000	\$76,500	\$65,025

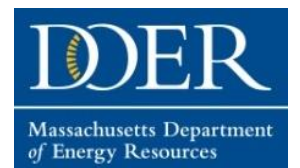
Poll Question #3

How likely will your community/school district purchase an electric truck, bus or van in the next 3 years if the purchase price was the same as a gasoline or diesel model?

- **Not likely at all**
- **Possibly**
- **Will definitely look into it**
- **Absolutely**



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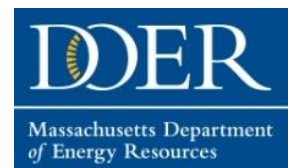


State Contracts

- VEH 98 - for vehicles including electric Blue Bird buses hybrids, and BEVs
- FAC 88 - electric lawn and grounds equipment
- VEH 106 - Telematics
- VEH 102 - for EVSE, idle reduction technologies



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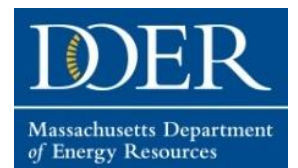


Green Communities Grants

- Eligible Green Communities can apply for funding:
 - publicly accessible charging stations
 - Hybrid (SUVs), plug-in hybrid and battery-electric hybrid vehicles
- Green Communities grants also fund hybrid retrofits/upfits of light and medium-duty vehicles in municipal and school fleets



*Helping Massachusetts Municipalities Create a Clean,
Affordable, and Resilient Energy Future*



National Grid MA Fleet Advisory Services Program

With You for the Long Haul, at No Cost

You have a lot to juggle when it comes to managing publicly owned vehicles. Join our program to get **comprehensive, objective guidance** from experts in EVs and help meet your Green Communities goals.

- You can expect a fully **customized report** that helps you:
 - ▶ Analyze your organization's conditions and unique needs
 - ▶ Easily understand data about how EVs will impact your fleet and municipal emissions
 - ▶ Pitch solutions to key decision makers on your team
- Plus, you'll get:
 - ▶ Access to a web portal with lifetime savings estimates for your fleet
 - ▶ Support through regular, one-on-one check-ins
 - ▶ Help finding **financial assistance** to help offset the cost of switching to EVs
- **Eligible fleets:** municipal, school bus, transit, state and federal government

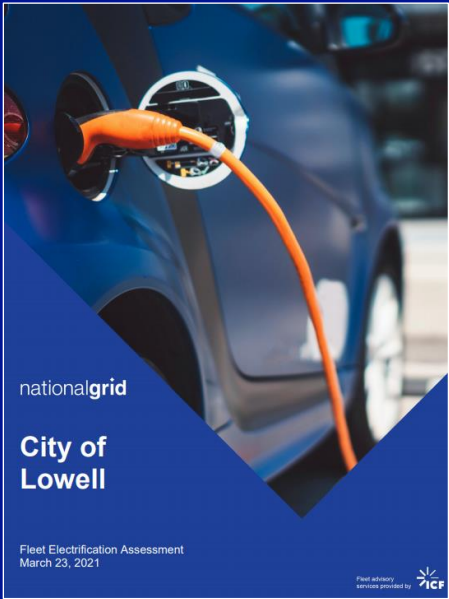
National Grid MA Fleet Advisory Services Program

Tools and Resources

We want to make it easy for you to get the information you need and share it with your team.

The screenshot shows the 'Instant Estimate' tool interface. It has a header with 'nationalgrid', 'MA Fleet Advisory Services Program', and navigation links: 'About', 'Instant Estimate' (active), 'Contact Us', and a 'Log in' button. The main heading is 'Get an instant look at the difference EVs can make.' Below this, there are two steps: '1 Choose vehicle type' and '2 Enter information for one type of vehicle in your fleet'. Step 1 includes a car image and icons for Sedan, Pickup, SUV, Van, and Refuse Truck. Step 2 includes input fields for 'Current Fuel Type' (a dropdown), 'Current Fuel Cost' (with a '\$/Gallon' unit), 'Annual Vehicle Miles' (12400), 'Average Fuel Economy' (with a 'mpg' unit), 'Vehicle Lifetime' (15 Years), and 'Number of Vehicles' (1). There are 'Submit' and 'Clear Values' buttons. A 'Contact Us' button is at the bottom.

Instant Estimate Tool



Custom Report

The screenshot shows the 'Resources' page. It has the same header as the other screenshots. Below the header, there are links to 'My Account', 'My Report', 'Resources' (active), and 'Updates and News'. The main heading is 'Resources'. Below this, there are four links with plus signs: 'Electric Vehicles and Electric Vehicle Supply Equipment 101 +', 'Grants and Incentives +', 'Talking to Your Organization About Electrification +', and 'Additional Operations & Maintenance Training +'.

Training & Resources

FleetAdvisoryMA.NationalGrid.com

Here's How It Works

1. Contact us at FleetAdvisoryMA@icf.com
2. We'll connect you with an **expert** in fleet electrification.
3. Your trusted advisor will review your **current fleet** makeup.
4. You'll get **a custom report** that analyzes the benefits of electrification, like cost savings and greenhouse gas reduction.
5. We'll walk you through **personalized recommendations** about which types of EVs would impact your bottom line, your community, and the environment.
6. We'll help you find **financial assistance** to help offset the costs of electrification.



Contact Info and Resources

- www.concordma.gov/sustainability
- www.sustainableconcord.org
- khanley@concordma.gov

- <https://www.mass.gov/how-to/apply-for-massevip-fleets-incentives>
- Erin.Bostwick@mass.gov

- doer.morev@mass.gov
- www.mass.gov/service-details/mor-ev-rebate-program
- <https://afdc.energy.gov/tools>
- john.liriano@mass.gov

- <https://fleetadvisoryma.nationalgrid.com/>
- FleetAdvisoryMA@icf.com