



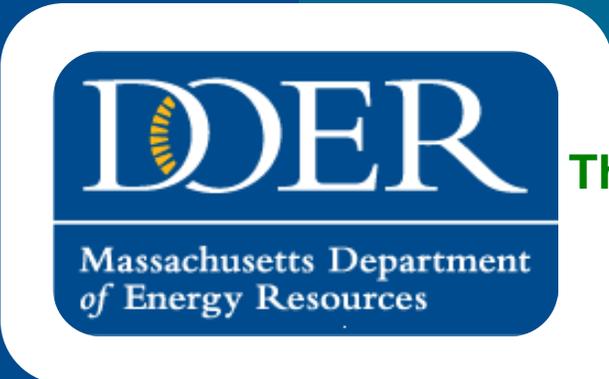
Energy Boot Camp

September 4, 2014

Presenter

Stephen Russell

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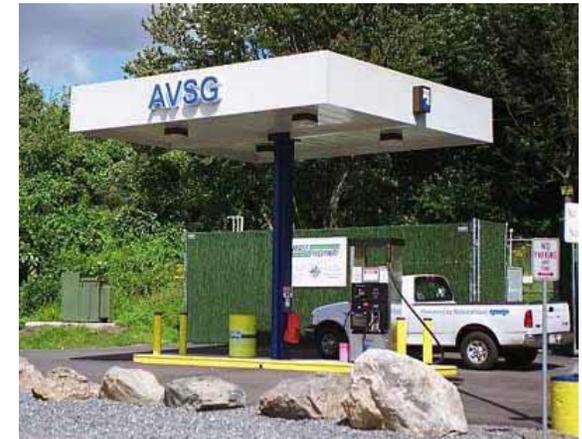
The alternative transportation/ Massachusetts Clean Cities Coalition are part of the Department of Energy Resources Renewables Division
Coordinators:
Stephen Russell and Michelle Broussard



Biodiesel



EVs



Natural gas

Clean Cities' Mission

To advance the energy, economic, and environmental security of the U.S. by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector.

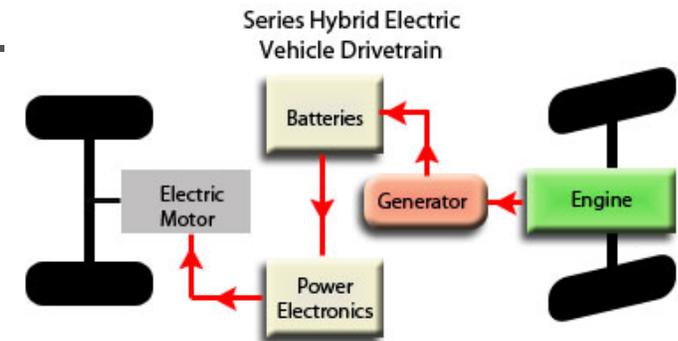
- Sponsored by the DOE's Office of Energy Efficiency and Renewable Energy's Vehicle Technologies program
- Provides a framework for businesses and governments to work together as a coalition to enhance markets
- Coordinate activities, identify mutual interests, develop regional economic opportunities, and improve air quality

- 90 active coalitions in 45 states
- 775,000 AFVs using alternative fuels
- 6,600 AFV stations
- 8,400+ stakeholders

Clean Cities Coalitions



- Clean Cities are a resource to both public and private fleets.
- They are a catalyst to match fleets with resources needed.
- They are the go-to folks for technical resources for alternative fuels and technologies.



Alternative Fuels

Biodiesel (B100)

Electricity

Ethanol (E85)

Hydrogen

Natural gas

Propane



Fuel Blends – commonly used

Biodiesel/diesel blends (B2, B5, B20)

Ethanol/gasoline blends (E10)

Hydrogen/natural gas blends (HCNG)

Diesel/CNG

- CNG Cleaner Less \$ alternative to Diesel fuel.
- Hybrids – in the right application can mean a fuel savings of over 30%.
- Battery electric vehicles will operate at \$1.00 per gallon equivalent.
- Biodiesel (B20) can increase MPG by 1 to 2 miles and is cleaner
- Autogas(propane) lower cost conversion.
- Hydrogen fuel cell vehicles are about 1-2 years away

CNG VEHICLES

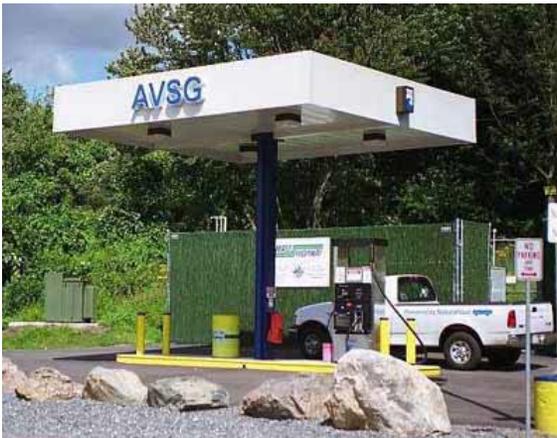
Medium-duty: Vans and Shuttles.



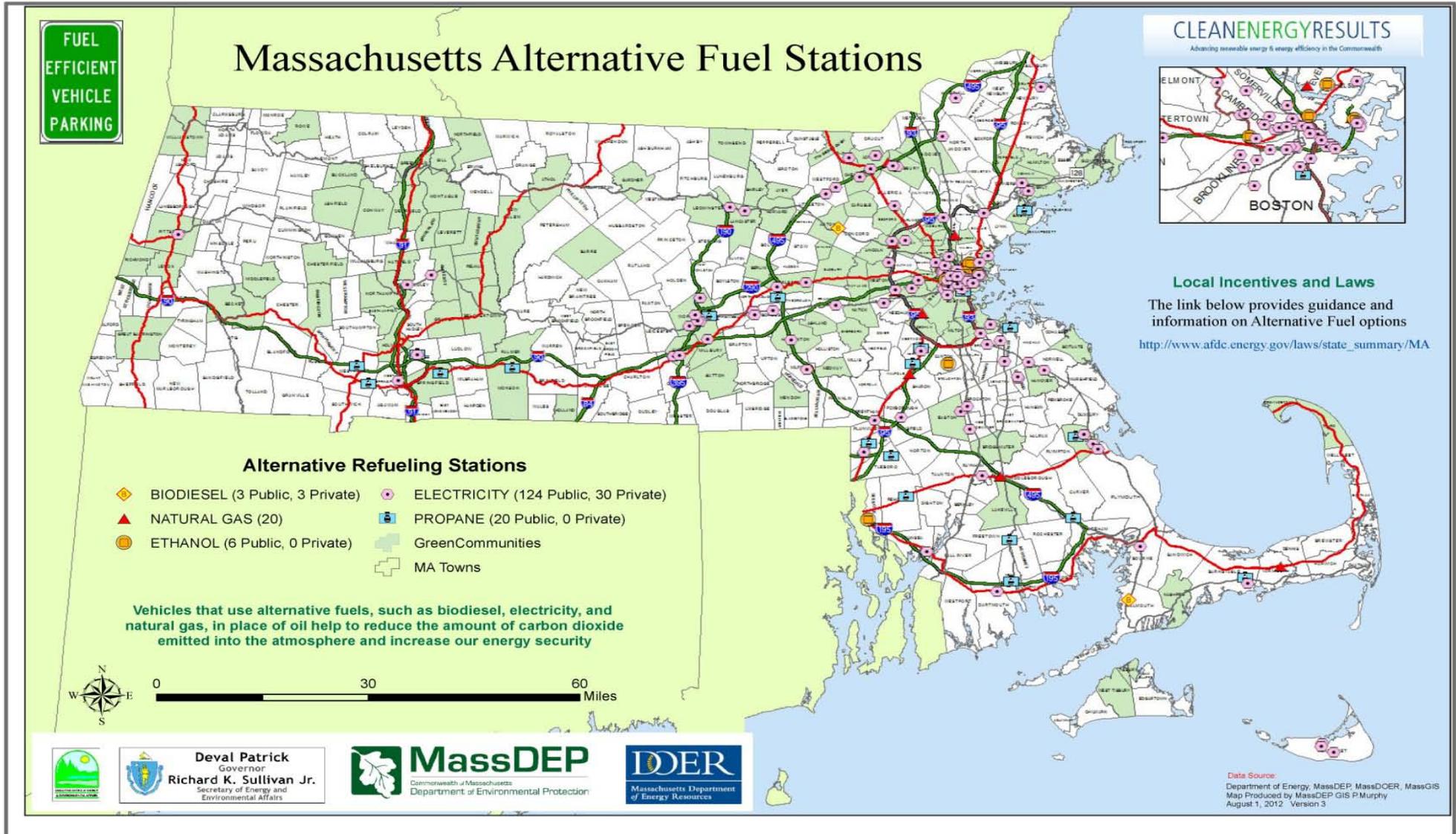
Massachusetts has Alternative fuel infrastructure



- 192 public Charging stations with over 384 Charge points (140 installed by communities)
- 20 CNG filling stations both public and private
- 3 Biodiesel (B-20) stations
- 19 Propane stations (autogas)
- 8 E-85 stations
- 1 Hydrogen station



Worcester RTA
Battery electric
Bus



How do you locate alternative fueling stations in your state go to:
<http://www.afdc.energy.gov/locator/stations/>

**OVM 10 contract has
Alternative fueled vehicles
Available to purchase.**



Massachusetts Department
of Energy Resources

- **Fuel Economy**

- Fuel efficiency
- Behavioral changes
- Vehicle maintenance initiatives
- Vehicle miles traveled (VMT)



- **Hybrids**

- Light- and Heavy-duty HEVs
- PHEVs



- **Idle Reduction**

- Heavy-duty trucks
- School buses
- Truck stop electrification



DOER Clean vehicle Grant Program

The latest DOER project proposes to take traditionally fueled vehicles powered by gasoline and diesel and replace them with alternatively fueled vehicles.

This project will replace more than 200 public and private vehicles powered by gasoline and diesel with alternatively fueled vehicles.

The alternative fuels will be natural gas, propane (auto gas), battery, hybrid, and solar electric, as well as hydraulic hybrid.

It will also provide seed funding for the electric vehicle charging infrastructure and natural gas infrastructure. This project will cover the differential cost for the various clean fuels.

Go to www.mass.gov/energy/cleancities to register for a grant application.

The Clean Vehicle Program is funded by the Congestion Mitigation and Air Quality (CMAQ) improvement program sponsored by the U.S Department of Transportation's Federal Highway Administration.(11.7 mil \$)

Massachusetts Offers Rebates for Electric Vehicles (MOR-EV)



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MOR-EV IS A MASSACHUSETTS PROGRAM THAT ISSUES REBATES TO ELECTRIC VEHICLE DRIVERS

Purchase or lease an eligible electric vehicle and apply for your rebate today!



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The Massachusetts Offers Rebates for Electric Vehicles (MOR-EV) program aims to provide air pollution emission reductions for the Commonwealth by increasing the use of electric vehicles.

BROUGHT TO YOU BY



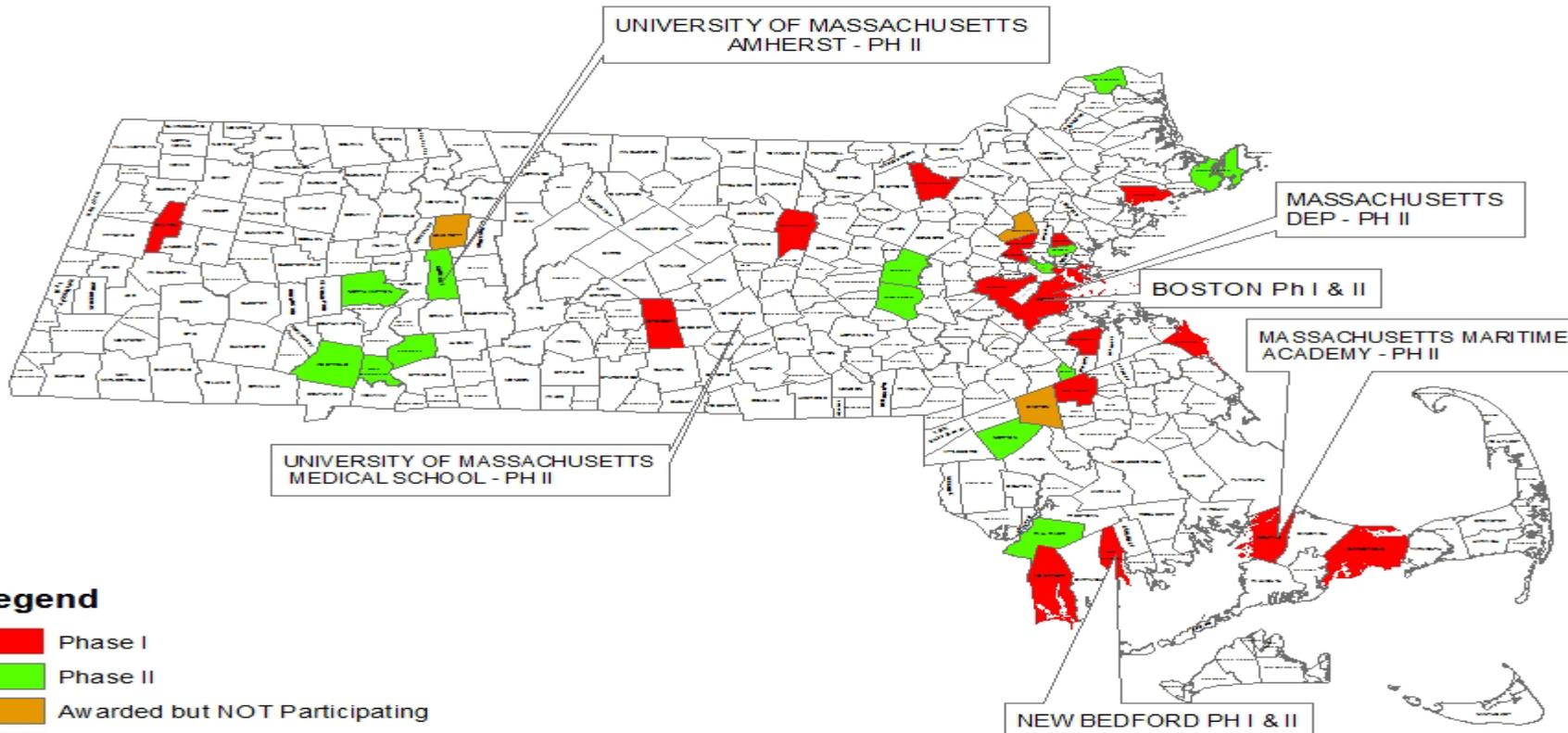
www.MOR-EV.org

866-900-4226

- Official announcement on Earth Day 2013
- Phase I and II : Close to \$1,100,000 Awarded
 - 38 entities awarded
 - One State Agency
 - 3 Public Universities
 - 34 Municipalities
 - Vehicles and Charging Stations Awarded
 - 50 Plug-In Hybrid Vehicles (PHEVs)
 - 65 Battery Electric Vehicles (BEVs)
 - 30 Level 2 Dual Head Charging Stations



MASSACHUSETTS ELECTRIC VEHICLE INCENTIVE PROGRAM (MASSEVIP)



Legend

-  Phase I
-  Phase II
-  Awarded but NOT Participating
-  All other Towns



- Public Entities
 - Municipalities
 - Public Universities and Colleges
 - State Agencies
 - Public Driving Schools
- Private Entities
 - Private Universities and Colleges
 - Private Driving Schools
- Program Requirements
 - Will commit to using the vehicle in the Commonwealth for at least 36 months
 - Entities must purchase at least one battery electric vehicle to received incentive for charging station
 - Charging station must be publicly accessible and space used specifically for electric vehicles



- Application period: **FIRST COME FIRST SERVED**
- Complete and submit to MassDEP an Application Form
- Form and instructions found at:
www.mass.gov/eea/agencies/massdep/air/grants/massevip.html
- Applications are reviewed
- MassDEP will issue a Grant Approval within 30 days of receipt of the application
- Entity must sign an End-User Agreement
- Upon receipt of the signed End-User Agreement by MassDEP, entity has 1 year to acquire vehicle(s) and/or proceed with Level 2 charging station



Important Web Sites and Resources



Clean Cities Web site

www.eere.energy.gov/ccities

Alternative Fuels & Advanced Vehicles Data Center Web site

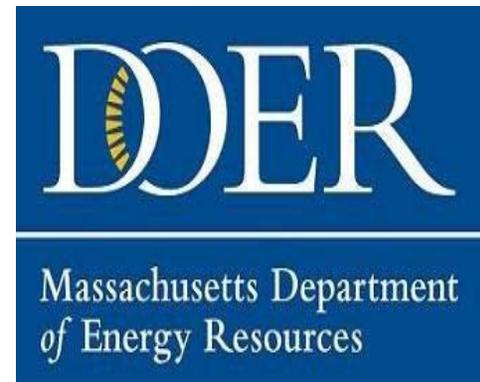
www.eere.energy.gov/afdc

Clean Cities Coordinator Contact Information and Coalition Web sites

<http://www.afdc.energy.gov/cleancities/progs/coordinators.php>

Massachusetts Electric Vehicle Incentive Program web site:

www.mass.gov/eea/agencies/massdep/air/grants/massevip.html



Contact Information



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Massachusetts Clean Cities Coalition

www.mass.gov/energy/cleancities/

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