

2013 Transportation Technology Deployment Report:

Massachusetts Clean Cities

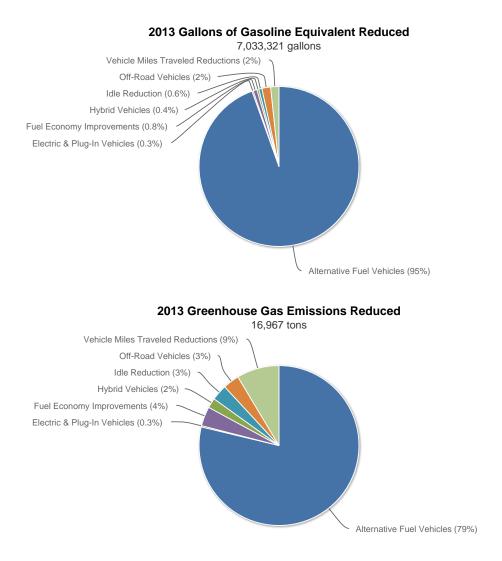
March 2014



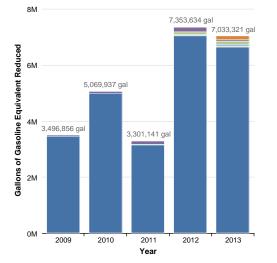
The U.S. Department of Energy's (DOE) Clean Cities program advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum use in transportation. A national network of nearly 100 Clean Cities coalitions brings together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and new transportation technologies, as they emerge.

Every year, each Clean Cities coalition submits to DOE an annual report of its activities and accomplishments for the previous calendar year. Coalition coordinators, who lead the local coalitions, provide information and data via an online database managed by the National Renewable Energy Laboratory (NREL). The data characterize membership, funding, projects, and activities of the coalitions. The coordinators also submit data on the sales of alternative fuels, deployment of alternative fuel vehicles and hybrid electric vehicles, idle-reduction initiatives, fuel economy activities, and programs to reduce vehicle miles traveled. NREL and DOE analyze the data and translate them into petroleum-use and greenhouse gas reduction impacts for individual coalitions and the program as a whole. This report summarizes those impacts for Massachusetts Clean Cities.

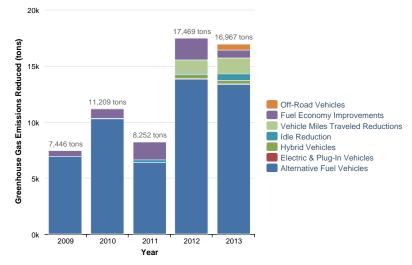
To view aggregated data for all local coalitions that participate in the Clean Cities program, visit <u>www.eere.energy.gov/cleancities/accomplishments.html</u>.

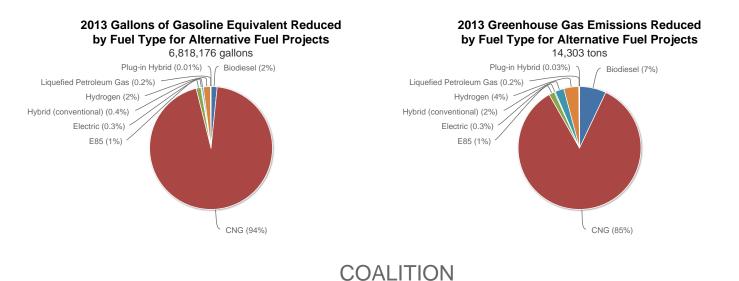


Historical Gallons of Gasoline Equivalent Reduced



Historical Greenhouse Gas Emissions Reduced





Massachusetts Clean Cities - MA

http://www.mass.gov/energy/cleancities

Designated: 03/18/1994 **Boundaries:** Entire state of Massachusetts

COORDINATORS

	Address	Telephone	Fax
Mike Manning	C-6 Shipway Pl Boston, MA 02129	617-242-8755, X14	617-242-0814
Stephen Russell	100 Cambridge St, Ste 1020 Boston, MA 02114	617-626-7325 or 617-797-5224 (cell)	617-727-0030
Number of coordinators			2
Coordinator(s) hours per	week on Clean Cities		55 hours
Other staff hours per wee	ek on Clean Cities		15 hours
How long have you been	the coordinator?		5 years

OPERATING INFORMATION

Host organization	Government - State
Stakeholders	
Number of stakeholders	495
Number of private stakeholders	276
Does the State Energy Office provide any financial support to the coalition or stakeholders?	Yes
Explain State Energy Office's support	
Salary and benefits as well as office space and admin support	
How would you rate the quality of the data on your survey?	Good
How do you obtain most of your data for the survey?	Coalition records,

Coalition records, Paper, e-mail, or spreadsheet questionnaire to stakeholders, Phone calls to stakeholders

2013 Outside Funding

Stakeholder dues collected	\$0
How much funding is obtained from other sources to cover coalition operating expenses?	\$128,000
Non-DOE or ARRA grant and matching funds spent in 2013	\$286,000
Total non-DOE or ARRA funding in 2013	\$414,000

VEHICLE & FUEL INVENTORY

Alternative Fuel & Vehicles

		- ·	Number of			
Fleet/Station Name	Vehicle Class	Fuel	Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Boston Water and Sewer	Heavy-Duty	Biodiesel (5%)	-	78,000 gal	3,958 gal	36.3 tons
Market: Government - Local Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
This fleet is not part of the State manda development of the bid specifications.	ate and is purchasing	g fuel from the S	State of Massac	husetts Biodiesel cont	act that coalition assiste	ed in the
Cape Cod Biofuels	Heavy-Duty	Biodiesel (20%)	3	10,000 gal	1,522 gal	14.0 tons
Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: N	lo					
Cape Cod Biofuels uses this fuel in the	ir deliver trucks and	they are a clea	n Cities Stakeh	older		
Cape Cod RTA	Heavy-Duty	Biodiesel (20%)	18	169,000 gal	25,730 gal	235.8 tons
Market: Government - Local Vehicle type: Bus: Transit Percentage from coalition: 75% National Clean Fleets Partnership: N	ю					
CCRTA began use of Biodiesel based	on information provid	ded by the Clea	n Cities coalitio	n		
Charles River Transportation Management association	Heavy-Duty	CNG	7	114,000 GGE	108,307 gal	203.7 tons
Market: Corporate Fleet Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: N	lo					
Massachusetts Clean cities funded the	differential cost of C	NG option on t	hese buses.			
City of Boston Fleet	Heavy-Duty	Biodiesel (10%)	-	308,922 gal	31,356 gal	287.3 tons
Market: Government - Local Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: N	ю					
This is a City fleet using B-10 as they h	nave a centrally fuele	d fleet.				
Courtyard by Marriot	Heavy-Duty	CNG	4	56,000 GGE	53,203 gal	100.1 tons
Market: Airport Vehicle type: Bus: Shuttle Percentage from coalition: 100% National Clean Fleets Partnership: N						
Clean Cities funded the differential cos	t of these vehicles					

Clean Cities funded the differential cost of these vehicles.

			Number of			
Fleet/Station Name	Vehicle Class	Fuel	Vehicles	Fuel Used	GGE Reduced	GHG Reduced
Dennis K Burke retail station	Heavy-Duty	Biodiesel (20%)	-	22,000 gal	4,466 gal	40.9 tons
Market: General/Unknown Vehicle type: Unknown/Other Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
In addition to selling B-20 at their retail fleet. Those deliveries are done to cent						ted under the state
Dennis K Burke retail station	Light-Duty	E85	50	82,000 gal	34,397 gal	86.0 tons
Market: General/Unknown Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: Y	es					
Dennis K Burke is an Active Stakehold	er and promotes the	use of Alternativ	e fuels. He se	lls it at the pumps		
Gulf oil/Cumberland Farms	Light-Duty	E85	0	89,154 gal	49,864 gal	124.6 tons
Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
Clean Cities assisted in funding this pro now have a full year of fuel usage .	oject and Gulf oil is a	a stakeholder. Th	is are new sta	tions opened in late 20	12 on the Massachuse	tts turnpike. we
Knights airport shuttle	Light-Duty	LPG	10	100% of time	12,163 gal	25.4 tons
Miles traveled per vehicle: 14,596 mi Average vehicle fuel economy: 12 M Market: Airport Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: N						
Knights airport shuttle converted 10 of	his F 350 vans to LF	PG in 2013				
Lowell RTA	Heavy-Duty	CNG	10	152,631 GGE	145,008 gal	272.8 tons
Market: Government - Local Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
MBTA - Massachusetts Bay Transportation Authority	Heavy-Duty	CNG	320	5,449,532 GGE	5,177,372 gal	9,739.5 tons
Market: Government - State Vehicle type: Bus: Transit Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
Mass DOT and other shuttles using Logan AP	Heavy-Duty	CNG	290	765,000 GGE	726,794 gal	1,367.2 tons
Market: Government - State Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: N	0					
Massachusetts State Fleet	Heavy-Duty	Biodiesel (5%)	-	1,125,470 gal	42,838 gal	392.6 tons
Market: Government - State Vehicle type: Truck: No Trailer Percentage from coalition: 75% National Clean Fleets Partnership: N	0			I The coefficien worked		

Massachusetts Clean cities had direct involvement in getting the state to use B-5 biodiesel. The coalition worked with the legislature and educated the fleet managers on the benefits of the fuel. in 2008. The coalition assists in writing the specifications for the biodiesel contract also.

Fleet/Station Name	Vehicle Class	Fuel	Number of	Fuel Used	GGE Reduced	GHG Reduced
Tieer/Station Name		I UEI	Venicies	i dei Osed		GIIG Neuticeu
Massport (logan Airport)	Heavy-Duty	CNG	45	110,567 GGE	105,045 gal	197.6 tons
Market: Airport Vehicle type: Bus: Shuttle Percentage from coalition: 100% National Clean Fleets Partnership: No	0					
National Grid - Massachusetts	Heavy-Duty	CNG	150	152,780 GGE	72,575 gal	136.5 tons
Market: Utility Vehicle type: Truck: No Trailer Percentage from coalition: 50% National Clean Fleets Partnership: No	D					
Steamship Authority	Heavy-Duty	CNG	5	56,467 GGE	53,647 gal	100.9 tons
Market: Government - State Vehicle type: Bus: Shuttle Percentage from coalition: 100% National Clean Fleets Partnership: No	D					
Total:			912		6,648,247 gal	13,361 tons

Electric, Hybrid & Plug-in Vehicles

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Brauns express	Heavy-Duty	HEV	1	938 gal	11.6 tons
Average electric fuel economy: - kWh/100mi Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 42,526 mi Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No					
Massachusetts Clean Cities funded the hybrid technology ad	dition to this truck.				
Cambridge Landscape	Heavy-Duty	HEV	2	617 gal	7.6 tons
Average electric fuel economy: - kWh/100mi Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 15,326 mi Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No					
mass clean cities provided funding for the purchase of this te	cnology				
City of Boston	Light-Duty	HEV	80	24,939 gal	307.2 tons
Average vehicle fuel economy: 32 MPG Miles traveled per vehicle per year: 10,345 mi Market: Government - Local Vehicle type: Car Percentage from coalition: 75% National Clean Fleets Partnership: No					
The City of Boston has not only replaced all their ford Taurus share technology.	's with Prius hybrids	they reduced	their fleet using zip	car technology by 2	0 vehicles using car
Electric vehicle supply stations	Light-Duty	Electric	800	7,711 gal	25.0 tons
Electricity used: 54,000 kWh Market: General/Unknown Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No					

2,125 is the number of registered EV's in Massachusetts that are using the public charging stations. There are actually 2600 vehicles registered less the 275 TESLA registered because they do not use public charging stations

Fleet/Station Name	Vehicle Class	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced
Frito Lay	Heavy-Duty	Electric	5	9,365 gal	13.4 tons
Average electric fuel economy: - kWh/100mi Miles traveled per vehicle per year: 12,362 mi Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes					
These 5 trucks traveled roughly 63,000 miles in 2013 u	sing no diesel fuel.				
High Output	Heavy-Duty	HEV	1	757 gal	9.3 tons
Average electric fuel economy: - kWh/100mi Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 34,321 mi Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No					
Clean cities funded the hybrid addition to this vehicle.					
Massachusetts Highway Dept (DOT)	Light-Duty	PHEV	15	732 gal	4.2 tons
Average vehicle fuel economy: 60 MPG Miles traveled per vehicle per year: 10,458 mi Market: Government - State Vehicle type: Car Percentage from coalition: 20% National Clean Fleets Partnership: No					
diesel Direct	Heavy-Duty	HEV	1	292 gal	3.6 tons
Average electric fuel economy: - kWh/100mi Average vehicle fuel economy: 8 MPG Miles traveled per vehicle per year: 13,239 mi Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No					
Massachusetts Clean Cities funded the hybrid technolog	gy addition to this fuel de	livery truck.			
Total:			905	45,351 gal	382 tons
Off-Road Vehicles					
Fleet Name Application	Method	Fuel	Number of Vehicles	GGE Reduced	GHG Reduced

Fleet Name	Application	Method	Fuel	Vehicles	GGE Reduced	GHG Reduced
Sysco foods	Forklifts	Alternative fuel or vehicles	Hydrogen	230	124,578 gal	559.9 tons
Fuel used: 260,000 kg Percentage from coalitie National Clean Fleets Pa						
Total:				230	124,578 gal	560 tons

FUEL ECONOMY

Fuel Economy Improvements

-uei Economy improvemei						
Fleet Name	Previous Fuel	Current Fuel	Number of Vehicles	Miles Traveled per Vehicle	GGE Reduced	GHG Reduced
Brauns express	6 MPG	7 MPG	53	22,000 mi	4,378 gal	54.3 tons
Method: Tires - Low-rolling resistance Vehicle class: Heavy-Duty Market: Corporate Fleet Vehicle type: Truck: Semi-tailer Percentage from coalition: 50% National Clean Fleets Partnership: No						
The low rolling resistant tires along with a east coast.	luminum wheels	s has produce a 3%	savings in fuel in ti	heir 53 tractor traile	rs delivering furniture	up and down the
Cambridge Landscape	15 MPG	20 MPG	1	16,532 mi	276 gal	3.4 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Corporate Fleet Vehicle type: Pickup/SUV/Van Percentage from coalition: 100% National Clean Fleets Partnership: No						
High Output	5 MPG	7 MPG	1	34,321 mi	2,246 gal	27.9 tons
Method: Vehicle - More efficient Vehicle class: Heavy-Duty Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: No						
Clean cities funded the hybrid addition to	this vehicle.					
Massachusetts State light duty ileet (PHEV)	42 MPG	60 MPG	10	13,546 mi	968 gal	11.9 tons
Method: Vehicle - More efficient Vehicle class: Light-Duty Market: Government - State Vehicle type: Car Percentage from coalition: 100% National Clean Fleets Partnership: No						
The State retrofited 10 Toyota prius staff of	cars with Hymot	ion batteries.				
Staples	8 MPG	11 MPG	80	15,180 mi	45,808 gal	568.0 tons
Method: Vehicle - More efficient Vehicle class: Heavy-Duty Market: Corporate Fleet Vehicle type: Truck: No Trailer Percentage from coalition: 100% National Clean Fleets Partnership: Yes						
Staples uses a speed governor to achieve	e their Fuel Savi	ings. 60 Miles per ho	our only.			
Total:			145	101,579 mi	53,676 gal	665 tons
/ehicle Miles Traveled Rec	luctions					
Fleet Name		thod	Ve	hicle Class	GGE Reduced	GHG Reduced
Massport (logan airport	Oth	ner	He	eavy-Duty	117,470 gal	1,456.7 tons
Fuel: Diesel Fuel economy: 6 MPG Number of vehicles: 98 VMT reduction per vehicle: 10,000 mi Percentage from coalition: 65% National Clean Fleets Partnership: No				,,	,	,
Logan airport has opened a central rental companies it is difficult to get specifics on			e road in 2013. du	e to the fact that the	ese buses were owne	d by various rental

companies it is difficult to get specifics on fuel elimminated

Total:

IDLE REDUCTION

Onboard Idle Reduction

Fleet Name	Number of Vehicles	Equipment Usage per Vehicle	Fuel Saved per Vehicle	GGE Reduced	GHG Reduced				
Brauns express	53	1,830 hrs/year	1 gal/hr	44,000 gal	542.0 tons				
Equipment: Auxiliary power unit (APU) Percentage from coalition: 50% National Clean Fleets Partnership: No									
the savings calculated by the fleet manager v	the savings calculated by the fleet manager was 1,000 gallons of fuel savings per truck per year.								
Total:	53			44,000 gal	542 tons				

FUEL STATIONS

New Stations

Fuel	Public Stations	Private Stations
Biodiesel	-	-
CNG - Compressed Natural Gas	-	3
E85 - 85% Ethanol	-	-
Electric Chargers	126	16
Hydrogen	-	-
LNG - Liquefied Natural Gas	-	1
LPG - Liquefied Petroleum Gas	-	1
Total:	126	21

OUTREACH ACTIVITIES

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
December Stakeholder meeting	12/13/2012	Meeting - Stakeholder	75%	36
Technology: Alternative fuel vehicles, Hybrid el Audience: Airport, Delivery, General Public, Go Clean Cities 20th Anniversary Event: No		sit, Utility		
This meeting covered an update on Electric veh	icles in Massachusetts as well a	as what is happening in the region wi	th the TCI initiative.	
Ribbon cutting ceremony	01/24/2013	Media Event	100%	28
Technology: Alternative fuel vehicles Audience: General Public, Government, Private Clean Cities 20th Anniversary Event: No	Pleets, Transit			
Knights airport shuttle service has converted the	e shuttle vans to propane autog	as and this event provided media cov	erage to this exciting ev	ent.
February Stakeholder meeting	02/14/2013	Meeting - Stakeholder	100%	32
Technology: Hybrid electric vehicles, Idle reduc Audience: Airport, Delivery, General Public, Go Clean Cities 20th Anniversary Event: Yes	-			
This stakeholder meeting included presentations the spring. They will have the largest number of panels on medium duty trucks that provide enou Massachusetts also presented the new OVM-10	all electric transit buses in the igh stored power for the elimina	state. In addition ENOW presented th tion of idling for ancillary items such a	neir technology that prov	rides solar
12 Fleet visits throughout year	03/01/2013	Literature Distribution	100%	12
Technology: Alternative fuel vehicles, Fuel bler Audience: Airport, Delivery, General Public, Go Clean Cities 20th Anniversary Event: No			ction	
Mot individually with 12 Floot managers through	out the year to discuss how Alt	ornativo fuelo con play o ralo in their t	laata	

Met individually with 12 Fleet managers throughout the year to discuss how Alternative fuels can play a role in their fleets.

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Electric vehicle roundtable meeting	03/07/2013	Workshop held by coalition	70%	70
Technology: Alternative fuel vehicles Audience: Airport, Delivery, General Public, Governm Clean Cities 20th Anniversary Event: No	nent, Private Fleets, Utility	/		
High level Stakeholder meeting to develop polices to a from both government and the private sector.	eliminate barriers to elect	tric vehicles in the State. Movers and	I shakers in the state wer	e involved
Panelist at Babson College Energy and Enviormental Conference	04/05/2013	Conference participation	50%	50
Technology: Alternative fuel vehicles Audience: Airport, General Public, Government, Priva Clean Cities 20th Anniversary Event: No	ate Fleets, Transit, Utility			
Presented on Electric vehicle infrastructure to attende Company	es at this annual conferei	nce. Participated on a panel with XL	hybrid/UPS/ and Toyota	Motor
Energy independance summit	04/09/2013	Conference participation	100%	8
Technology: Alternative fuel vehicles, Fuel blends, Fuel	uel economy improvemer	• •	iction	
At this event the coalition coordinator visits with staff of	of State legislators and br	ings them up to date on alternative f	uel activities in the state.	
April Stakeholder meeting	04/18/2013	Meeting - Stakeholder	100%	30
Technology: Alternative fuel vehicles Audience: Airport, Delivery, General Public, Governm Clean Cities 20th Anniversary Event: No	nent, Private Fleets, Trans	sit		
This meeting presented technology around the hydrog both auto manufacturers as well as Hydrogen fuel cell				
Ribbon cutting for Electric vehicle incentive program for EVs for cities and Towns	04/22/2013	Media Event	100%	100
Technology: Alternative fuel vehicles Audience: General Public, Government, Private Fleet Clean Cities 20th Anniversary Event: No	s			
MA Clean Cities coordinated the media events attend announce Electric vehicle incentive for Cities and Tow Massachusetts and Chelmsford Massachusetts. Thes communities.	ns to purchase Electric v	ehicles and charging stations. There	were two events one in (Greenfield
VERGE business conference - Transportation panel presentation	05/14/2013	Conference participation	75%	25
Technology: Alternative fuel vehicles, Vehicle miles t Audience: Delivery, General Public, Government, Pri Clean Cities 20th Anniversary Event: No				
Spoke on a panel regarding electric vehicle infrastruct	ture in the state of Massa	chusetts the focus was on sustainab	ility in transportation sect	or.
EV presentation to Region 1 EPA	05/21/2013	Conference participation	100%	32
Technology: Alternative fuel vehicles, Hybrid electric Audience: Government Clean Cities 20th Anniversary Event: No	vehicles			
at request of Region 2 EPA the clean cities coordinate	or presented an update or	n the Electric vehicle development in	Massachusetts.	
June Stakeholder meeting	06/13/2013	Meeting - Stakeholder	75%	40
Technology: Fuel economy improvements, Idle reduce Audience: Airport, Delivery, General Public, Governme Clean Cities 20th Anniversary Event: No		sit, Utility		
This meeting presented information on Hydraulic hybr Electric vehicle incentive program for Cities and Town				rmation on the

Activity Name	Dates	Activity Type	Percentage from Coalition	Persons Reached
Clean cities presentation	06/19/2013	Conference participation	100%	100
Technology: Alternative fuel vehicles, Fuel economy Audience: Utility Clean Cities 20th Anniversary Event: No	y improvements, Idle reduc	tion		
Presented Clean cities overview along with Alternativ road fleet managers.	ve fuel vehicle information	appropriate to the electric Utilities	hat were in attendance at	the EPRI Non
Natural gas for transpotation workshop	08/07/2013	Workshop held by coalition	100%	46
Technology: Alternative fuel vehicles Audience: Delivery, Government, Private Fleets, Tra Clean Cities 20th Anniversary Event: No	ansit, Utility, Waste			
The coalition presented a workshop for fleets on nate Massachusetts.	ural gas for the transportati	ion sector.hosted at National Grid's	headquarters in Waltham	
August Stakeholder meeting	08/08/2013	Meeting - Stakeholder	100%	10
Technology: Alternative fuel vehicles, Hybrid electri Audience: Delivery, General Public, Government, P Clean Cities 20th Anniversary Event: No		/		
This meeting was the first meeting held way out in P well as an update on electric vehicle infrastructure be			ation was on propane as a	an autogas, as
Electric vehicle Task force follow up meeting.	09/30/2013	Meeting - Stakeholder	100%	34
Technology: Alternative fuel vehicles Audience: Delivery, General Public, Government, P Clean Cities 20th Anniversary Event: No	rivate Fleets, Transit, Utility	/		
Follow up meeting for the EV task force to set the ch in the state.	art of work for policy devel	opment in EV infrastructure, Media	as well as the marketing o	of Ev vehicles
AltWheels Fleet Day	10/07/2013	Workshop held by coalition	100%	265
Technology: Alternative fuel vehicles, Fuel blends, I Audience: Airport, Delivery, General Public, Govern Clean Cities 20th Anniversary Event: No	, i		luction	
This is a day long workshop for Fleet managers on A technologies and vehicles.	Iternative fuels and techno	ologies. It involves panel presentation	ons and displays of alterna	tive fuel
First responder training	12/13/2013	Workshop held by coalition	100%	50
Technology: Alternative fuel vehicles Audience: Government Clean Cities 20th Anniversary Event: No				
The coalition provided first responder training on bot	h gaseous and Electric fue	led vehicles at the fire academy in	Stowe Massachusetts.	

Total:

968

GRANTS

Grantor	Total Grant Amount	Total Matching Funds	Total Project Funding	Grant Amount Spent in 2013	Matching Funds Spent in 2013	Total Project Funding Spent in 2013
AEP funds/ air quality mitigation funds	\$384,000	\$0	\$384,000	\$286,000	\$0	\$286,000
Additional grant money added i Additional matching funds adde Length of grant: 3 Year grant began: 2011 Sources of the grant: None of the Partners: Departmet of Enviorm Technologies: Electricity Purpose: Install Electric vehicle c	ed in 2013 \$0 e above ental protection	5 communities				
25 communities installed 134 leve		s throughout the state				
DOE Barriers to Alternative fuels	\$99,000	-	\$99,000	\$25,000	\$0	\$25,000
Additional grant money added i Additional matching funds added Length of grant: 2 Year grant began: 2013 Sources of the grant: Departmer Partners: Maine, NH, Vt. RI and M Technologies: B100 - 100 percer Liquefied Petroleum Gas Purpose: Examine Barriers to the	ed in 2013 \$0 nt of Energy Massachusetts nt Biodiesel, Biodies		npressed Natural Ga	as, E85 - 85 percent E	thanol, H2 - Hydro	gen, LPG -
We will survey Fleet Managers, MPO's about barriers to the use of Alternative fuelsand work with Alternative fuel suppliers to determine if there are any barriers to transporting Alternative fuels in the region.						
Massachsuetts Clean cities Department of Energy resources	\$1,800,000	-	\$1,800,000	\$0	\$0	\$0
Length of grant: 2 Year grant began: 2013 Sources of the grant: None of the Technologies: Electricity Purpose: Develop an Electric sch		rid for 4 communities i	n the state.			
Work with electric bus manufacturers, school districts as well as the utilities to develop a Vehicle to grid pilot.						
Total:	\$2,283,000	\$0	\$2,283,000	\$311,000	\$0	\$311,000