

Melrose Green Community Progress Report

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Presentation Overview



- Green Community update and 2017 grant award
- Solar PV development
- Community outreach projects

Green Community Designation Criteria



- Sites for renewable energy facilities (no change)
- Expedited permitting process for renewable energy facilities (no change)
- Stretch code adoption – requirements to minimize energy costs of new construction (now base code)
- Fuel-efficient vehicle purchase policy
- Energy Reduction Plan (ERP) - Establish energy baseline and a plan to reduce consumption by 20% in five years

Grant and Incentive Funds



GC Designation Grant	\$176,265
GC Competitive Grants (3)	\$692,484
Owner's Agent Technical Assistance (3*)	\$35,000
EECBG (MVMMS solar)	\$150,000
Clean Energy Choice Grant	\$23,343
Electric Vehicle Incentive Program (2)	\$45,000
Utility Incentives	\$994,457
National Grid Community Initiative	\$34,058
Municipal Vulnerability Preparedness Grant	\$19,000
Total:	\$ 2,169,607

Energy Reduction Plan Progress



	Baseline MMBtu	Year 1 MMBtu	Year 2 MMBtu	Year 3 MMBtu	Year 4 MMBtu	Year 5 MMBtu	Year 6 MMBtu	Year 7 MMBtu	Year 8 MMBtu	Change vs. Baseline
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	
Buildings	55,049	50,080	56,409	47,403	51,683	60,638	59,530	55,664	51,879	5.8%
Street & Traffic Lights	4,956	4,899	4,868	4,776	4,896	4,828	4,857	3,533	2,795	43.6%
Vehicles	14,765	13,985	15,050	13,608	10,214	10,375	11,111	10,309	11,030	25.3%
Water/Sewer	1,167	1,034	1,046	960	960	972	961	981	902	22.7%
TOTAL ENERGY CONSUMPTION	75,937	69,998	77,373	66,747	67,753	76,813	76,459	70,487	66,606	12.3%

Energy Reduction Plan Projects

Building/Site Name	Energy Conservation Measure Name	Date Completed	Green Community Grant (\$)	Utility Incentives (\$)
Melrose High School	White roof and R30 insulation	Sept 2011	\$123,801	\$32,561
Post-Top Victorian Lights (118)	LED retrofit	2011 & 2012	\$35,076	\$17,106
Winthrop Elementary School	EMS & ventilation upgrades	April 2012	\$0	\$0
Public Works Operations Facility	Lighting, HVAC upgrades, roof insulation	June 2012	\$0	\$0
Six Elementary Schools	Interior and exterior lighting upgrades	Nov 2012	\$0	\$233,266
Melrose Public Library	Children's Room lighting upgrade	March 2013	\$2,472	\$1,340
West Knoll Soccer Complex	Lighting controls	Feb. 2013	\$8,750	\$0
Police Station	Lighting upgrade	March 2013	\$6,166	\$504
Melrose High School	Science wing renovation	August 2013	\$0	\$11,066
Melrose Veterans Memorial MS	Gym light replacement	Sept 2013	\$0	\$12,180
Melrose High School	HVAC upgrade	Dec 2014	\$250,000	\$95,100
20 City and School Buildings	Energy Savings Performance Contract	Dec 2014	\$0	\$315,000
Streetlights	LED conversion	June 2016	\$225,000	\$250,104
Melrose High School	Learning Commons renovations	August 2016	\$0	\$26,230
Totals			\$651,265	\$994,457

2017 Green Community Projects



➤ Electric Vehicle Purchase	\$21,185
➤ Retro-commission MHS/MVMMS	\$37,330
➤ Milano Center HVAC Upgrade	\$18,595
➤ Lincoln ES HVAC Upgrade	\$14,966
➤ Lincoln ES EMS Upgrade	\$125,408
Total Grant Award:	\$217,484

Vehicle Fleet Update



Fleet Inventory includes **31 Non-Exempt Vehicles (25%)** and 94 Exempt Vehicles/Equipment

Changes to fleet inventory:

- Added two Ford Focus EVs to DPW Engineering and Fire Prevention
- EVIP grant funding to add one more EV to Engineering
- One EV dual charging station in City Hall lot and grant funding for one more (location TBD)
- New water meter technician van will be outfitted with XLHybrid system which will save 25% on fuel
- Police Patrol: 2 Ford Fusions (mpg 23) replaced Crown Vics (mpg unknown)
- Animal Control Officer: Transit Connect (mpg 24) replaced Ford Aerostar (mpg 18)
- Schools: Dodge Caravans (mpg 20) replaced Ford passenger vans (mpg unknown)



Solar PV Development



- Phase I: 50 kW on MVMMS roof (2008 & 2011)
- Phase II: 301 kW on MHS/MVMMS roofs (2013)
- Phase III: 61 kW DPW rooftop system (in process)
- Phase IV: Net-metering credit off-taker of 1 MW solar canopy at Oak Grove MBTA parking lot (2018)
- Phase V: Solar canopy at MHS parking lot?

Community Outreach



- Melrose Energy Challenge 2011
- Solarize Melrose 2012
- Sustainable Melrose created 2013
- Go Solar Melrose: EnergySage.com/Melrose
- Green Business Program 2014
- Melrose Energy Challenge 2016
- Community Electricity Aggregation Program 2016-17