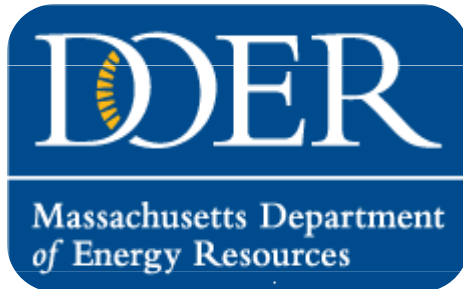


Creating A Cleaner Energy Future For the Commonwealth



**DEP Workshop
for Brownfields
Licensed Site
Professionals**

**November 7,
2012**

Massachusetts Clean Energy Programs, Policies and Goals

**Meg Lusardi, Director
Green Communities Division**

State Policy Creates Momentum

- **Green Communities Act (GCA)**
 - All cost effective energy efficiency
 - Green Communities (103)
 - Advanced building energy codes (122)



- **Global Warming Solutions Act (GWSA)**
 - Clean Energy and Climate Plan set GHG emission reduction goals at 25% below 1990 Baseline Levels by 2020; 80% reduction by 2050



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Clean Energy Activity

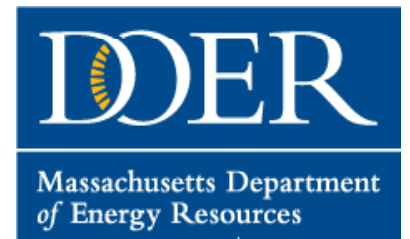
- Key Initiatives

- Mass Save® Energy Efficiency Programs
- Green Communities Division
- Leading by Example
- Building Energy Codes
- Zero Net Energy Buildings
- Renewable Portfolio Standard
- Alternative Energy Portfolio Standard

- Additional Leverage

- Regional Greenhouse Gas Initiative
- American Recovery and Reinvestment Act
- Mass. Clean Energy Center

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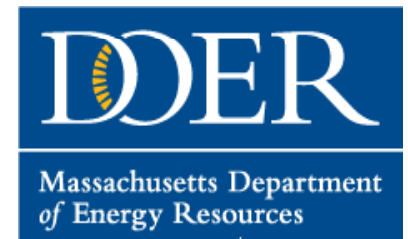
Energy Efficiency Goals (2010-2012)

- Pursue all cost-effective energy efficiency

THREE-YEAR PLAN GOALS	2010	2011	2012	Total
Total Benefits (million \$)	\$1,355	\$2,022	\$2,520	\$5,877
Annual Electric Savings (GWh)	600	908	1,107	2,615
Annual Gas Savings (million therms)	14 .4	18 .1	25.3	587.8
Annual GHG Reductions (metric tons)	343,000	500,000	627,000	1,470,000

- First 3- year Energy Efficiency Investment Plans:
 - \$2 billion investment
 - \$6 billion in benefits

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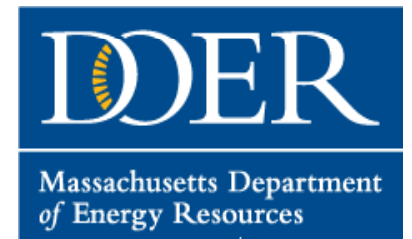


Energy Efficiency Goals (2013-2015)

- Pursue all cost-effective energy efficiency

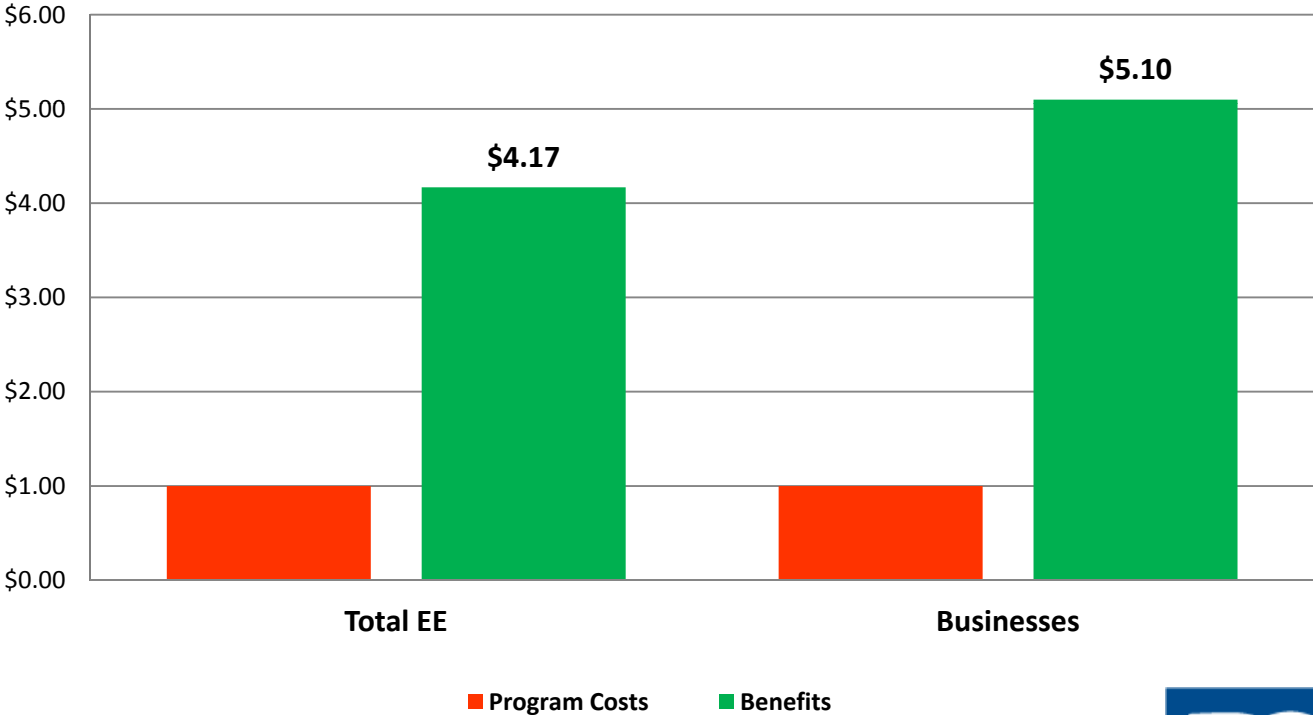
THREE-YEAR PLAN GOALS	Total
Total Benefits (million \$)	\$8,922
Electric Savings (GWh)	3,705
Gas Savings (million therms)	72

- Second 3- year Energy Efficiency Investment Plans:
 - \$2 billion investment
 - \$8.9 billion in benefits

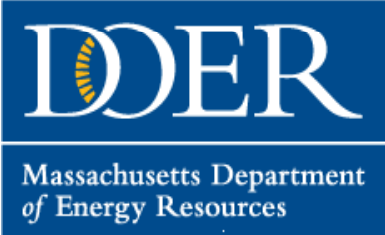


Cost Benefits of Energy Efficiency 2010-2012

Energy Efficiency Provides Over \$4 in Benefits for Every Dollar of Program Costs Invested, and Over \$5 Per Dollar Invested for Businesses



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Green Communities Designation

- 103 cities and towns designated Green Communities
- Nearly \$23 million invested to implement energy efficiency and renewable technologies
- Total reduction of 1,776,635 MMBTUs committed, equivalent to the annual energy consumption of approximately 13,358 New England households

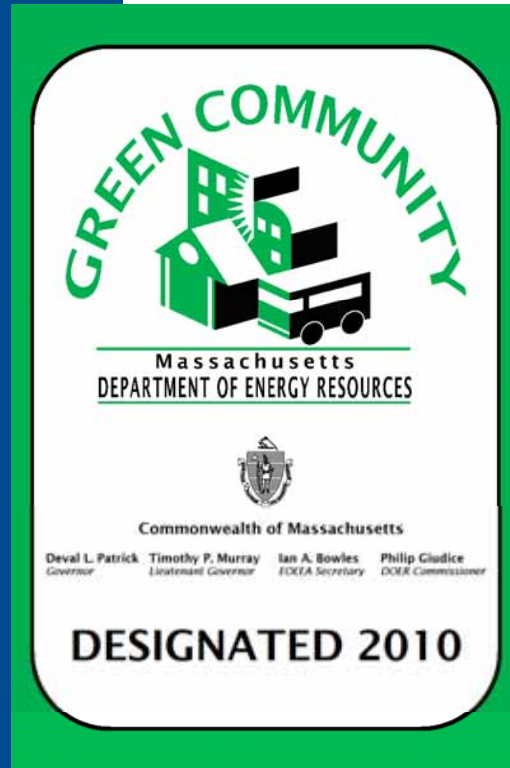


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Green Communities Grant Program

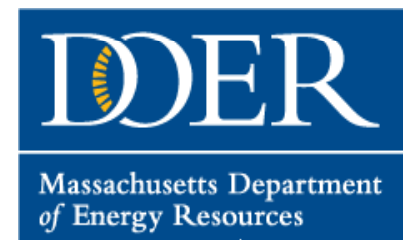
Qualification Criteria

1. Adopt as-of-right siting for RE/AE generation, R&D, or manufacturing
2. Adopt expedited permitting process
3. Create an Energy Reduction Plan to reduce energy use by 20% in 5 years
4. Purchase only fuel-efficient vehicles
5. Adopt Stretch Code or minimize life cycle cost



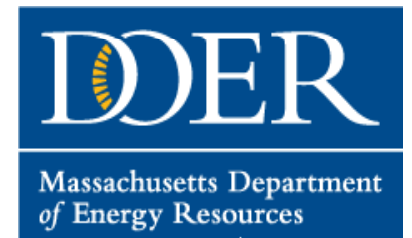
Green Communities Act, M.G.L. Ch. 25A §10

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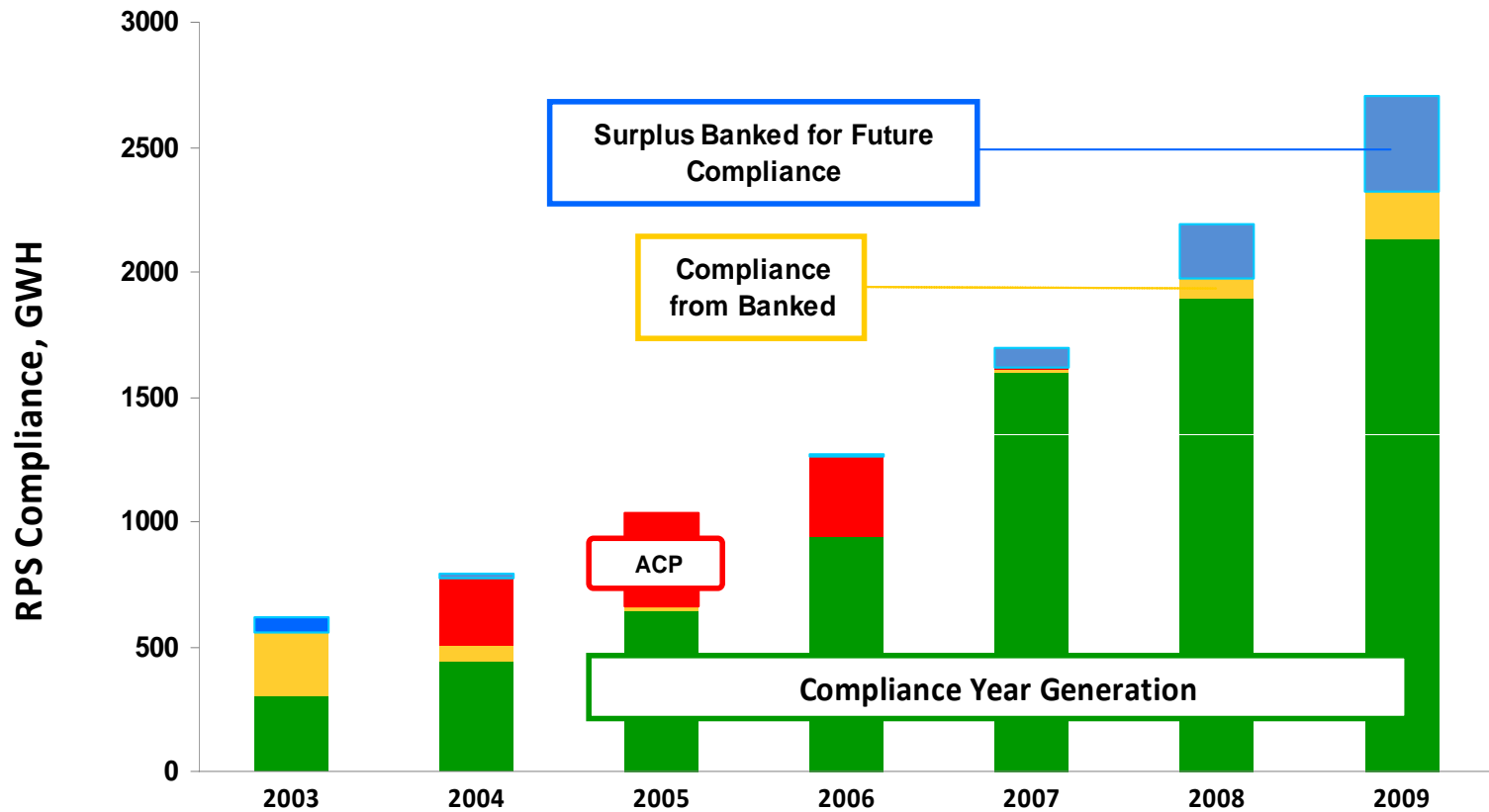
Renewable Energy Framework

- **Patrick/Murray Administration Goals**
 - Solar: 250 MW installed by 2017 / Wind: 2000 MW installed by 2020
- **Renewable Energy Portfolio Standards (RPS/APS)**
 - Creates demand (Minimum Standard) and provides additional revenue (Renewable Energy Certificate) for qualified generation
 - Reinvests Alternative Compliance Payments (ACP) into solar, renewable thermal, CHP
 - Establishes an obligation of all Massachusetts Retail Electric Suppliers to provide a percent of their load with renewable energy generation
 - Strategize to “green up” the ISO-NE grid. Generation from throughout New England and adjacent control areas are eligible
- **Green Communities Act**
 - Net Metering, Long Term Contracts and utility-owned solar electricity
- **Mass. Clean Energy Center (MassCEC)**
 - Provides targeted funding programs to support development of renewable energy supply in Mass.



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MA Class I RPS Program Success



	2003	2004	2005	2006	2007	2008	2009
Surplus Banked	61	20	1	9	81	211	386
ACP Compliance	0	265	368	323	11	1	0
Compliance from Banked	255	61	20	2	7	81	190
Compliance Year Generation	304	445	645	939	1600	1896	2130

Renewable Energy Snapshot

174 MW



Total solar capacity installed in
Massachusetts as of November 1, 2012

Goal: 250 MW by 2017

61 MW



Total wind capacity installed in
Massachusetts as of November 1, 2012

Goal: 2,000 MW by 2020

DER

Massachusetts Department
of Energy Resources

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Federal Stimulus

- DOER directed nearly \$70 million in clean energy projects and investments in Massachusetts
 - Over \$21 million for groundbreaking energy efficiency renovations across Massachusetts through High Performance Building grants.
 - Over \$15 million for comprehensive energy projects and an innovative energy monitoring system (EEMS) at state facilities through the Leading By Example Program.
 - Nearly \$15 million for municipalities across the Commonwealth with populations of less than 35,000 residents.
 - Nearly \$18 million for solar projects

Policy Has Created Real Progress

- #1 state for energy efficiency (ACEEE) 2011, 2012
- #2 in private clean energy investment
- 103 Green Communities
- 121 Stretch Code Communities
- Nearly \$70 million in clean energy ARRA funding
- 174 MW of solar PV installed
- 61 MW of wind generation installed
- Electric vehicle charging stations: over 275 charge points; 138 public EV stations and 31 private level 2 stations.

THE 2011 STATE ENERGY EFFICIENCY SCORECARD

