Learning from ARRA

MASSACHUSETTS ENERGY OFFICE EXPERIENCE WITH THE 2009 AMERICAN RECOVERY AND REINVESTMENT ACT AND HOW IT CAN INFORM FUTURE STIMULUS PROGRAMS

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What we will cover:

• Governor/Legislature Approach to Energy in 2008
  • Building a Clean Energy Future for Massachusetts
  • Developing infrastructure/capacity to deliver energy programs/incentives to municipalities, businesses and residents.

• 2009 ARRA Response
  • Goals/Priorities
  • Delivering the opportunities

• 2020 Energy Stimulus Recommendations
Governor’s approach to Energy

• Governor Deval Patrick was elected Massachusetts’ 71st Governor in November of 2006
  • Among his priorities were investing in education, health care and life sciences and tackling energy costs, building a robust clean energy economy and addressing climate change.

• On Energy the Governor,
  • Rejoined the Regional Greenhouse Gas Initiative, combined the state energy and environmental offices into one Secretariat, signed landmark energy, climate and green jobs legislation and prioritized energy efficiency, renewable energy and offshore wind.
Together the Governor and the Legislature enacted bipartisan legislation that built the strong clean energy foundation that remains in effect today.

- Combined Energy and Environmental Affairs
- Prioritized Energy Efficiency
- Expanded the RPS
- Developed 1st in the nation Green Communities Program to support cities and towns

**Green Communities Act**

- Set 2020 and 2050 GHG reduction goals
- Develop GHG baseline and future projections
- Set up advisory board to monitor progress

**Global Warming Solutions Act**

- Created the Massachusetts Clean Energy Center – quasi public economic development agency empowered to develop programs and invest in early stage clean energy companies and technologies.

**Green Jobs Act**

- President George W. Bush signed the Emergency Economic Stabilization Act of 2008 focusing on providing $700 Billion dollars in funding for the Troubled Assets Recovery Protection Program (TARP)
- President Barack Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA)
  - $787 Billion dollars to support targeted spending and tax cuts including funding for energy programs and projects.
  - $27.2 Billion focused on energy efficiency and renewable energy research and investment.
  - $21.5 Billion focused on energy infrastructure
  - $4.3 Billion in home energy credit for homeowners
Governor’s Priorities and alignment with ARRA goals

**RECOVERY GOALS**

- To stimulate the economy;
- To invest for the long term; and
- To deliver meaningful government accountability.

**INVEST IN THE LONG TERM**

- Maintaining our commitment to education;
- Investing in clean energy;
- Protecting safety net services and universal health care now and for future generations;
- Upgrading the statewide transportation network;
- Investing in our communities; and
- Investing in Massachusetts’ innovation economy.
ARRA ENERGY FUNDING FOR MASSACHUSETTS (Administered by MA DOER/Partners)

<table>
<thead>
<tr>
<th>Program</th>
<th>State Energy Program</th>
<th>Weatherization Assistance Program</th>
<th>Energy Efficiency Conservation Block Grants</th>
<th>Energy Efficiency Appliance Rebate Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount (millions)</td>
<td>$54.9</td>
<td>$122.1</td>
<td>$43.1</td>
<td>$6.2</td>
</tr>
<tr>
<td>Description</td>
<td>For investing in state-level EE and renewable energy priorities including water and wastewater facilities</td>
<td>Scale-up existing weatherization efforts - targeting nearly 17,000 homes and workforce training</td>
<td>Direct and indirect funding for cities and towns to support local EE programs</td>
<td>Provide consumer rebates for purchasing energy efficient appliances.</td>
</tr>
</tbody>
</table>

ARRA funded SEP Programs

- Public/Private grants for energy efficiency and clean energy projects
- $4,000,000 loan fund – to expand EE measures as part of state MassSave program
- Established a Clean Energy Investment Fund to reduce borrowing costs for state clean energy projects

Table 18. Massachusetts: Summary of ARRA-funded SEP programs

<table>
<thead>
<tr>
<th>SEP Formula Grant Sub-programs</th>
<th>Amount (million$)</th>
<th>Program Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Performance Buildings</td>
<td>$21.4</td>
<td>1. $16.25 million in grants for energy efficiency and clean energy projects in public and private buildings, plus community-based programs; most projects are EE, a small number involve geothermal or biofuel systems; 2. $4 million for Energy Efficiency Loan Fund to seed a loan loss reserve fund; 3. Remaining funds will support administration.</td>
</tr>
<tr>
<td>Lead by Example - State buildings</td>
<td>$15</td>
<td>1. $3.3 million awarded to Massachusetts Division of Capital Asset Management to leverage the Commonwealth Clean Energy Investments Fund. Provides project management resources to accelerate completion of an existing $200 million pipeline of projects in various stages of shovel-readiness for energy efficiency and renewable energy projects in public buildings; 2. $10 million for an enterprise-wide energy management system; 3. Remaining funds will support administration.</td>
</tr>
<tr>
<td>Renewable Energy Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar Stimulus</td>
<td>$18.5</td>
<td>1. Technical assistance for PV systems on public facilities with intention of generating up to 8 MW; 2. Augment Commonwealth Solar rebate program: $8M to residential and commercial buildings; $8.7M to public buildings.</td>
</tr>
</tbody>
</table>

Total | $54.9

Source: DOE (2009), interviews.
Implementing ARRA and deploying funding

• Utilizing the structures developed in 2008, Massachusetts was able to effectively, fairly and in a transparent way develop ARRA programs that met the needs of the intended recipients.

Green Communities Act
- Green Communities Division
  - Administered >$35,000 municipality EECBG program
  - Developed <$35,000 EECBG program
  - Supported State Energy Program grant program working with LBE and the Division of Capital Asset Management and Maintenance and Department of Environmental Protection
  - QECB Support
- Energy Efficiency Division
  - Developed and administered EE appliance rebate program
  - Worked with Housing and Economic Development on Weatherization Assistance Program

Green Jobs Act
- Massachusetts Clean Energy Center
  - Developed and manage the Wind Test Blade Center - $24.8 million
  - Supported ARRA investments in clean energy companies
Example of Green Communities Assistance

Various funding opportunities were made available to cities and towns (as well as businesses in their communities) and were either administered through the Green Communities Division/DOER or with support from the Division including:

• Clean Renewable Energy Bonds
• Energy Conservation Bonds
• Alternative Fueled Vehicles grants – Clean Cities Program

ARRA – Funding Opportunities for Municipalities

- Alternative Fueled Vehicles Pilot Grant Program
  - Due to DOER May 18; [www.mass.gov/doer](http://www.mass.gov/doer)
- Clean Renewable Energy Bonds (CREBs)
  - Interest-free bonds for clean energy production facilities; awards made from smallest to largest
  - Applications due August 4th to IRS
- Energy Conservation Bonds - $67M for MA
  - Interest-free bonds for capital expenditures for a wide range of activities that reduce greenhouse gas emissions allocated to states by population and to large local governments
- Energy Efficiency Block Grants - $400M
  - Competitive nationwide; awaiting guidance
- Energy Efficiency Block Grants - Formula
Recommendations

INFRASTRUCTURE

• Provide states with mechanisms (funding/resources) to support municipal and county efforts to recover from COVID-19 economic effects.

• Encourage use of quasi-pubic entities and partnerships with economic development agencies.

• Build support for “shovel ready” projects.

• Transparency and accountability are critical.

PROGRAMS

• Direct energy efficiency and renewable energy grants to municipal entities.

• State energy grants to modernize state facilities from an energy efficiency, monitoring and renewable energy perspective.

• Provide funding/tax credits for businesses to reduce energy costs through efficiency and renewables and expand business/clean energy opportunities.

• Properly designed loan programs that address current challenges are effective.
Results of Investing in a long term clean energy strategy

**2019 MASSACHUSETTS**
Clean Energy Industry Highlights

- **There are 111,836 clean energy workers in MA in 2019, a 1% increase from 2018.**
- **Clean energy companies represent nearly $14 billion in MA Gross State Product, up $4.8 billion since 2013.**
- **Clean energy jobs make up 3.1% of all jobs in MA.**

**9 CONSECUTIVE YEARS OF JOB GROWTH**

- **The clean energy industry in MA has added nearly 52,000 new workers since 2010, representing 86% job growth.**
- **61% of clean energy workers in MA are employed by small businesses.**
- **The Northeast region of MA employs 48% of the Commonwealth’s clean energy workers and contains 45% of the clean energy businesses in the state.**

**The Southeast region of MA experienced 1.5% clean energy job growth since 2018, the highest rate of all regions.**

**The Central region of MA has the highest concentration of clean energy jobs at 4.1% of its workforce, followed by the Western region at 3.5%.**