

Greening Your Community: Leading by Example

November 8, 2007



Finding the Resources: A Range of Opportunities for Communities



Mass Technology Collaborative (MTC)

www.masstech.org/

- Education / Grants / incentives
- Email notification list for towns
- Monthly webinars
 - Energy Star benchmarking
 - Nov 29 – is an ESCO right for you?



MTC

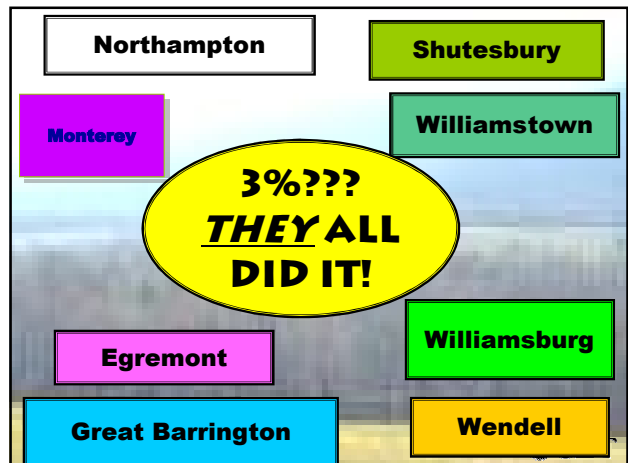


www.masstech.org/communityenergy/



Clean Energy Choice: Benefits for Towns/Cities

- Residents and businesses help towns earn MTC matching grants for renewable energy goods or services
- \$300,000 awarded to 190 towns



Municipal Energy Audit Program - DOER -

Goal

Identify cost-effective improvements for municipal buildings; Provide grants to towns to make efficiency improvements

- Limited funding available through June 30, 2007 for energy audits of municipal buildings
- Include multiple facilities on a single application (*Schools, town halls, libraries, police & fires stations, community centers, waste water treatment plants*)



Municipal Energy Audit Program

- Measure funding anticipated as of July 1, 2008
 - Grants up to \$100,000 per town from DOER
 - Grants must be matched 100%
 - Match can include town, utility rebates/incentives
 - No match required for municipal utility towns
- Towns apply to DOER for technical assistance as first step (first come first serve)
- Additional funds anticipated for technical assistance in 2008-09, but must have application on file with DOER



Regional Resources for Towns

- PVPC / FRCOG – Renewable Energy Strategic Plan
 - Collaboratively written with stakeholders
 - 100 MW new renewable energy generation in western Massachusetts
 - 200 MW of energy savings through conservation and efficiency
- Hampshire Council of Governments



Frameworks for Municipal “Greening”

- Form an Energy Committee
 - Formal / Appointed
 - Informal / Citizen Volunteers
- ICLEI’s Cities for Climate Protection
- Community Energy Challenge
- Join MA Climate Action Network (MCAN)



Energy Committees: Laying the Groundwork

- Amherst
- Ashfield
- Buckland/Shelburne
- Cummington
- Deerfield
- Easthampton
- Greenfield
- Leverett
- Northampton
- Northfield
- Orange/Athol
- Shutesbury
- Sunderland
- Warwick
- Whately

ENERGY GROUPS

- Sustainable Energy Action Committee (SEAC)
Ashfield, Buckland, Charlemont, Colrain, Heath, Hawley, Shelburne, Plainfield, Rowe
- Hilltown Sustainability Group
Ashfield, Chesterfield, Cummington, Goshen, Hawley, Plainfield, Windsor, Worthington
- North Quabbin Energy Group
Athol, Erving, New Salem, Orange, Petersham, Phillipston, Royalston, Warwick, Wendell



Projects of Energy Taskforces

- Learn about programs and grants
- Energy Fairs / Campaigns Promoting low-interest efficiency loans
- Upgrade town lighting measures
- Purchase clean energy
- Educational films / Monthly energy column / Cable access shows
- Develop model bylaws for renewables
- Books for library



ICLEI

- Framework and support for towns
- Inventory and forecast of town's greenhouse gas emissions
- Set emissions reduction target
- Create an Action Plan
- Engage the community in implementing your plan



New England Community Energy Challenge

17 participating communities in Massachusetts

Towns commit to

- Benchmark building energy performance
- Set goals – reduction of 10% or more
- Seek renewable energy choices
- Promote energy efficiency and renewables to companies and organizations in your community

Email to join a webinar:
Kambli.shubhada@epamail.epa.gov



MA Climate Action Network

- Networking and learning from other towns
- Collaborative campaigns to engage community members
- Annual conference – NOV 18th!
- Input to policies for energy efficiency, renewable energy and fuel efficient transportation



Green Building Opportunities

- What is Green?
- Energy Efficiency Retrofits
- LEED Certification (all sectors)
- ENERGY STAR Homes (market rate and low income)
- Compliance to state energy code



Green Building Is . . .

- Energy efficient design, techniques, and mechanical systems
- Healthy Indoor Air Quality
- Environmentally sensitive sites and landscaping
- Reduced construction waste
- Water conservation
- Environmentally preferable materials



LEED Certification

- Created by the USGBC
- Establishes a common standard
- Promotes integrated, whole-building design practices
- Raises consumer awareness about green design
- Helps transform the building market
- Almost 1,000 projects certified since 2003



Municipal LEED Projects

- **Northampton Senior Center**
 - Estimated 60% reduction in site energy use
 - Geothermal heat pumps to heat, cool, provide hot water
 - Photovoltaics planned for south roof of center
 - Green building criteria: sustainable site selection, water and energy use, and indoor environmental quality
- **North Adams Library**
 - Estimated Annual Energy Savings 20%
 - Renewable Energy included Photovoltaic panels and Geothermal Heat Pumps
 - Green Components: energy-efficient lighting, insulation, and windows; environmentally-friendly materials, and recycled construction waste, indoor air quality considerations.
- **LEED information: www.USGBC.org**



Cost of LEED Certification

2004 Study US General Services Admin.

- Design phase increased \$0.35 - \$0.59 per sq ft
- Construction increased \$1.78 - \$10.58 per sq ft (depends on level of certification)

2003 Study by MTC

- LEED certification possible for less than 2% of construction costs



LEED Energy Savings Potential

2003 MTC Study

- 60 LEED certified buildings compared to conventional buildings:
 - 18% to 37% energy savings in USGBC claims
 - 40% average energy savings with a LEED-certified building over standard construction



New Town Buildings: To LEED or Not To LEED?

- Early or late decision point to “go LEED”
- Steep learning curve
- Unanticipated surprises and challenges
- Other professionals required
 - Consultants and Installers
 - Help in choosing best LEED path
 - Third party certifiers
- LEED certification paperwork



ENERGY STAR Homes Minimum Residential Building Standard?

- 15 communities seeking variance from MA Residential code
- Would ensure all new homes were at least 15% more energy efficient
- Would require third party verification
- Learning curve / some builder education



Assistance through CET

- Navigate different programs and incentives
- Environmental Education
- Workshops on renewables
- Residential – Audits/New Construction
- Clean Energy outreach

