

# IS TOOL FOR MUNICIPAL ENERGY MANAGEMENT

ryan Dumont, a member of the all-volunteer Shirley Clean Energy Commission, was immersed in securing Green Communities certification for his town, and he was becoming more and more frustrated in his efforts to find helpful information. While the Green Communities program provided a clear list

of the actions required to earn certification, it could not provide each community with a roadmap of the obstacles to dodge and the most effective strategies for a town like his. "While going through this exercise," he says, "it soon became obvious that there was absolutely no place to go that was reliable to find Massachusetts energy-related ideas, cost-saving measures, grant opportunities, and basic how-to's to accomplish this task." When you type "wind power" in a search engine, for example, "the first two to three pages are advertisements; there's a little data from the feds and not a lot here in Massachusetts." Dumont, whose town is one of many in Massachusetts that do not have paid energy management staff, wished there was an easier way to find out how comparable towns were going about meeting their energy objectives.

Dumont and his colleagues across the Commonwealth recognize that municipalities have much to gain in both fiscal and environmental terms by initiating green energy and conservation projects. More and more communities are reducing operating budgets by increasing the energy efficiency of public buildings and vehicles, and converting to LED or other high-efficiency streetlights. Innovative financing approaches are making it possible for municipalities to use their future energy cost savings to pay for energy-saving improvements, without having to fund capital expenditures up front. Local zoning, siting and permitting rules have been adopted to pave the way for renewable energy projects. Massachusetts communities and regional consortiums have developed their own solar and wind energy generation, or partnered with private renewable energy developers, in order to realize significant municipal cost savings as well as progress on greenhouse gas reduction goals.

Federal, state, utility and private foundation grants, incentives and technical assistance are available to boost what municipalities can accomplish in energy efficiency and renewable energy. Massachusetts is one of the best states in the country for municipalities to implement energy initiatives, thanks to the state's participation in the Regional Greenhouse Gas Initiative and its Green Communities Act, which created incentives and opportunities for energy conservation and renewable energy, including the system for marketing Renewable Energy Credits, and a broadened role for "net metering" that makes renewable projects more attractive to both municipalities and publicprivate collaborations. Programs and resources are also available from agencies such as the Green Communities Division and the Massachusetts Clean Energy Center's Solarize Massachusetts Program.

So there's a lot of energy in the energy arena. Most local efforts, however, were being pursued in relative isolation. What was missing was an information clearinghouse and a way to discuss strategies and share success stories with peers. "I firmly believe that one central location to get all things energy-related is going to be an outstanding help," says Dumont, "and I would wager this will have a positive effect on reaching 'green' goals. … I'm of the opinion that if we give communities an excellent source—a one-stop shopping point—you will see an uptick in involvement and accomplishments." This, in a nutshell, is the goal of the newly formed Massachusetts Municipal Energy Group.

### A SHIFTING LANDSCAPE

Despite Massachusetts' leadership in sustainable energy matters, local governments face many obstacles and challenges to effective energy progress:

Candace Wheeler is chair of Gloucester's Clean Energy Commission and has been working as a project consultant on the MMEG program. She is a former Town Administrator in Hamilton.

# 1. The energy field is rapidly changing.

There are newly developing generation, transmission and efficiency technologies; fluctuating energy prices that affect the economic viability of alternative energy; the arrival and departure of funding, tax credits and incentives; and new legal, administrative and institutional mechanisms for realizing energy sustainability. All this change is hard to keep track of-but it's increasingly important to do so. It's all too easy to miss an opportunity by being unaware of a grant program, a model document, a conference, or a deadline.

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The MMEG website includes numerous forums on topics such as renewable energy.

# **2. The local learning curve is steep, and staff is spread thin.** In order to take advantage of the broad and ever-changing array of opportunities and resources for energy management, cities and towns need to get up to speed in a hurry so they can determine

The DOER saw the potential of Web-based, peer-to-peer collaboration to catalyze local government energy efforts.

what kinds of projects would fit their needs, what contract or procurement documents and processing are required, and what programs and funding sources are available to help them get it done. Most cities and towns, however, are stretched thin on consultant budgets, and municipal staff can't devote the time necessary to adequately administer energy efficiency and renewable energy measures. Some communities have created full-time or part-time energy coordinator positions, but many more have superimposed energy responsibilities on town administrators/ managers, public works departments, facilities managers, municipal light plant operators, and planning/community development departments, all of whom are already buried in other tasks. Often, appointed committees of volunteers, with their own day jobs, bear much or all of the responsibility for learning the landscape of local energy efficiency and renewable energy possibilities. Staff and committee turnover compound the problem.

Hamilton and Wenham, describes a group of North Shore towns that had started a series of breakfast meetings to discuss their energy projects. As the group got bigger, it became ever harder to find workable dates and times to meet. After a few months the group just stopped meeting. Meanwhile, state and regional agencies and nonprofit groups that focus on energy issues face a challenge in getting the word out to local governments and residents about programs, funding and technical assistance.

3. Hit-or-miss meetings

and wearisome Web surf-

ing are rarely productive.

Local energy managers

say they end up spending

many hours on the Inter-

net and at meetings that

may or may not cover

their interests or questions.

Such methods often fail to connect stakeholders or tap

the deep reserve of local

experiences and lessons

that fellow communities

could provide. A number of

spontaneous energy work-

ing groups sprang up around

the state in recent years,

but they were hampered by

the difficulties of coordi-

nating schedules and the

lack of an administrative

structure to support com-

munication. Sue Patrolia, the energy coordinator for

## **FRESH ENERGY**

Carey Duques, the environmental agent for the city of Medford, was among those who saw the need for a better way to share energy-saving and renewable energy ideas and examples with other municipal officials and volunteers. She saw the value of learning how political obstacles were overcome in comparable communities and how other towns were funding energy staff. When the idea of an online dialogue with other communities and state agency experts was floated late last year, Duques and several colleagues involved in municipal energy issues became actively engaged in supporting the development of a network.

The Department of Energy Resources was aware of the challenges faced by local governments, and in early 2011 the department's Green Communities Division solicited proposals for the development of a "community of practice"—a tool for local government entities to share information and best practices for implementing local energy actions. Before coming to the Department of Energy Resources, where he specializes in marketing and collaboration through information technology, Tom Witkin was a marketing executive for a Web collaboration company. One of his firm's major customers successfully leveraged a huge "community of practice" to solve global

problems. He brought the concept of interactive online problemsolving groups to the DOER.

With its model up and running, the DOER saw the potential of Web-based peer-to-peer collaboration to catalyze local government energy efforts and support the work of the Green Communities program. Green Communities had generated a wave of municipal activity, but its four regional coordinators were stretched thin, both in terms of time and "bandwidth" available for the cities and towns requesting their assistance. In his own town of Sudbury, Witkin saw the kind of expertise that could be shared by a peer network. In pursuit of a Green Communities designation, the town got an energy-efficient building code, known as a "stretch code," passed at Town Meeting on the first try. Witkin observed that Sudbury could provide other communities with tips on the process, which included mitigating builder resistance. Sudbury made a persuasive presentation and timed the vote to maximize the chance for passage.

Witkin's search for an energy-oriented "community of practice" in agencies in other states did not turn up anything, so the DOER wrote the recipe, starting with identifying the following program objectives:

1. Design a sustainable, growing program that makes it easier for municipalities, school districts and regional agencies to execute a broad range of energy activities. Define membership to allow interaction between multiple municipal and state agencies.

2. Support an energetic exchange of ideas, open communication and easy access to information, including best practices. Promote participation and facilitate collaboration.

3. Design a Web-based community that takes advantage of Web and social networking tools to make access and engagement simple and effective. Base implementation on proven, low-over-head Web hosting applications.

4. Design the program so that content is generated and moderated mainly by members.

5. Design the program so that any financing needed beyond the awarded grant funds is not raised "by charging financially strapped towns."

6. Execute programs to motivate and grow participation and report participation to the DOER.

7. Do not use the program as a platform to lobby state government or to further the financial interests of members.

#### MMEG TAKES SHAPE

The Massachusetts Municipal Association, which already had relationships with all of the state's communities as well as experience administering municipal peer-to-peer groups, won the DOER contract. The DOER notes that the MMA "is wellpositioned to generate discussion and encourage information sharing among local officials."

The MMA and the DOER identified people who had been active on energy issues in their communities and invited them to be part of an Advisory User Group. The group has advised on everything from the name of the program to the organization and ground rules for its website and the topics for face-to-face group meetings.

The MMA and the Advisory User Group decided on an inclusive approach to the new Massachusetts Municipal Energy Group. Membership would be open to municipal and regional school district staff, elected and appointed local officials, and local committee members involved in energy and sustainability activities, as well as state and regional government agencies and nonprofit organizations that provide technical assistance and funding for municipal energy efforts. For example, members include the state's Green Communities Division and the Massachusetts Clean Energy Center, regional planning agencies, and the Conservation Law Foundation. These organizations are a great resource for answering

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MMEGweb forums contain a host of topic-specific documents.

queries, adding information to the MMEG website, and making presentations at MMEG meetings.

Excluded from membership are vendors of energy-related services or equipment, unless the individual is also a municipal official or energy committee member. To ensure that MMEG benefits municipalities exclusively, membership is by invitation only. Interactions through the MMEG website require attribution, and MMEG has strict rules against using the site for marketing purposes.

The MMEG program will be made available for free for as long as possible. The MMA is providing website administration and technical services, and is initially acting as a moderator for the website dialogue. The intent, however, is that site moderators will be drawn from the group of users and will also act as facilitators to refer questions or information resources to appropriate participants on the site. The hope is that the program will become self-sustaining.

# BUILDING A COMMUNITY

The MMEG website, MMEGweb, is intended to be user-friendly, with email and Web meeting integration, search capability, discussion threads, event calendars, links to information feeds, files and other websites, email alert capability, and social media features.

The website is organized into eight topic groups:

• General MMEG Forum (site administration and policies, tutorials on site use, community calendar, program deadlines)

• Energy Efficiency (e.g., streetlights, building retrofits, energy services contracting)

• Renewable Energy (wind, solar, biomass, geothermal, hydro, renewable energy credits, and power purchase agreements)

- Grants, Incentives and Proposals
- Green Communities Program
- Energy Supply and Procurement
- Education, Marketing and Outreach
- Energy Policy and Legislation

The MMEG plans to hold four meetings per year to provide opportunities to hear from energy experts and to strengthen connections with colleagues.

Discussions can be either open to all site users or restricted to a selected audience. An online tutorial provides step-by-step instructions for starting a discussion, posting a document or a link, joining a topic group, and other information-sharing and dialogue features. Email alerts tell users when new information or a discussion is posted in the topic groups specified by the user. The website provides a brief biography of each member and his or her work experience.

The MMEG also plans to hold four meetings per year-one in each of the four Green Communities regions around the

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The MMEGweb General Forum sees daily activity.

state-to provide opportunities to hear from energy experts and to strengthen connections with colleagues. Meeting topics will be selected by the members of the MMEG, and meetings will include presentations and community roundtable discussions. Regional subgroups (e.g., Cape Cod or the Berkshires) may be formed around localized common concerns or multi-town projects, and these subgroups might want to have their own meeting schedule in addition to MMEG meetings. The Green Communities regional coordinators can organize meetings of any regional subgroups formed in their regions.

More than seventy-five representatives from state, regional and local governments attended MMEG's inaugural quarterly meeting on March 22 in Wilm-

ington. George Woodbury, energy services director at Republic ITS, presented a detailed primer on the technical foundations for implementing energy-efficient streetlighting. Representatives from the city of Gloucester explained the process that culminated in the permitting of two wind turbines and the signing of a powerpurchase agreement with the private wind energy developer. Combined, the two developments will save the city \$450,000 per year on electricity costs and allow them to meet a large part of their energy consumption with renewable wind energy. [The agreement document is available on MMEG-web.] Also at the meeting, Joseph Hurley, Medford's super-intendent of wires, mentioned his city's agreement with National Grid to retrofit streetlights without up-front costs. Participant evaluations of the meeting provided a vote of confidence for the newly formed program.

## **MMEG IN ACTION**

Although the MMEG is less than a year old, there are already many examples of how it is being used to improve the effectiveness of energy initiatives in Massachusetts.

Helen Aki, the energy services coordinator for the Metropolitan Area Planning Council, says she is using MMEGweb to manage and communicate with the participants in the council's regional streetlight conversion program. She has created a private forum within MMEG for the forty communities participating in this round of LED streetlight procurement. She uses the forum to provide updates, the latest drafts of procurement documents, program alerts, and answers to participant questions. Participants can log on anytime for updates, instead of having to wait for emails or meetings. The transactions in the restricted forum become a permanent record and document file for the streetlight program. Joanne Bissetta, the northeast regional coordinator for the Green Communities program, calls MMEGweb "a one-stop repository for DOER program materials and information"— which, she adds, "means we don't have to answer the same question six times." The steady flow of questions to the DOER about solar power purchase agreements will be handled this way.

Andy Brydges, senior director for renewable energy generation at the Massachusetts Clean Energy Center, says the MMEG provides an opportunity for his organization "to work more closely with municipal officials. In my experience, it has been difficult to find a forum to talk with multiple municipal officials at once, and MMEG can become the vehicle for this access." Energy has become a polarizing political issue, and public hearings on proposed projects are often contentious and full of biased information. Brydges says the MMEG provides a haven for municipal officials and committee members to get up-to-speed on issues surrounding energy proposals in a non-confrontational way.

There are indications that MMEGweb is becoming a tool for collaboration and problem solving. Discussion threads that start with a question are eliciting multiple responses. For example, a question posted by Medford Energy Coordinator Alicia Hunt about how to do a rigorous energy audit of the high school led to a chain of a dozen posts over a couple of weeks, including four from experts at the DOER providing insights on different types of audits and financing approaches, and several responses from communities. The conversation went from paying up-front for an audit to audits done through an energy services performance contract (ESCO). Hunt learned that Lowell had success with the ESCO approach to auditing and retrofitting all their municipal buildings, and Lowell posted its request for proposals (RFP) for ESCO services on MMEGweb for other communities to use. An official from Gloucester who saw the RFP online is now circulating the document to city officials who are in the process of developing documents for Gloucester's first municipal ESCO.

Duques, the environmental agent in Medford, received advice from Lowell soon after she posted a question on MMEGweb about whether to propose a municipal aggregation program for electric power supply for the residents of Medford. (The city could enter into a contract with an electricity supplier on behalf of the residents to supply power to them at a lower rate than National Grid.)

In Newburyport, Recycling Coordinator Molly Ettenborough has managed the process of upgrading streetlights for energy efficiency and is eager to use MMEGweb to share what she learned with colleagues in other communities.

Dumont says his town of Shirley was in the process of developing two large ground-mounted solar arrays that could make the town one of the largest solar generators in the state, and he sees the MMEG as a way that "other communities could use our examples" and learn about "potential pitfalls" around solar projects.

This is just the kind of collaboration and learning for which the MMEG was created.

#### **FUTURE CHALLENGES**

The MMEG is showing the potential to be a catalyst in the complex interactions between local and state government,



#### How to Join the MMEG

Any individual or agency involved in municipal energy activities can contact the MMA to receive an invitation to join MMEG and log on to its website. Just send an email to **MMEG@mma.org** with your name, title, and municipality or organization to receive an invitation, which will include instructions and a password for signing in.

utilities, energy organizations, and the private sector to achieve energy sustainability. To realize that potential, the same spirit of collaboration should be focused on keeping the MMEG vital and responsive.

Based on his experience with interactive Web-based communities, the DOER's Witkin observes that it takes time measured in years, not months—to establish a culture of dialogue through a website. Users have to regularly turn to the site, participate in the give and take, contribute to the flow of timely and current information resources, and make constructive criticism to constantly improve site capabilities. Keeping people engaged and participating is the key to realizing the vision of the MMEG as a self-sustaining community of practice.

If participation stays strong, the MMEG can meet the challenges of organizational sustainability, such as managing and indexing a growing amount of content, monitoring to ensure information is current, maximizing search capabilities both within and across topic groups, and improvising a funding source for a site moderator/administrator if the level of traffic on MMEGweb exceeds the level that volunteer moderators can handle.