Small Government Challenges: A Collaborative Program for Energy Efficiency in Public Facilities

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ABSTRACT

Despite the hundreds of millions of dollars in energy efficiency programs offered each year in California, small public institutions faced with shrinking budgets lack the staff resources to access the very programs that would save them money. Energy efficiency program providers, in turn, can't cost effectively reach these smaller customers. The Marin Energy Management Team (MarinEMT) program was conceived from the idea that energy management services could be more cost effectively provided to small public sector institutions if their needs could be served in aggregate through a collaboration. MarinEMT was created to serve the unique needs and issues of the 12 local governments and 19 school districts in Marin County, California, and serve as a pilot that can be replicated in other counties to serve historically hard-to-reach small communities. The MarinEMT acts as an "energy manager" for 31 public institutions leveraging and integrating state, utility, and private energy efficiency programs, filling resource gaps, and addressing specific barriers as needed to provide comprehensive and seamless delivery of services.

The MarinEMT has developed and integrated multiple program elements including shared energy accounting, peer networking, Web-based intranet, localized peer training, and demonstration centers. The Team identifies not only near-term energy efficiency measures but captures opportunities otherwise lost that occur each year at time of equipment purchase and replacement, renovation, and new construction. The collaborative approach also provides an effective means to work with all levels of management to build an energy efficient culture within and between the institutions. This paper explains how many of the common program barriers were addressed and presents lessons learned in the two years since the program's inception.

Background

Marin County, California, is a small county with a population of about 250,000 bordered by the Pacific Ocean and the San Francisco Bay. The county, served by Pacific Gas and Electric (PG&E), has 12 local governments and 19 school districts with 74 schools. The cities range in population from about 2,100 to 56,000, and 9 of 11 cities have populations less than 13,000. None of the cities and schools has staff members that are designated or trained specifically to manage energy use. With the exception of the County, none of the 31 organizations has an annual energy cost large enough to justify a full-time energy manager. However, collectively, they have an $8 million annual energy bill, well within the range to benefit from dedicated energy management.

[1] In addition to the authors, people and companies that have participated in the MarinEMT have included Dana Armanino, Marin County; Cyane Dandridge and Shawn Rohwedder, Strategic Energy Innovations; Tim Holmes and Sam Pierce, Kenwood Energy; Bart Wallace; and kW Engineering.

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Scoping surveys conducted at the beginning of the program about the cities and towns of Marin County indicated that energy efficiency was not a high priority:

- Sixty-four percent of the cities and towns had no current energy efficiency projects.
- Seventy-three percent of them had completed some energy efficiency projects in the past ranging from stoplight LED conversions to T8 lighting.
- Some of the lighting projects were completed ten or more years ago.
- Only three cities had some sort of energy efficiency policy; one indicated that they procure Energy Star equipment, three cities and the county had adopted resolutions to reduce greenhouse gas emissions (although only the county had taken any implementing actions).
- None of the cities had any type of energy benchmarking, and none of them perform energy accounting.

Information collected from scoping surveys at the school districts indicated a similar lack of awareness and focus on energy efficiency projects:

- One quarter of the schools had ongoing energy efficiency projects such as a cool roof and new T8 lighting.
- Two of the schools were installing photovoltaic (PV) systems.
- Ninety percent of the schools had some sort of past energy efficiency projects, which were mostly lighting.
- One school had built a school wing that was considered "green."
- Three quarters of the surveyed school districts had future plans for some sort of new construction or modernization, although energy efficiency was not specifically indicated to be part of the plans.
- Only one school had some sort of energy policy in place.
- Only two of the schools reported having an energy audit.
- Three of the directors of maintenance/facilities had attended classes at the PG&E's Pacific Energy Center (PEC).
- Similar to the local governments, none of the school districts had benchmarking or performed any type of energy accounting.

The idea of the Marin Energy Management Team (MarinEMT) was conceived from the idea that energy management services could be more cost-effectively provided to small public sector institutions if their needs could be served in aggregate through a collaboration. The team was formed in 2002, when a Marin County Supervisor began an initiative to explore with the 11 city managers in Marin the best way to implement a collaborative program for energy efficiency in public facilities.[2] The city managers recognized that they could do more to save energy and save money but lacked the funds to initiate an effort. They agreed to support collaboration but only if outside funding was available.

[2] At the initiation of Supervisor Harold Brown and under a grant from Marin County, HMW International, Inc. was retained to assist the County and interested communities in pursuing energy efficiency opportunities to reduce the public sector's costs for energy.

Marin County requested funding for the MarinEMT program from the California Public Utilities Commission (CPUC) for the 2004-05 funding cycle under the RFP for third-party programs. Marin proposed the program as an "information-only" program, instead of a program with set energy savings goals, to have the flexibility to experiment in developing the collaborative infrastructure. To tie the initial effort to a specific savings target from the start would have hampered the ability to innovate. Ultimately, the objective would be to capture many more efficiency opportunities than most energy efficiency retrofit programs and create a sustainable culture of efficiency within the institutions.

During the current 2006–2008 California energy efficiency program cycle, the MarinEMT is in the process of becoming a PG&E local government partnership and will no longer be an "information-only" program.[3] The team will have aggressive savings targets and will have to work under the same rules established for less comprehensive rebate and "direct install" programs. The program will expand to other public agencies including water, sanitary, and fire districts. The team will also work closely with Marin's water districts to better integrate water conservation and energy efficiency initiatives to increase the numbers of customers participating and reduce transaction costs for all parties.

For the new 2006–2008 program cycle, PG&E has adopted a "market-driven" delivery paradigm that attempts to eliminate traditional program configuration and move towards a more "seamless" delivery of energy efficiency services to market segments. The CPUC has also pushed for innovative approaches to capturing lost opportunities and energy efficiency measures stranded by programs focused on only the most cost-effective measures. The MarinEMT model embodies the new delivery paradigm and goals, especially for the hard-to-reach public sector, and may provide useful insight for other local government partnerships. The new challenge for MarinEMT will be to balance the aggressive short-term goals of the State and PG&E with the collaboration's long-term goals for a persistent and sustainable culture of energy efficiency within Marin's public institutions.

Marin County's Barriers to Energy Efficiency

Resources and support for energy efficiency, which are abundantly available through a variety of programs funded by ratepayers via the California Public Goods Charge, have not reached Marin's public institutions.[4] During the eight years prior to the start of the MarinEMT program, Marin's local governments received only about $173,000 in grants from the California Energy Commission (all for battery backup systems) and $312,000 in loans. School districts only received about $28,000 in technical assistance. Of Marin's 19 school districts and 74 schools, only three are known to have received services from Rebuild America and Green Schools programs. While no estimate of program services was available from PG&E, a MarinEMT survey suggests that Marin local governments use such services infrequently. There are multiple reasons why these smaller institutions are underserved, including:

[3] "Information-only" programs are generally defined as education, training, and marketing programs that support energy savings programs but have no energy savings goals of their own. For 2006-08, PG&E would not permit local government partnerships or third-party programs to be "information-only."

[4] While no formal accounting of the distribution of public goods charge funds for energy efficiency programs is available by city or county, hard-to-reach markets are by definition underserved. Marin County lacks the customer size and densities that are easier to reach by programs driven by aggressive savings goals.

- Limited local resources (small towns and school districts have small budgets and so have limited staff with limited expertise about energy-related issues)
- High transaction costs due to multiple and ever-changing programs
- Lack of energy accounting and familiar metrics
- Complex procurement and decision making
- Lack of training and institutional memory
- Lack of policies and procedures.

Limited Local Resources

Like most public institutions in California, the cities and school districts of Marin are faced with shrinking budgets and overworked staffs.[5] Despite the perception of Marin's affluent suburban population, proximity to San Francisco, and the hundreds of millions of dollars in energy efficiency programs offered each year in California, Marin's local governments and schools have no more financial means to implement energy efficiency programs than similar small governments in more remote counties. Marin cities also have no enterprise agencies (e.g., water, sanitation services) that can provide more stable revenues and staffing. Only one Marin community has a utility users' tax that can provide windfalls to cities when energy prices spike, producing revenues that can be used to support increased attention to energy efficiency activities.

High Transaction Costs

The problem for small customers is generally not the lack of energy efficiency programs—usually too many programs are available and none of them offers comprehensive services. The time and cost involved in sorting out, researching, and applying to the multiple programs is beyond the capability of Marin cities and schools. Applications require information that takes too long to compile. Programs can conflict and will push only those measures they have to offer rather than what may be most appropriate. Local staff have no time to listen to or to perform due diligence on unsolicited vendors. Conversely, the transaction costs are too high for utilities and vendors to solicit and work with small communities cost effectively.

Lack of Energy Accounting

As the saying goes: It is difficult to manage what isn't being measured. Managers who can't account for energy use tend to approve only the most cost-effective investments in energy efficiency and tend to use initial costs rather than lifecycle costs for procurement decisions. Also, energy efficiency benefits are rarely translated into the metrics government uses in decision making. Few decision makers implement energy efficiency as an end in itself; most undertake energy efficiency projects for the perceived benefits such as saving money, creating healthier and more comfortable home and work environments, increasing productivity, lowering maintenance costs, etc. State policy has a different set of goals than end-users, and most programs fail to

[5] A statewide tax initiative approved by the voters in the late 1970s rolled back and greatly limited local government's property tax revenues. Another initiative approved in the late 1980's requires a two-thirds vote to raise any type of existing tax or adopt any new tax. Local governments in California have limited means to increase revenues in line with increasing costs such as energy.

present the non-energy benefits that may be most important to the market segment. While this isn't unique to the public sector, it presents a key barrier.

Complex Procurement and Decision Making

Working with the public sector requires as much knowledge of civics as it does of energy efficiency. Public sector processes take longer to navigate and have more players involved in decision making. The public sector also grapples with more conflicting priorities and is subject to more rules and public scrutiny than the private sector. Schools must navigate state oversight agencies as well. For example, the CA Department of the State Architect imposes building rules for schools that are different than local government codes—as well as different procurement requirements. All this creates longer and somewhat unpredictable decision making timelines, which typically result in higher transaction costs for program providers and vendors. As a consequence, providers and vendors focus on the largest public clients where the return justifies the transaction costs. The public sector also has unique opportunities such as low-interest financing from the state. However, most utility and third-party programs are not designed to address these unique barriers and opportunities.

Lack of Training and Institutional Memory

Decision makers in the public sector change with great regularity, creating the need for continual outreach and training. Today, a new generation of facility managers and staff who historically remained in their jobs for many years are far more mobile, creating gaps in institutional memory of the facilities, the equipment, and historical operations and maintenance. City managers and school superintendents, the ultimate financial gatekeepers, average about five years on the job. As a result, energy efficiency initiatives started under one person or team get neglected or are even unknown to new staff. Unless they have prior training and knowledge, new managers rarely have energy efficiency at the top of their priorities.

Lack of Policies and Procedures

Most of Marin's public sector institutions have implemented some energy efficiency on an *ad hoc* basis. However, none have adopted guiding policies or have a comprehensive framework in place to ensure that energy efficiency becomes a sustained component of the organizational culture.

The MarinEMT Model

Marin County created the MarinEMT to act as energy managers for all of the 12 local governments and 19 school districts in Marin County. The team acts as an extension of the staff of the 31 public institutions, leveraging and integrating state, utility, and private energy efficiency programs, filling resource gaps, and addressing specific barriers as needed to provide as comprehensive and seamless delivery of services as possible. The MarinEMT developed and integrated multiple program elements to address the barriers including shared energy accounting, peer networking, Web-based intranet, localized peer training, and demonstration centers, which are detailed in this paper.

Success Factors

Several strategic decisions have proven important to the success of the program.

Finding the right sponsors. The concept for an energy efficiency collaboration was first presented to the city managers rather than the elected officials because, in small communities with unpaid part-time elected officials, city managers have much more control over what gets done. They are also gatekeepers, fending off the elected officials' proposals if they deem that the community lacks the resources to implement them. Having buy-in from city managers also assures that the team gets the attention of public works and facilities staff. Working directly at the staff level would also keep the program off the political radar and viewed ultimately by staff as *their* "team," working for them rather than one imposed on them by the elected officials. This has proven especially important to building initial trust.

The city managers requested that the 19 school districts be included in the collaboration out of their own concern for the financial conditions and needs of the schools. While schools have different decision making processes and rules than local governments that would complicate the collaboration, the initial program was expanded to include the schools increasing the total number of organizations involved to 31.

Assembling the right team. One of the most important aspects of creating the MarinEMT was assembling the team itself. The right team, a team that is responsive, flexible, and has the right set of skills, is critical to getting and maintaining credibility with facilities staff. Initially, it was assumed that the team would need to:

- Be locally based
- Have expertise in energy efficiency, project management, and how schools and local governments work
- Have appropriate engineering expertise on-call
- Leverage appropriate existing programs.

To achieve this, Marin County did not try to find a single company that could meet the requirements, but assembled a team with the right skill set from multiple local companies. A locally based team has more familiarity with local issues, is more in touch with the politics and staff in public agencies, and may have established connections within the organizations and institutional structures. Cost effectiveness was another consideration: if not local, staff travel time becomes an issue, and useful site visits and meetings might be less frequent. To minimize confusion for the clients, the team used common business cards and email addresses. A team working from multiple locations and companies raised issues of management and coordination, scheduling, computer compatibility, document control, and other collaboration issues. This was, in part, resolved through the creation of a Web-based intranet discussed below. Even though the team consisting of staff from four companies and the County worked together successfully, keeping the focus on the team program became a management issue because no one was 100% allocated to the program.

In working with the public sector, it was initially assumed that knowledge and experience with public institutions was at least as important as knowledge and experience with energy efficiency programs. While not full time, on-call access to engineering expertise would be

critical as well being able to follow up quickly and capture unanticipated opportunities: MarinEMT would function best if it could provide the right services at the right time. With engineering expertise available on the team, any kind of critical information or technical assistance could be obtained in a timely manner. Existing utility, state, and third-party programs required applications and review as well as too many rules that could delay services and increase transaction costs.

Within the first year of the program, the team realized that not only was engineering expertise important to have on-call, it was a much greater need than originally anticipated. When a program moves beyond a rigid set of energy efficiency measures such as is typical with a small business direct install program, some level of engineering expertise is almost always required. Within a year, the team shifted from engineering on-call to engineers (with great communication skills) on the front line. The team specifically looked for engineers with public sector experience. We were able to find engineers both fluent in energy efficiency and in working with local governments and schools (one is even a city councilman). Teaming engineering with project coordination/outreach staff proved effective in using the engineering time well. The team was able to make this change and stay within the original budget of the first two-year program cycle. As the program moves forward over the next three years, increased cost of frontline engineering is projected to be returned in greater capture of energy savings opportunities.

Imposing no requirements for participation. Under the MarinEMT model, participants contribute no funds to support the program, and they are not required to sign any written commitment to participate or follow through on any recommended actions. And no demands are made for any staff time. The city managers help to get the MarinEMT in the door, but the city or school staff participate in the program solely on its merits. This goes against a commonly held notion that organizations that don't invest *some* money or make *some* form of commitment will not participate. But strategically, the team felt that the trust and collaborative relationship the outside team needed to build with staff had to be the choice of staff. With shrinking budgets and reduced staffing, facilities managers will reject programs that appear to demand their time without providing clear and early value. MarinEMT's approach is to require a minimum amount of time (only 1–2 hours) to do a quick assessment of each organization's needs, then provide immediate value in the form of energy accounting for all their facilities, something that only a few of the 31 organizations had ever done. The incremental approach of providing value for a little time invested has led to steadily increasing trust and participation in the collaboration. MarinEMT gained 100% participation on some level from all 31 organizations within the first year. The team has benchmarked historical energy use and tracks and reports on monthly energy use and cost to all 31 organizations.

Capitalizing on the benefits of an external energy management team. An energy management team that is not part of the organizational structure of an institution can have drawbacks, including not being on the site to work daily with other staff. But the MarinEMT also assumed that being "outsiders" could have benefits as well. One benefit is being able to communicate easily and credibly with all levels of personnel in the organization. In this way, the MarinEMT can validate the perceptions of facilities staff who might not be recognized as experts in this area within their own administrative structure. Also, being an outsider, the MarinEMT can objectively communicate issues to various audiences within the organization's structure, tailoring messages for business/financial staff, technical/facilities staff, or management/

administrative staff. During the course of the program, facilities staff of the client base began to recognize that the MarinEMT did work for them. The team not only assisted them in taking on energy efficiency initiatives but also provided support for compatible projects for needed equipment upgrades, renovations, and operations and maintenance improvements. Because many initiatives such as better lighting, redesigned and upgraded HVAC, and better climate control improve the work environment, MarinEMT activities have been perceived to benefit a broader range of staff, and the team continues to gain trust and support throughout each organization.

Leveraging (not duplicating) other programs. The MarinEMT program was conceived from the idea that energy management services could be more cost-effectively provided to small public sector institutions if their needs could be served in aggregate through a collaboration. The team's job is not to create another duplicative and competing program but to assess needs and opportunities, and effectively leverage and integrate state, utility, and private energy efficiency programs. The team fills resource and program gaps only as needed. As discussed previously, the barrier is not lack of technical resources, information or finances—but time and resources it takes to go after them. Conversely, state, utility, and third-party program providers and vendors often can't assist these institutions because there is no easily identifiable point of entry and the transaction cost is too great for them as well.

For example, PG&E ran a program distributing free LED exit signs and compact fluorescent lights through its account services group. Because only a few of the 31 schools and governments have energy demand large enough to be assigned accounts, their account services representatives had no easy means to identify who to talk to nor could they afford to invest the time for the resulting savings. Because of MarinEMT's already-established network and role as "energy manager," the team was able to distribute almost 150 LED exit signs and 700 compact fluorescent lights with only a few hours of marketing time. MarinEMT already had all the necessary account information in its database and took care of the necessary paperwork (which required another eight hours to complete, a task which the team reported to PG&E could be substantially reduced through electronic filing).

This leveraging works not just with programs, but also with vendors. Because of their small size, MarinEMT customers don't have time to listen to vendors' pitches and then carry out the due diligence research on the products and vendors. Through two demonstration projects, the team was able to obtain donations for state-of-the-art technology for a school computer classroom and a city council chambers. The team serves as an objective evaluator of new products and programs to recommend as appropriate to the 31 organizations. Through this effort, the team can identify and test new technologies locally and estimate the potential savings for each organization. As of this writing, several new products have been installed and will be analyzed for wider application across the organizations. The vendors involved have embraced this opportunity and put in considerable time to ensure a successful outcome. Even though this effort is in the early stages, it has already resulted in additional work for some vendors.

Leveraging other programs has worked well in part because the MarinEMT was initially established as an information-only program, not in competition for savings with other programs. In the new program cycle, the team will become a local government partnership with PG&E and be required to meet aggressive energy savings targets. While the utility has expressed the desire to create an integrated portfolio with shared goals, it is uncertain how well this will be achieved in practice and what the ultimate impact on MarinEMT's program design will be. Multiple programs can only be delivered seamlessly to customers if the program providers are not in

competition with each other for energy savings and the costs of program integration are not borne by the program providers alone.

Capturing lost opportunities. Probably one the greatest problems with the historical program-driven approach to facilitating energy efficiency is the savings opportunities left behind. This is exacerbated by a policy bias to deliver great amounts of energy savings at the lowest possible price within a short program cycle. The sheer size of the California market tends to hide the inevitable diminishing returns of this approach, and adopted cost-effectiveness formulas fail to account for these external impacts further biasing program choices to short-sighted solutions. This is the energy efficiency equivalent of strip miners not being held accountable for the adverse impacts on the community. The value of a more holistic approach to energy efficiency becomes more readily apparent when the total potential market for efficiency is much smaller as is the case with Efficiency Vermont.[6] This is also the self-imposed case in Marin County where we have limited our scope to a specific market, the public sector, in a limited geographic area.

To serve the customer base well, the team needed to establish a process for identifying and capturing all available opportunities on an ongoing basis in a manner cost-effective to each institution. The MarinEMT attempts to capture different types of lost opportunities including:

- Retrofit measures with longer paybacks unlikely to be implemented on their own, but practical to implement as part of a comprehensive package
- Measures not feasible to retrofit but cost effective when implemented in conjunction with equipment replacement, renovations, and capital improvements
- High efficiency specifications for new construction and modernization
- Higher efficiency specifications for procurement.

MarinEMT conducted a needs assessment of each city and school district to identify staff responsibilities, knowledge level, barriers, past and current energy efficiency initiatives, vendors, O&M practices, critical issues, and future plans to better understand and address the common and unique needs of each organization in the collaboration. From the initial assessments, targeted facility audits were conducted to identify near-term opportunities and identify opportunities triggered by future events such as end-of-life equipment replacement, reroofing, and other renovations. The team reviews capital budgets to identify future opportunities and be prepared to offer assistance at appropriate future dates. Other opportunities are identified during peer network meetings and workshops; even the local newspapers are scanned to capture information not picked up in other ways. The team found no single method to reliably gather a complete picture of each institution and identify all possible opportunities.

The team operates under the assumption that time and resources spent up front to identify and track all opportunities, even if they are not cost effective at the time, will eventually result in capturing an opportunity that might otherwise have been lost. Toward the end of the two-year program cycle, the team began to notice more customers initiating projects without the team's prompting, based on audits or information provided up to a year and a half earlier. For the next

[6] For an excellent description of this approach, see "Taking a Holistic Approach to Markets: How Efficiency Vermont's Transition From Programs to Markets Is Changing the Way Energy Efficiency Services Are Developed and Delivered," *Jennifer L. Chiodo, Jennifer Chiodo Consulting and Blair Hamilton, Efficiency Vermont, ACenergy efficiencyE Summer Session 2004*

program cycle, the team is working with third-party program providers to modify their audits to collect data on potential lost opportunities that can be tracked and acted on in the future.

Specific MarinEMT Program Elements

Centralized energy accounting. While benchmarking and tracking facility energy use is a critical component of energy management, only two of the thirty-one organizations in the collaboration had the ability to do it. And though they have the ability and, many times have the responsibility, to change energy use patterns, most of the facilities managers contacted never saw the energy bills processed by the business office.

The MarinEMT program planned from the start to provide energy accounting services for participants to benchmark facilities, monitor energy use and demand, provide operations and maintenance support, and track project savings. The team chose utility management software that could provide energy use normalized for seasonal and annual temperature variations and a wide variety of reporting functions. This task would have been prohibitive if the team had to retrieve hard copy bills for all accounts of all the organizations. MarinEMT worked with PG&E's information technology staff to set up an automatic query that could provide a monthly electronic file for all the organizations. The MarinEMT now tracks more than 1,000 accounts for 31 organizations. A standard set of reports is created for each organization's facilities and posted to the Web-based intranet.

Providing energy use reports gives almost all participants their first understanding of where and how they use energy—and how much that energy use is costing them. This is the first "value added" service the team provided, and it requires almost none of their time. In addition to the value of the information, it serves as an ideal marketing tool to gain their further participation in the collaboration. While few can afford to maintain this data on their own, it becomes very cost-effective on this scale. Even with an electronic file, staff time is required to import and validate the data. If each organization paid a proportionate share of the cost, it would average about $30 per customer per month, about the cost of an hour of staff time for each of them.

To date, the full potential of energy accounting has yet to be realized by the participants. Since few have ever had this information available, they aren't accustomed to using it. The team plans to provide additional training on management and behavior issues in the future. In collaboration with the water districts (to integrate water conservation and energy efficiency initiatives), the team plans to add water use data as well. At the request of customers, the team will explore ways to present the data to raise awareness and provide incentives to reduce energy use through better practices in schools and firehouses.

Web-based "intranet" for collaboration. MarinEMT developed a simple Web-based intranet to serve two functions: providing a means for a multi-company team to share information and project resources, and providing participating organizations with easy access to their own data and program resources. It also allows the team to collect and maintain extensive data on each organization, essentially capturing the institutional memory. With ongoing staff changes across all organizations, the collected information allows new staff to come up to speed more quickly and helps establish the relationship with the team. The tool serves as an intranet for customers and team staff to share and store documents, contact information, and scheduling. Because it is Web based, the intranet solves problems of location and computer compatibility for the entire MarinEMT community.

Developing a customized Web tool proved to be a low-cost means to provide effective communications through an interface that is friendly, simple to use, and customized to the MarinEMT community's needs. However, any customized Web site requires time-consuming attention to fixing bugs and maintenance. While the shared database for contacts and documents has been most useful to the team, scheduling and other functions fell short. Even for the team, old computer habits proved hard to break and certain changes that would make the system more practical didn't get implemented in a timely fashion.

While participating jurisdictions could retrieve their own energy use reports, audits, and other documents, there wasn't sufficient need to access the system for them to remember how to use it when it would be useful. This lesson reinforced the fact that, particularly with these customers, person-to-person communications must remain the primary method of relating to the individuals in the MarinEMT community. The Web-based system remains a low-cost and useful tool (with appropriate outreach and training efforts) as a secondary method of communication and for storing all documents, contacts, and other information in a location retrievable by all participants.

The Web-based tool was also to provide a means of organizing and aggregating data on measures and savings, and tracking future opportunities. The team found a similar offline tool developed for the San Diego Regional Energy Office, which they shared with Marin.

Peer networking. Peer networking is a method of tapping into the collective wisdom of the institutional staff, motivating them to implement energy initiatives, and helping to create a local culture of efficiency. Prior to the creation of the MarinEMT, there was limited ability for members of this community to tap into the expertise of their peers—particularly with regard to energy efficiency. In the spirit of the MarinEMT philosophy, peer networking provides an effective means of leveraging resources already in the community but not easily accessed. It provides not only a means to introduce new initiatives, technology and practices, but to share practical lessons learned, swap notes on vendors, and discuss other issues of mutual relevance. These discussions can be many times more credible and effective than more formal training workshops.

Launching a successful peer network is less about convincing the participants of its value than motivating an already overworked group of people to take the time to do it. Taking a cue from another program that conducts seminars for small businesses, the MarinEMT adopted a lunchtime meeting format at local restaurants. The strategy proved incredibly successful.[7] Initially, participants stayed about an hour, but the bimonthly meetings lengthened fairly quickly to about 2 hours. The restaurants provide a private meeting space away from distractions, and the team only pays for those who actually attend.

Peer networking has allowed the MarinEMT to develop relationships more cost effectively and with more customers than would otherwise have been possible. It has proven one of the best ways for the team to keep up on issues across the jurisdictions, identify and follow-up on new opportunities, and address potential problems quickly. Each meeting always has a topic

[7] A survey of participants conducted by the independent program evaluator found two-thirds of the possible organizations attended at least one lunch, 90 percent of those indicated a high likelihood of using the contacts from the lunch as support around energy efficiency, 81 percent stated an increase in knowledge about energy efficiency due to lunch participation, and 62 percent have already taken specific actions regarding energy use or energy efficiency. See "Draft Final Report for County of Marin's Measurement and Evaluation of the Marin Public Facilities Energy Management Team Program" by Equipoise Consulting Incorporated, April 19, 2006.

but most of the time is left for general discussion. The peer networking has proven valuable in providing recognition and camaraderie for staff that generally only get attention when things go wrong.

Localized training. While PG&E maintains an excellent demonstration and training facility across the bridge from Marin County—the Pacific Energy Center (PEC)—only a few staff in 31 public institutions have attended trainings there. One facility manager who had taken a daylong workshop was unable to do much with the knowledge because no support was available once the manager was back on the job. Outreach to small institutions, time, lack of follow-up, and a supporting network all proved barriers to both the use of and results from PEC and similar programs. To overcome these barriers, MarinEMT brought the training to Marin. The team developed workshops around topics of interest to the participants and sponsored workshops by other programs that addressed the needs of our institutions. The third-party workshops worked best when the team could work with the presenters to tailor the training to our community. The single most effective change was to help presenters reduce the length of their workshops.

Conclusion

The Marin EMT has proven to be a needed service and a successful model for reaching small public sector institutions. The initial two-year program addressed many common barriers hard-to-reach local governments and schools face when trying to pursue energy efficiency initiatives. The program also provides a means for utilities, third-party program providers, and vendors to more cost effectively reach the small public sector customers.

The program benefited by the lack of energy savings requirements in the first two years. This allowed the team to focus on developing and revising the program elements needed to identify and overcome the barriers.[8] For the 2006–2008 energy efficiency program cycle, MarinEMT is becoming a PG&E local government partnership and will no longer be an "information-only" program. In addition to the issues of integration into the PG&E program portfolio, the team will have aggressive savings targets and will have to work under the same rules established for less comprehensive rebate and direct install programs.[9] The new challenge for MarinEMT will be to balance the aggressive short-term goals of the State and PG&E with the collaboration's long-term goals for a persistent and sustainable culture of energy efficiency within Marin's public institutions. Lessons learned from the first two years of the MarinEMT program include:

- Stay current with the civics of local governance to work effectively with the public sector. Permit greater flexibility in the time allowed to achieve energy savings goals. The nature and complexity of decision making in the public sector makes it far more difficult to predict when (but not if) energy savings measures will be implemented.

[8] The program had many non-energy goals that it met or exceeded for purposes of evaluation. While the CPUC decisions express the value and desire for innovation, the established rules for program performance and payments penalize failure to achieve energy savings and offer no compensation for risk or the value of lessons learned.

[9] Most of the programs in PG&E's proposed 2006-2008 portfolio target only the most cost-effective energy efficiency measures due to the low levelized cost target for the portfolio (3.4 cents/kWh).

- Plan peer networks with the specific needs of the audience in mind. Most workshops and training should be conducted in the community, with an audience of peers from the community, and tailored to the needs of the audience.
- Use ongoing energy accounting to develop and maintain a persistent culture of energy efficiency. California utilities can do much more to make this an accessible and cost-effective tool, especially for smaller customers. Better online access and a streamlined process for programs managing multiple customers would greatly increase the usability of this information.
- Continue to work with the CPUC and utilities to account for and capture lost opportunities so that program providers will not be penalized for pursuing them. Currently, there are no metrics to evaluate lost opportunities and no penalties for creating them.