O&M First!

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Resource Efficiency Managers Offer Alternative Approach to Realizing Energy Efficiency

FEMP

The U.S. Department of Energy's Federal Energy Management Program (FEMP) is pleased to present the series O&M First! as a way to promote energy efficiency by first applying O&M best practices. It is our hope that the experiences shared will provide Federal facility managers with strategies they can apply to their own facilities, as well as introduce the FEMP O&M program to federal site staff.

A copy of the FEMP O&M Best Practices Guide can be downloaded at www.eere.energy.gov/femp/operations_maintenance/om_best_practices_guidebook.cfm. This Guide, which covers a full range of facilities O&M topics, provides the rationale for a proactive O&M program; identifies O&M management issues and their importance; explains the various O&M program approaches; introduces maintenance technologies; and explores O&M procedures for the predominant equipment found at most federal sites.

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Resource Efficiency Managers, or REMs, offer federal sites a new approach to cost-effectively realize energy efficiency, water conservation, and solid waste resource conservation. This unique approach was pioneered in the federal sector with the U.S. Army, Fort Lewis, Washington, in 1996 and has since spread to a number of other federal sites with a long list of success stories. As of April 2003, a total of $83 million in activities and projects have been identified by REMs at federal sites that will result in annual savings of more than $12 million. REMs have also secured an additional $23 million in grants and buy-downs that have further reduced overall capital cost requirements. This makes REMs a clearly proven alternative for federal facility managers to consider when looking for ways to improve their resource efficiency programs.

What are REMs?

REMs are experienced individuals assigned to federal sites for the purpose of generating savings from reduced use of utilities (i.e., electric, gas, water, etc.) and reduced solid waste disposal costs. These assignments, typically contracted through a third party, are structured such that these positions are "self-sustaining"—revenues generated through savings will cover at least the cost of the REM contract. Historical information indicates that an investment in a REM typically returns in the range of 300 to 400 percent.

Typical REM Services

A REM is located onsite and works with the facility staff to identify the full range of available efficiency improvements. In some cases, a REM may be responsible for more than one site. On the O&M side, this may include approaches such as

- developing metering and sub-metering plans
- reviewing and analyzing meter and equipment data
- identifying low- and no-cost efficiency improvement opportunities
- establishing equipment re- and retro-commissioning programs
- reviewing and modifying building and equipment operating schedules.

Other efficiency activities often included in REM contracts are

- developing and administering energy awareness programs
- training building managers and operators to identify opportunities
- reviewing utility bills for errors
- identifying potential retrofit projects
- providing project management oversight
- completing applications for co-funding from either utility incentive programs or state public benefits funds
- advising on procurement of energy-efficient equipment.

Results at Federal Sites

To date, more than 40 federal sites have contracted REMs to either lead or support their energy and water management programs. Savings continue to accumulate at these sites as a result of the broad range of measures already in place while new measures with additional savings are continually being identified and implemented. Here are some examples of REM success stories.

Since 1996, the Army base at Fort Lewis, Washington, has relied on its REM to continue a long-standing energy-efficiency tradition. Cumulative cost savings resulting from REM-led energy-efficiency efforts at Fort Lewis now exceed $4.0 million. Energy-efficiency measures incorporated at Fort Lewis include applying lighting conservation measures in motor pool areas, parking lots, and hallway areas; repairing/replacing photocells, the boiler plant and the steam system; installing programmable thermostats, direct digital control systems, de-stratification fans, infrared heaters, and vending misers; identifying utility billing errors; developing and administering a post-wide energy awareness program; and initiating an energy savings performance contract.

RESOURCE EFFICIENCY MANAGER

A REM has been helping at Navy Base Coronado, California, since 2001. REMs have been instrumental in a number of projects and activities, including the installation of a 750-kW photovoltaic system, demonstration of microturbine and fuel cell technologies, upgrades to the compressed air system, coordination of alternative financing projects, and completion of a water conservation project. To date, a total of over $10 million in activities has been identified that will result in an annual cost savings of almost $1 million, at a total REM investment of $320,000.

Identifying and Obtaining REM Providers

DOE FEMP can assist you in developing a REM scope of work tailored to your needs. We can also provide additional pricing information and help you identify REM sources and procurement mechanisms best suited to your needs. And note that REMs can be contracted through the GSA Federal Supply Schedule SIN 871-201. FEMP can also help you explore potential REM funding options available to your site. Use of REMs in association with O&M best practices makes sense!

Additional Information

To obtain more information on REMs please contact any of the individuals listed in the information sidebar on this page, or visit the Washington State University REM website, which includes REM case studies.

REM Charles Howell (far right) and Fort Lewis, WA, energy team received the 2002 Secretary of the Army Energy and Water Management Award.

Leading by example, saving energy and taxpayer dollars in federal facilities

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FEMP O&M Resources

FEMP is committed to providing federal facility staff tools and knowledge to help optimize their O&M programs. Visit the FEMP homepage for information on O&M and other FEMP programs and activities at www.eere.energy.gov/femp.

FEMP also offers the workshop Operations and Maintenance Management. To find out more about this course, visit www.eere.energy.gov/femp/services/training_om.cfm.

Please contact any of the individuals listed below for additional information on the REM program:

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