“Why Should I Invest in a Resource Efficiency Manager?”
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Q&A Session Materials – Answers provided by event presenters Bill Sandusky (Program Manager, Pacific Northwest National Laboratory), David Struck (REM, US Coast Guard), Bernard Lindsay (Utilities & Energy Program Manager, Navy Region Southwest), and Washington State University Energy Program staff

**Question:** Since REM’s salaries are paid from savings they generate after the first year, how does the REM go about claiming “credit” for assisting in the implementation of an ESPC project?

**Answer**
Bill: That would be negotiated with the contracting officer, as it would be agency-specific, depending on the services provided.

David: ESPC management and development is considered a “collateral” duty for the REM. In the case of the US Coast Guard REM, even though we (I) do not get direct “credit” for savings achieved through an ESPC (or UESC), the “big picture” of agency efforts and accomplishments is recognized by the USCG.

**Question:** Could you address methods for verifying savings claimed by REMs?

**Answer**
Bill: Short of collecting and analyzing consumption data, verification of savings would be based on review of savings estimates and associated assumption and verification by observation that no-cost and low-cost projects were implemented and are continuing.

David: With the absence of a reliable data base or system of comprehensive data management, I rely on two primary methods. One would best be compared to a “stipulated” approached used by an ESCO, that being the “designed” savings expected from a given retrofit or improvement: lighting being a good example, using pre and post measurement. The second is fairly basic and primitive, and that is bill comparison. This obviously presents a problem if the Unit (site) has a change in building space and/or usage. The target goal for the USCG is to establish a system by which we can create a facility index for each building and/or site, based on square footage and usage type, SIC code.

**Question:** What suggestions would one have for helping a REM avoid performing “personal services?”

**Answer**
Bernie: Start by establishing a scope of work with very specific actions that require deliverable documentation. Once the services are awarded and in place, continually
reinforce the fact that energy services have been procured, and not labor. REM services contractors should be more autonomous than supervised. They should not be sent off to meetings just because Government personnel are not available. The REM services contractor answers to the parent company regarding typical human resource matters, such as leave, time and attendance, performance appraisals, etc. Reinforce with surrounding staff personnel that the REMs are not hired labor. Consider the scope of work when requesting actions from REMs.

**Question:** How are savings from Energy Awareness programs determined?

**Answer**

**Bill:** Analysis of consumption data can be used to determine the effectiveness of an Energy Awareness Campaign for family housing residences, if separately metered consumption data is available. For commercial buildings, without the ability to acquire and analyze consumption data, savings is based on review of savings calculations and assumptions along with observation that actions were implemented.

**David:** They are not measured, at least with the USCG. These again are seen as “collateral” duties for the REM. As with Metering, one could apply the “Hawthorne Affect,” but that again gets into a sticky area.

**Question:** I am interested in those projects that have been successful in reducing water consumption and sewer discharge. What are some of the actions taken by the REM that have resulted in successfully reducing water/sewer consumption at Navy Region Southwest?

**Answer**

**Bernie:** In general, REMs save water and sewer consumption and costs by combining data analysis with knowledge of the buildings and operations of our bases. Some examples:

- REMs use meter data to find undetected leaks inside and around buildings.
- REMs use data to find leaks in irrigation systems, to be corrected through fast payback projects.
- REMs use data to find buildings, processes, and irrigated areas operating outside normal parameters, e.g., being over-watered, water-consuming equipment operating improperly, etc. They investigate to see if the water use is legitimate. If not, they take appropriate corrective action by either notifying building monitors or occupants. One example: REMs detected a leak in a cooling tower at a building through data analysis alone. The leak was undetectable to operators.
- REMs use data and knowledge of buildings to find billing errors, e.g., 95% reduction of an installation water bill due to misallocated line losses, and correction of other invoices.
• REMs are proactive in eliminating one-pass cooling water and other poor practices.

• REMs develop practical, cost-effective water conservation projects, including horizontal axis washers, ultra low flush toilets, waterless urinals, low flow showerheads and faucets, kitchen sprayers, etc.

• REMs develop templates to readily evaluate technologies at bases with different rate structures and rebates.

• REMs provide energy and water awareness training to Building Monitors at least quarterly.

• REMs use innovative methods to help address water conservation problems, e.g., developed financed energy and water project to repair badly leaking swimming pool. REMs facilitate use of reclaimed water for non-potable uses, e.g., dust control, golf course irrigation.

Question: Can (presenter) David Struck elaborate on "Co-Manage" ESPC project?

Answer

David: As a “consultant” I have no real direct control of the ESPC process. However, my roll is to review, analyze and make recommendations to the scope, content and intent of the ESPC. This duty is performed as a “team” member, supporting USCG personnel and the appointed FEMP representative involved in the ESPC process.

Question: What is the typical performance period for each year of REM services? Since the federal government is funded on a yearly basis, to utilize savings to fund the REM, I would think each year of services must be awarded at the end of the fiscal year. Is this correct?

Answer

Bill and David: Yes, typically the contract is for one year, with the option for a fixed number of optional years.

Bernie: The typical period of performance is one year; however, there is no statutory reason for this. Also, we do have contracts which last longer than 12-months, and also extend across fiscal years. We have one contract that has performance dates of April-March. One of the points of confusion with REM services is the thought that we can only procure for the current year; however, since we are purchasing A/E type services, there is not a restriction. Much the same as a design contract, we purchase the services, and the year of execution or year of funds is not limited to current year.

Question: Are there any Key Lessons learned from the REM program?

Answer
Bill: One key lesson learned is finding qualified staff with the ability to interact with installation staff is necessary for a successful REM program. The other lesson is that numerous opportunities exist for identification of savings. Some are obvious, and some come from the lack of time for facility staff to deal with the operational aspects of energy, water, waste water, and recycling activities.

David: Don’t pick up laundry….it raises silly questions. Have a reliable data management system! The USCG had used Faser, but the deployment was not well supported and it became a “garbage-in, garbage-out” issue. VERY important!

Question: Where can I find documented and validated savings generated by REMs for various agencies?

Answer
Bill: Since data is provided to DOE on a volunteer basis only, you would need to contact the various contracting officers in the agencies that have implemented REM programs.

Question: I understand that WSU’s contract with DOE FEMP has not been extended and their support services will be shut down soon. Is that true?

Answer
Bill: FEMP has determined the effort related to past REM activities has been a success, and future activities can be funded directly by agencies or via professional organizations. Therefore, it is appropriate to reduce funding in this area.

WSU Energy Program Staff: The program funding for staff ends on December 31, 2006. We are happy to discuss possible funding sources for this program with anyone who is interested. The REM program website will still be available to viewers, but the newsletter (REM News) and staff support will not.

Question: Who are the POC’s for the Navy, Air Force, and Army REM Programs?

Answer
Bill: While I can’t confirm it, the POC for REM activities within the Air Force would most likely come from staff located within AFCESA located at Tyndall Air Force Base. REM activities within the Army appear to be regionally focused, but under the direction of IMA staff located in Washington, DC. Jim Paton might be a first point of contact. Contracting for a REM at DOD installations can be accomplished via the Army Corps of Engineers located in Huntsville, AL.

Bill: Ed is a good POC for Southwest REM services, as well as myself. For overall Navy REM services, Mr. Jim Heller, at Naval Facilities Engineering Service Center should be contacted at james.heller@navy.mil.

Question: Is it feasible to install meters on existing facilities, or it is a good option for new construction?
**Answer**

**Bill:** On some facilities with defined distribution system and access, it can be done. All new facilities should be constructed so all utility systems have the ability to be metered.

**David:** In regards to “existing” buildings, the USCG has developed a “floor” of utility costs to warrant the deployment of a meter on ANY building, this being about $40K. All new buildings are being planned with sub-meters.

**Question:** If the REM does not recover their salary cost through their energy conservation measures at any given contractual year, would we be refunded any fees for contracting a REM in that year?

**Answer**

**Bill:** That would be spelled out in the contract with the agency.

**David:** The REM is on a “performance based” contract. It is up to the REM and the client agency to determine if the services provided have “value” above and beyond actual “savings” achieved through the program.

**Question:** How does the Navy handle situations where a REM identifies projects that could generate savings, but due to funding constraints, the base doesn't implement the project. Can the REM take credit for the proposed savings?

**Answer**

**Bill:** This is primarily a local policy issue. Unlike an action such as ESPC, which has legislative restrictions, the requirement for a 2:1 payback for REM services is self-imposed. If the REM contractor identifies a legitimate project, with payback that can be calculated, they have accomplished part of their scope of work. If the customer chooses not to do the project, that is another matter. Even if the project is not executed initially, the customer could implement it at a later date. My tendency is to accept a well documented project, because in our experience, our contractors achieve greater than our target of 2:1 payback.

**Question:** Just a comment: There is a lot of discussion about implementation of projects based on funding/investment, but I thought the main point of REMs was to identify low cost/no cost?

**Answer**

**Bill:** The basic structure and funding support for REM activities is the ability to identify and implement (or realize) savings from no-cost/low-cost projects. Therefore, the answer to this question is yes.

**David:** It is a matter of priorities and turning over the right rock. No Cost/Low Cost (NCLC) measures are the pots-of-gold at the end of the rainbow: they exist, but are sometime elusive. When in search of these NCLC measures, the REM will often find
areas of need and potential improvement that are given VERY high priority due to association of mission critical parameters. These measures are not free, but most stand the test of simple pay back (SPB). Those with more attractive SPB ratios will typically get priority funding.

**Question:** Last year we implemented the project of replacing incandescent lights with more efficient fluorescent lighting, but this savings was not observed? What can be done?

**Answer**
**Bill:** If consumption data is measured at the building level, any savings could be masked by higher than anticipated consumption for other end uses. You would need to determine a way to meter the consumption only for the lighting end-use, and then compare to estimated consumption using the standard fixtures.

**David:** Recognize it and move on! Lighting is “the low hanging fruit” and should ALWAYS be recognized as a catalyst for further measures.

**Question:** What actions can be initiated by REM to reduce sewer cost when sewer is not metered and the sewer service provider is different than the water service provider?

**Answer**
**Bill:** The REM would have to first determine the rate schedule for the sewer cost. If it is a fixed rate not dependent on water use, the REM would have to determine the best way to negotiate with the firm or organization that provides the service, based on actual information regarding sewer use.

**David:** Metering domestic water (DW) at point of use (building-by building) OR at the location of NON-DW use is the only way. Sanitation Districts will work with you in agreeing to accept metered data to support a claim that a certain determined amount of water is NOT going down the drain an impacting their sewer facilities.