

SAVEnergy Action Plans: Implementing Audits in Federal Facilities

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ABSTRACT

The Department of Energy's Federal Energy Management Program is charged with implementing key sections of the Energy Policy Act of 1992 and all of the Executive Order 12902, to make the Federal Government operate more energy and water efficient. A congressionally-mandated energy, renewables, and water conservation audit program is one component of this plan. The SAVEnergy Action Plan is designed to help energy managers identify specific energy and water projects and link these projects to appropriate funding mechanisms for implementation. FEMP's SAVEnergy staff has been working with Federal agencies to develop strategies to complete their legislatively-mandated goals, both through FEMP's programs and other programs available to the Federal sector.

INTRODUCTION

The Energy Policy Act of 1992 (EPACT)¹ authorized programs and Congress appropriated funding that significantly impact Federal energy management. A goal of 20% energy reduction from the 1985 baseline by the year 2000 was mandated for all agencies. Building on EPACT, the Executive Order 12902² was signed in March 1994 to give Federal energy managers tools and processes necessary to implement energy efficiency, water conservation and renewable measures. Now energy managers have specific action items and target dates which should enable them to reduce their gross square foot energy consumption 30% by the year 2005, as is required by the Executive Order.³

The following discussion focuses on the provision set forth in EPACT for the establishment of energy audit teams⁴ and the follow-up activities put forth in the Executive Order to audit Federal facilities and implement the recommended projects.⁵ The Department of Energy's Federal Energy Management Program (FEMP) has been tasked to

implement the Federal energy management portion of EPACT and the entire Executive Order.⁶ One program within FEMP, the SAVEnergy Action Plan, has been developed over the last year to support energy managers in meeting their statutory goals through energy, renewables, and water conservation audits.

EXECUTIVE ORDER

While EPACT sets up the mechanism for audit teams, the Executive Order states specific requirements and due dates for completing energy, renewables, and water conservation audits and implementing resulting recommendations.

Completing Audits

Agencies must first perform a prioritization survey of their facilities to identify which sites have the most energy efficiency and water conservation savings potential.⁷ Then, based on the survey results, agencies must audit 10% of their facilities each year until all facilities have been audited. To accomplish this goal, agencies are allowed to use previously conducted audits (within the last three years) and they are asked to develop a ten-year plan outlining the procedure for audits of the remaining facilities.⁸

With FEMP staff facilitating, the Interagency Energy Management Task Force⁹ has assembled numerous working groups, one of which is working to implement the audit and implementation portions of the Executive Order. The working group identifies barriers to completing requirements and makes implementation recommendations first to the entire Task Force, then to the upper management (Assistant Secretary level) interagency committee.¹⁰ The energy audit working group has identified numerous methods to complete energy audits and has supplied this handbook to all agencies.

Implementing Audits

As audits are completed, agencies must begin to implement the energy efficiency and water conservation

recommendations within 180 days of the audit.¹¹ The energy audit working group has established guidelines that agencies can use in developing their 10-year audit and implementation plans so that they can connect these milestones. These guidelines include: how to identify significant energy efficiency and water conservation opportunities, how to self-audit or identify an auditor, and how to acquire project funding. The SAVEnergy Action Plan is one means for the agencies to incorporate all of these ideas.

SAVENERGY ACTION PLANS

The SAVEnergy Action Plan program was developed by FEMP to break the audit paradigm. The majority of audits are conducted by energy service companies or architect and engineer (A&E) firms and presented with an executive summary, lists of recommendations, and detailed engineering and cost calculations. The facility manager must decide when and if to implement the recommendations. The SAVEnergy Action Plans have built a follow-up mechanism into the process.

Audit Protocol

Based for the most part on statutory requirements, the SAVEnergy program has a set protocol to which every audit conducted in the SAVEnergy program must adhere. These requirements include: Federal life cycle costing,¹² maximum 10-year simple payback for projects, renewable energy and water conservation screening, fuel-neutrality, familiarity with funding resources, and the development of a SAVEnergy Action Plan for project implementation. The agency must sign a letter of agreement stating a commitment to completing recommended projects. A savings verification plan must also be developed to help ensure that projected savings are achieved. Thus, the protocol has built into the audit follow-up and success indicator processes.¹³

Project Implementation

The SAVEnergy Action Plan for project implementation is written so that energy managers have all of their potential funding options identified so that project implementation can move forward. For example, if an auditor recommends that a utility demand side management (DSM) program should be used to help fund a lighting retrofit project, the auditor will have all of the required utility forms filled out for the agency representative to sign. Even with very specific guidance on funding options and projects, an agency may have trouble in implementation due to internal barriers.

FEMP has piloted the use of a SAVEnergy Action Team to overcome the various obstacles.¹⁴ The SAVEnergy

Action Plan is presented to this Action Team, composed of operations and maintenance, legal, procurement, construction, and environmental personnel within the facility or agency. This group would then work together to decide how to implement the Action Plan. All departments that would impact project completion would have a "buy-in" and would be included in the process. Once an Action Team is set up and begins implementing projects, that team will move on to additional work within their agency, or even be called upon as a resource for other agencies. Empowering the agencies to solve their internal issues can only increase the effectiveness of the energy management programs at their facilities.

FUNDING SOURCES

With energy budgets under close scrutiny, Federal agencies have been encouraged to leverage funding from as many non-Federal resources as possible. Each SAVEnergy Action Plan is tailored to the expected funding source for projects.

Private Sector

Utility DSM programs and energy service companies (ESCOs)¹⁵ can finance projects for the Federal government that are not able to be funded by an agency. Where a free energy audit is offered by a utility, Agencies are encouraged to take advantage of the service. The audit must be fuel-neutral and should give specific project recommendations. If the audit is not comprehensive or does not meet Federal standards, the SAVEnergy program can complete a comprehensive audit and still recommend the use of any available DSM funds for projects.

Where agencies have no project funds, private sector leveraging is encouraged. When the agency is interested in bringing in an ESCO to fund a project, a SAVEnergy audit will take on the characteristics of a walk-through audit, providing general utility and operational data to enable the facility manager to give consistent information to bidding ESCOs. Recently, due in part to FEMP's emphasis on Energy Savings Performance Contracting (ESPC), Federal agencies have found it easier to make performance contracts effective in the government.

Federal Funds

Agencies who have their own audit and project funds may take advantage of the SAVEnergy comprehensive audit program, with FEMP co-funding the audit. At a minimum, the SAVEnergy program could provide audit protocol and process information to enable the agency to complete its own audit or to help the agency in obtaining a quality audit.

For agencies who have very little of their own funds, but

have identified innovative and high potential projects, FEMP has a grant program, the Federal Energy Efficiency Fund (Fund)¹⁶ which can finance both a comprehensive SAVEnergy audit and project implementation. The Fund is currently available to all agencies except the Department of Defense, Department of Energy, the Veteran's Administration, and the General Services Administration. These agencies receive dedicated appropriations for funding energy projects.

Now that the SAVEnergy Action Plan program has been developed and has started work, the constant quality assurance process is beginning. The goal is that, once a certain number of audits are conducted, agencies will have a better understanding of their facilities, in general, and therefore will be able to transfer completed projects to many other sites. The agencies should also be able to complete audits and facilitate projects much easier with established processes. FEMP wants the SAVEnergy program to serve as a model for Federal energy and water audits, positioning agency audit activities to be self-sustaining and of high quality with private sector delivery.

In part, FEMP's mission is to support the Federal energy manager and to develop programs which will allow the Federal Government to create better energy and water use practices to make energy efficiency and renewables, not subsidized programs, but the way to do business.

ACKNOWLEDGEMENTS

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ENDNOTES

1. The Energy Policy Act of 1992 (EPACT) P.L.102-486.
2. Executive Order 12902—Energy Efficiency and Water Conservation at Federal Facilities, March 10, 1994.
3. Executive Order, Sec. 301, Energy Consumption Reduction Goals.
4. EPACT, Sec. 158(a), Establishment of Energy Audit Teams.
5. Executive Order, Sec. 302, Energy and Water Surveys and Audits, Sec. 303, Implementation of Energy Efficiency and Water Conservation Projects.
6. Executive Order, Sec. 201, Interagency Coordination.
7. Executive Order, Sec. 302(a), Prioritization Survey.
8. Executive Order, Sec. 302(b), Comprehensive Facility Audits.
9. EPACT, Sec. 151(4), Interagency Energy Management Task Force.
10. EPACT, Sec. 151(4), "Task Force," Executive Order, Sec. 201, Interagency Coordination.
11. Executive Order, Sec. 303(a), Implementation of New Audit Recommendations.
12. EPACT, Sec. 544(b), Use of Life Cycle Cost Methods and Procedures.
13. Energy and Water Conservation Action Plan Protocol, FEMP.
14. SAVEnergy Action Team pilot program at Social Security Administration, Baltimore, Maryland.
15. EPACT, Sec. 801(a), ESPC.
16. EPACT, Sec. 546(b)(1), Federal Energy Efficiency Fund.