FEMP Peer Review

Panel Report

September 20-21, 2005

November 4, 2005

Mr. Rick Khan, Program Manager
Federal Energy Management Program
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Khan:

On behalf of my colleagues on the Federal Energy Management Program Peer Review Panel, I am pleased to submit the panel's final report. The panel convened on September 20 and 21, 2005, in Washington, DC, to conduct FEMP's first independent peer review. The review covered subprograms and projects that comprise 90 percent of FEMP's FY 2004 and FY 2005 budget.

The panel appreciated the opportunity to review FEMP's programmatic activities and meet with FEMP headquarters staff, national laboratories staff, and contractors. Our review and deliberations included an assessment of FEMP's:

- Quality of programs and projects
- Productivity
- Accomplishments
- Relevance to accomplishing FEMP's mission and goals
- Relevance to technical and market challenges
- Management

In addition, the panel assessed FEMP's congruence with the mission and goals of the Department of Energy's Office of Energy Efficiency and Renewable Energy. The result of the peer review assessment, along with findings and recommendations, are in the report.

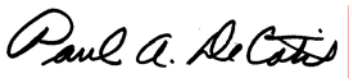
Overall, the 13-member panel determined that FEMP is using program resources wisely, particularly given decreasing financial resources and budgeting uncertainties. In spite of current and future funding issues, FEMP's work continues to be of good quality, addresses important customer needs, and remains unique in its role of serving

Federal agencies and their facilities nationwide. In the report, the panel has provided its recommendations for improving the program. The recommendations are addressed according to:

- FEMP in general
- Cross-cutting issues
- Subprogram and project level issues

Once you and your staff have reviewed the panel's report, I would be pleased to meet with you and your team to discuss the panel's assessment and recommendations in more detail.

Sincerely,



Paul A. DeCotis, Chair
Federal Energy Management Program Peer Review

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EXECUTIVE SUMMARY – PANEL REPORT

INTRODUCTION

This report summarizes the findings of the Federal Energy Management Program (FEMP) Peer Review Panel (herein after referred as the "panel") conducted over a three-day period in September 2005.[1] The panel consisted of 13 individuals possessing a broad range of experience and knowledge covering most of the areas of each program services offered by FEMP.[2] Each of the members contributed to the panel's balance of knowledge, skills, and capabilities. The review covered FEMP generally and individual projects specifically that comprise approximately 90 percent of the FEMP budget. The review covered activities for FY 2005 and included a discussion of activities planned for FY 2006 (with some presentation of FY 2004 activities). The report is organized to address over-arching issues identified by the FEMP Peer Review Panel during a September 20-21, 2005 review of FEMP's major subprograms:

- Planning, Reporting, and Analysis
- Departmental Energy Management Program
- Technical Assistance
- Financing

Charge to the FEMP Peer Review Panel

The panel reviewed FEMP management practices, program activities, and accomplishments in light of established program criteria from the *Office of Energy Efficiency and Renewable Energy (EERE) Peer Review Program Guide*.[3] The panel assessed FEMP's (1) quality of programs and projects, (2) productivity, (3) accomplishments, (4) relevance to accomplishing its mission and goals, (5) relevance to technical and market challenges, and (6) management. Additionally, the panel assessed FEMP's relationship to the Department of Energy (DOE) and EERE missions and goals and the appropriateness of FEMP priorities.

To conduct the review, the panel read FEMP documents and materials provided in advance of the review and heard presentations from FEMP representatives and national laboratory and contractor staff regarding their mission and goals, accomplishments, future plans, challenges, and various aspects of program management. The panel received several other documents from FEMP, including information about its staffing, budget, performance metrics, planning, and program needs. Panel members reviewed and considered all of the materials in writing this report.

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[1] The Peer panel met with FEMP management and staff and contracting and National Laboratory personnel on September 20 and 21 to hear presentations and engage in dialogue about FEMP's strategic focus and operating strategies for fulfilling its mission. Following the two days of meetings with FEMP, the panel met in executive session and conducted a strategic management assessment of FEMP and its four sub- programs: Planning, Reporting, Analysis; the Departmental Energy Management Program; Technical Assistance; and Financing. The agenda and related materials are included in the appendices to this report.

[2] Panel member representation included experts with knowledge and experience in energy policy, energy use and efficiency, environmental technology, energy program deployment, project financing, utility program administration, program management and design, evaluation and metrics, technical assistance and training, and marketing and communications.

[3] U.S. Department of Energy. 2003. Peer Review Program Guide.

STRATEGIC ASSESSMENT – SUMMARY OF PEER REVIEW FINDINGS

Overall, the panel found that FEMP's work is of good quality, addresses important customer needs, and remains unique in its role of serving Federal facilities. FEMP's work is policy relevant and consistent with the mission of DOE and EERE. Moreover, the panel found FEMP staff and national laboratory and contracting personnel generally to be very capable, knowledgeable, and passionate with significant expertise.

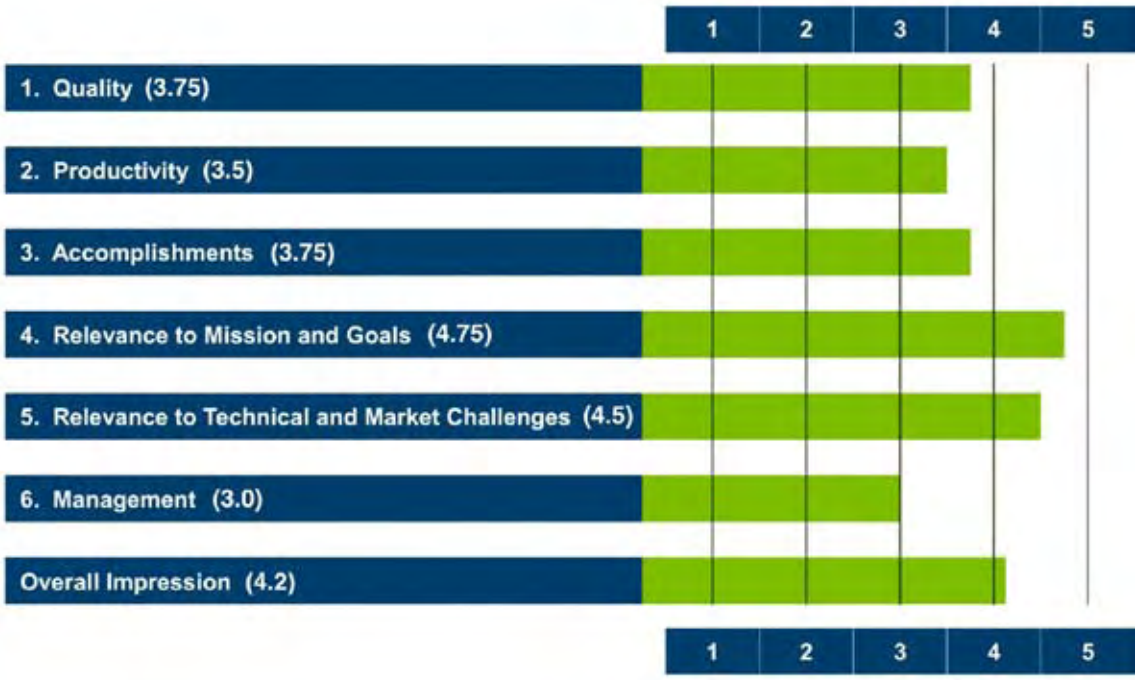
The panel scored FEMP on a scale of 1-5 according to the Review Criteria, as shown in Illustration 1, where 1.0 is very poor and 5.0 is outstanding. Overall, the panel came to view FEMP very favorably, as seen in Illustration 1. Nonetheless, the panel recognized that many opportunities are available to FEMP to strengthen its programs and services, opportunities the panel believes will increase FEMP's efficiency and effectiveness.

Illustration 1 provides the FEMP Peer Review Panel's overall assessment of FEMP, based on the materials presented and the panel's executive session discussions following the September 20-21 review. The numerical results may differ from the temperature charts provided in the appendices because it reflects the numeric scoring and the qualitative assessment of the program.

Quality

The panel found FEMP staff, contractors, and national laboratory staff to be knowledgeable, competent, and well versed in their subject matter. However, limited and continually decreasing financial resources and budgeting

Illustration 1. Peer Panel Ratings of FEMP Performance According to Review Criteria



uncertainties have a negative effect on FEMP planning and program execution. Budgeting uncertainties, in particular, contribute to a sense of futility, resignation, and powerlessness among staff, and, if left unaddressed, can negatively affect future productivity and accomplishments. In spite of financial limitations and uncertainties, the high quality of FEMP staff, contractors, and laboratory personnel allows them to deal with these realities professionally and with great integrity.

If Regional Offices and national laboratory resources were scaled back, FEMP would be challenged to continue delivering its quality programs and would face more risk of not meeting its objectives.

Productivity

The panel found FEMP to be using resources wisely, particularly given decreasing financial resources and budgeting uncertainties. At some point in the near future, the panel believes FEMP will find it necessary to abandon completely or transition out of some of its activities, allowing the program to dedicate limited resources to its mission-critical objectives. Productivity is apparently high for those subprograms and projects within FEMP that have more readily obtainable performance measures. Several projects are not able to generate rigorous, reliable metrics that clearly indicate productivity trends, often because the necessary data are not available or outcomes are difficult to measure. These programs are discussed later in this report, and the panel recommends that more attention be paid to data collection, analysis, management, and reporting. The panel recognizes that FEMP must balance needs for reporting solid results with limited financial resources while, and above all else, remaining dedicated to its mission. But FEMP has not measured successes in some cases where it should. Anecdotal information provided during the review process, including discussions with review participants and customers gave the panel confidence that many FEMP successes are going unreported.

Accomplishments

The panel finds that FEMP is making good progress toward meeting its mission and goals. Nonetheless, as described and recommended below, accomplishments could be greater and more widely reported if FEMP focused its resources more strategically, and if better data collection, analysis, and management protocols were put in place. The panel also found that FEMP relies heavily on the DOE Regional Offices and national laboratories to help implement programs and contribute to accomplishments. If Regional Offices and national laboratory resources were scaled back, FEMP would be challenged to continue delivering its quality programs and would face more risk of not meeting its objectives. Given the enactment of the Energy Policy Act (EPACT) of 2005 and recent supply and price volatility in energy markets, FEMP's role is now more critical than ever. Paradoxically, in EPACT, FEMP is given new responsibilities at the same time that financial resources are being cut and field staff is threatened. Thus, an even more difficult situation is created for FEMP, and fulfillment of its mission will be severely challenged.

Relevance to Mission and Goals

The panel finds FEMP's activities very relevant to accomplishing its mission and goals and those of EERE, DOE, the Administration, and Congress. FEMP is responsible for helping Federal agencies reduce energy use and energy costs by encouraging and supporting investments in energy efficiency, renewable energy technologies, energy use, demand management, contracting, and process im-

provements, yet it has no authority over the energy decisions of Federal agencies. Given the competitive nature of energy markets and the vulnerability of Federal agencies to energy price volatility and strained supplies, FEMP's activities are more critical than ever. However, the panel found that FEMP's mission and objectives are expanding at the same time as resources are decreasing. FEMP's mission is expanding beyond its current capabilities, and mission creep is causing confusion and uncertainty inside FEMP. In addition, the panel found that the myriad of different reporting requirements imposed on FEMP from DOE and by the Administration and Congress is resulting in FEMP being over managed.

The panel finds FEMP's activities very relevant to accomplishing its mission and goals and those of EERE, DOE, the Administration, and Congress.

Relevance to Technical and Market Challenges

FEMP's programs, services, and support activities adequately address technical and market barriers that might inhibit Federal agencies' investments in technologies that could improve energy use and reduce energy costs. In particular, FEMP's Financing and Technical Assistance programs aggressively target known barriers and succeed in creating a distinctive competency within FEMP for helping Federal agencies address their most pressing energy needs.

Management

The panel finds FEMP's subprogram management team (team leaders) to be considerate, passionate about their work, and supportive of staff. The recent turnover and extended vacancies in the FEMP Program Manager position have required FEMP subprogram management to coordinate and plan independently. In the opinion of the panel, this situation has led each FEMP subprogram to operate without central administration and coordination. While it is difficult for the panel to draw hard and fast conclusions regarding the overall impact of this lack of coordination on FEMP, several management-related issues are identified in the subprogram sections of this report that might be directly attributable to this lack of central coordination. The panel believes program management and individual project management across projects is good but uneven. Some projects have excellent project oversight and others having less direct oversight. In either case, these panel observations are not conclusions and determining whether this is an issue with ramifications for FEMP is difficult.

Overall Impression

Overall, the panel finds FEMP staff, programs, and services to be of high quality. FEMP's productivity is generally good but uneven across program functions. In several subprogram areas and projects, productivity is very high while in others productivity is marginal or difficult to determine due to the lack of data, as described below. FEMP's accomplishments are many and varied and consistent with its mission and objectives. Overall, the panel found many significant accomplishments for which FEMP should be very proud. FEMP's programs, services, and activities are extremely relevant to the EERE and DOE mission and to the Administration and Congressional goals. However, the clarity and understanding of its mission and goals within FEMP need reinforcement and strategic prioritization. In addition, FEMP services are targeting technical and market barriers very well, but FEMP's efforts to overcome and work around barriers could be strengthened by linking and mapping specific activities to particular barriers – leading to more effective

program strategies. Given recent vacancies and turnover at senior levels, FEMP management admirably administers its programs. Management has the opportunity to strengthen its vision and strategic processes and better integrate FEMP within EERE and DOE now that the Program Manager's position has been filled.

Recommendations

The panel was impressed with FEMP and its staff and pleased with the progress that FEMP was able to demonstrate toward its goals. Nonetheless, the panel believes that FEMP can take steps to improve productivity and increase its impact despite decreasing financial resources and continuing budget uncertainties. Overarching strategic recommendations are presented below. Specific subprogram and project recommendations are contained in the relevant section discussions included in this report. Overall, the panel recommends that FEMP:

- Clarify its mission and more strategically define its objectives. In addition, FEMP should better communicate its mission and objectives to staff, contractors, and the Federal agencies it serves to make sure that its messages are consistent and understood by all.
- Seek more support and resources from EERE and DOE generally to help it fulfill its mission. FEMP should seek authority commensurate with its responsibilities for the Federal sector's energy use to the extent it is allowed by law. For example, FEMP is responsible for helping agencies reduce energy use and costs, but it has no direct authority over agencies' energy decisions.
- Institute "best practices" training in program and project management and budgeting, improve staff skills and capabilities, and even out the knowledge disparity among staff within FEMP. FEMP should further facilitate knowledge transfer from seasoned and experienced staff to junior staff.
- Improve FEMP's management of relationships with Federal agencies and within EERE and DOE to support more rigorous and consistent data acquisition, analysis, and reporting. This can be accomplished by collecting more data directly from energy services companies serving Federal agencies through the Energy Savings Performance Contracting (ESPC) program.
- Focus the annual awards program on projects with real energy savings and positive outcomes that support improved energy efficiency and renewable energy development – and use this as a calling card for future customers.
- Consider expanding the number of ESPC Alternative Financing Representatives (AFRs) from four – the current program is not sufficient to achieve desired program results.
- Identify opportunities for providing assistance to Federal agencies engaged in new construction and rebuilding efforts in the Gulf Coast and Florida following the extensive damage caused by hurricanes Katrina, Rita, and Wilma.
- Consider adopting a more hands-on project management style to ensure that FEMP staff are more directly involved in projects and rely less on contractors and laboratories for planning and strategy development. These functions should be centralized and the responsibility of FEMP staff.
- Take a broader view of indicators for successful Technical Assistance Program (TAP) project outcomes. Both the Joule and PART metrics are too narrow to capture the richness of TAP initiatives. The panel also urges FEMP to review how the benefit and cost measures reported by TAP

are calculated: there appears to be some degree of misrepresentation of both the benefit and the cost data presented to the panel.

- More strongly support FEMP's core training functions for the energy management program as well as life cycle cost training and data development.
- Consider holding more frequent meetings of the Federal Energy Management Advisory Committee (FEMAC). This group can be used by FEMP management as a sounding board for debating various program strategies and opportunities to expand program and service offerings to Federal agencies. While FEMAC was only briefly discussed during its review, the panel believes greater use can be made of FEMAC.

FEMP Panel Report

INTRODUCTION

This report summarizes the findings of the Federal Energy Management Program (FEMP) Peer Review Panel (hereinafter referred as the "panel") conducted over a three-day period in September 2005.[4] The panel consists of 13 individuals, each possessing a broad range of experience and knowledge, covering most of the program services offered by FEMP.[5] Each of the members contributed to the panel's balance of knowledge, skills, and capabilities. The review covered FEMP generally and included specific individual projects that comprise approximately 90 percent of the FEMP budget. The review covered activities for FY 2004 and FY 2005 and included a discussion of activities planned for FY 2006.

REPORT ORGANIZATION

The report is organized to address overarching issues identified by the FEMP Peer Review Panel during a September 19-20, 2005 review of FEMP's major subprograms:

- Planning, Reporting, and Analysis
- Departmental Energy Management Program
- Technical Assistance
- Financing

The first section of this report addresses cross-cutting issues that were identified by the panel during the peer review process. The panel recommends that these issues should be strengthened or eliminated, depending on the overall effect of each issue on FEMP's ability to serve customer needs and accomplish its mission. The second section of the report provides an assessment of FEMP's main subprograms based on the FEMP Peer Review evaluation criteria, which were established in advance of the peer review in accordance with DOE/EERE guidance. This section address the four FEMP subprograms according to the presentations made to the Peer Review subpanel:

- Subpanel 1: Planning, Reporting and Analysis
  Departmental Energy Management Program
- Subpanel 2: Technical Assistance
- Subpanel 3: Financing

The third section of the report provides a discussion of the panel's findings and conclusions. The Appendices includes additional discussions on the Planning, Reporting, and Analysis and Departmental Energy Management Program subprograms too lengthy to be included in the main report, and the meeting agenda. The Appendices also include FEMP Peer Review Panel member and presenter

[4] The Peer panel met with FEMP management and staff and contracting and National Laboratory personnel on September 20 and 21 to hear presentations and engage in dialogue about FEMP's strategic focus and operating strategies for fulfilling its mission. Following the two days of meetings with FEMP, the panel met in executive session and conducted a strategic management assessment of FEMP and its three main programs: Planning, Reporting, Analysis; the Departmental Energy Management Program; Technical Assistance; and Financing. The agenda and related materials are included in the appendices to this report.

[5] Panel member representation included experts with knowledge and experience in energy policy; energy use and efficiency; environmental technology; energy program deployment; project financing; utility program administration; program management and design; evaluation and metrics; technical assistance and training; and marketing and communications.

biographies, "temperature charts" summarizing panel member evaluation results, project summaries of activities reviewed by the panel, and other items prepared for the review process.

CROSS-CUTTING ISSUES

The panel recognizes that FEMP has achieved laudable successes, despite many external limitations. Limitations identified by the panel include: the myriad responsibilities imposed on FEMP via Congressional and Executive Authority, which create confusion in FEMP management and staff inhibiting their understanding of its mission and goals. For example, FEMP has no authority over other agencies' energy management decisions, yet a recent GAO report appeared to make FEMP directly responsible for agencies' energy savings, exacerbating staff confusion. Energy expenditures comprise a small percent of an agency's annual budget and receive little attention despite Presidential directives and Congressional mandates to reduce energy use in the Federal sector. The delay in Congressional reauthorization of the ESPC program for 14 months in FY 2004 contributed to an already difficult situation. Programs and projects cannot be started and stopped easily without a negative effect on the staff managing the activities. Such delays create uncertainty for customers in the process of negotiating contracts, negatively affecting future projects. While FEMP is working to streamline alternative finance timelines and make the most of limited resources, EPACT 2005 has added new goals for agencies to install and purchase renewable energy technologies and added new responsibilities for FEMP.

FEMP has no authority over other agencies' energy management decisions, yet a recent GAO report appeared to make FEMP directly responsible for agencies' energy savings, exacerbating staff confusion.

Strategy and Planning

The opportunity for DOE to use and rely on FEMP appears to be untapped, perhaps due to the lack of stable leadership within FEMP and the lack of a solid reporting and supporting relationships between FEMP and EERE/DOE. FEMP does not appear to receive interest, policy support, or resources from its supervisory division, EERE. The roles of FEMP's top leadership are largely undefined, likely due to the lengthy delay in appointing a new ProgramManager. The new Program Manager appeared to the panel to be relatively unknown within FEMP because he recently joined the program. He indicated that he is interested and open to receiving guidance and suggestions from this review. The limited period covered by the study (FY 2005 and FY 2006) for the Peer Review was only sufficient to identify program activities that need attention and opportunities. The panel hopes that the new Program Manager will provide specific, concrete direction in the areas of strategy, prioritization, benchmarking, and performance management. Finally, the panel learned that 70 percent of Federal energy use is within the Department of Defense (DOD), which maintains its own energy management and reduction infrastructure. However, by virtue of FEMP's valuable staff and tools, and its activities in support of DOD, FEMP appears to be serving these high-priority facilities well. This focus most likely produces high benefit-cost ratios, but may limit participation by non-defense agencies in FEMP's programs.

Performance Gap

The panel identified significant differences between stated goals and expected performance, partly explained by reductions in FEMP funding. A performance gap is therefore created – making it increasingly difficult for FEMP to realize its goals. The panel recommends that to achieve current program goals, funding should be increased; if funding is not increased, goals should be revised to better reflect funding levels. Given the stated intent of decreasing the role and use of national laboratories and DOE Regional Offices, which FEMP now appears heavily reliant upon to deliver services, the performance gap can be expected to increase. FEMP and DOE should consider implementing new program strategies or realigning programs to deliver services without support of the national laboratories and DOE Regional Offices.

Inter- and Intra- Agency Collaboration

Collaboration appears uneven across programs and among staff. Some FEMP programs and managers work well with others programs and staff within and outside of FEMP, while others do not, indicating a lack of strategic focus and prioritization. However, an opportunity is available to streamline program offerings and better serve customers by coordinating and collapsing services. For example, the ESPC program and DUMP can be jointly offered – providing agencies with rate analysis, sub-metering, negotiated utility rates, and Energy Savings Performance Contracting one time, "one stop shopping" and to maximize and leverage opportunities.

Benchmarking

Because FEMP does not maintain an established, rigorous benchmarking process for its programs, ad hoc benchmarking appears to be applied unevenly among programs. Alternatively, the ESPC program is an example of a program with a clearly defined vision and good performance metrics.

The DEMP and Departmental Utility Management Program organizations are extremely effective in producing measurable cost savings within the Federal Government. They enjoy strong project management and reporting skills while staying focused on the bottom line.

Summary of Strategic Assessment

The panel conducted a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis in order to assess FEMP's management and strategic focus. The SWOT analysis results are reported in Illustration 2. Overall, FEMP management appears to be well aware of its organizational strengths and engages in activities to turn these strengths into distinctive competencies. For example, the ESPC and Utility Energy Services (UES) programs are two excellent examples where FEMP has positioned itself as an industry leader. FEMP has served as the catalyst for creating these services, bringing them competitively to the Federal sector and is recognized by Federal agencies and the private sector.

SUBPANEL1: PLANNING, REPORTING, ANALYSIS AND DEPARTMENTAL ENERGY MANAGEMENT PROGRAM

Overview

Within the Planning, Reporting, Analysis and DEMP subprograms, information supply is very strong, but significant attention should be given to multi-year planning, assessment tools, and data and reporting.

FEMP clearly guides other agencies' energy management initiatives and has successfully removed and avoided duplication of efforts among agencies. FEMP's

Illustration 2. Federal Energy Management Program — Peer Review SWOT Analysis

STRENGTHS[1]
(Specific to Program Area)

Financial Program

- Procurement appears to be more flexible in FEMP than in other Federal agencies
- Exceptional on-the-ground field support is an advantage
- Ability and innovation in leveraging other funds (e.g., DEMP Utility Program)
- The establishment of standardized tools for other programs (agencies) to use
- Early progress in capturing useful results and data
- Demonstrated good customer relationships with agencies

Planning, Reporting & Analysis and DEMP & DEMP Utility (DUMP) Programs

- DEMP / Utility
- Utility rate intervention activities
- Technical and historical energy efficiency knowledge of staff and contractors
- Data collection process
- Outreach and website tools and processes
- The role of coordinating Interagency interactions

Technical Assistance Program

- High caliber and professionalism of staff; expert teaming approach to delivery; commitment and cohesiveness of some teams; beating the system, i.e., staying on task under changing organizational conditions
- Ability to use a number (wide-range) of information dissemination techniques
- Creative partnerships with others in delivering services
- Effective training that reaches a large number of people (6,000)
- Knowing who to go to, to get things done within FEMP and outside of the group, i.e., ability to connect
- Value of the laboratories in technical arena

[1] Overarching observations regarding FEMP strengths include: an observed spirit of entrepreneurship despite the many challenges faced by the program; high creativity of staff in spite of budget cuts and insufficient funding to meet its mission; recognition of the leadership within FEMP that helped to standardize practices and policies in customer agencies that have been implemented and adopted.

NOTE: Underlined text indicates key issues identified by the panel.

role as chair of the Interagency Energy Task Force allows FEMP staff to review other agencies' efforts, develop consistent outreach, and raise discussions of competing and conflicting efforts. FEMP also does an exceptional job of outreach. Its website is relied upon. Workshops are attended by the right audiences and are providing needed information. The panel found some ways to reduce costs and increase the effectiveness of activities. For example, FEMP could save money by putting "You Have the Power" material on CDs and on its website rather than printing paper copies. With respect to outreach, senior management should increase

Illustration 2. Federal Energy Management Program — Peer Review SWOT Analysis (cont.)

WEAKNESSES
(General)

- **Inadequate resources**
- **Gap in knowledge transfer**
- **Instability in senior leadership and program commitment**
- **Organizational instability**
- Lack of adequate benchmarking, both internally and externally
- **General lack of sufficient quality data, particularly acute for some projects**
- **Insufficiently developed partnerships (not maximized)**
- Lack of explicit authority over agencies' energy use
- Perceived lack of champions within senior official levels within EERE and DOE
- **Lack of clear mission: e.g., FEMP's mission is growing without clear expectations on deliverables**
- "Leading by Example" fosters mission creep; too vague – causing confusion within FEMP and creep in roles, responsibilities, and priorities
- **The presumed mission vs. actual mission – some observed Misunderstanding with a negative effect on project implementation**
- FEMP is a deployment organization with no apparent goal of transforming agencies and markets in support of higher levels of energy efficiency
- General passivity of management – no clear directive or guided leadership – Perhaps due to instability in leadership or lack of concrete support of EERE and DOE
- Too much reliance on national laboratories and consultants: in many cases, the knowledge exists within the national laboratories and not within FEMP
- **Culture issue: resignation, don't make waves, futility**
- Lack of clear and concise strategy / strategic vision / planning / prioritization of tasks and projects
- Lack of recognition of FEMP employees: little to no recognition of the employee's creativity/work on a day-to-day basis (FEMP)
- Employees parse themselves out; many employees wear many hats
- **14-month break in ESPC authorization**

the recognition of award winners with award ceremonies that are meaningful to the participants.

The DEMP and Departmental Utility Management Program organizations are extremely effective in producing measurable cost savings within the Federal Government. They enjoy strong project management and reporting skills while staying focused on the bottom line. Customer relationships are so strong that two customers attended the Peer Review to support the programs. Staff performance is extraordinary given in-house and facility-based cutbacks. Much larger structural issues, such as conflicting funding paths, inhibit DEMP/FEMP coordination. For example,

Illustration 2. Federal Energy Management Program — Peer Review SWOT Analysis (cont.)

OPPORTUNITIES (General)	THREATS (General)
• **EPACT '05 – provides clear targets and annual energy savings reduction goals** • Further advance goals via outreach – being proactive to help the military address energy security directives • **Address high energy prices and price volatility (particularly petroleum products and natural gas)** • More partnering and cost sharing with States • Assisting states in meeting renewable portfolio standards (Regional Offices know about these and have connections with these States) • Federal bureaucracy pushes agencies to FEMP tools • **A more supportive Administration given the current and possible longer-term high energy costs and need to reduce agency spending** • Partnership – leverage for training, materials, and technical support • Climate change – to bring clean energy technologies to Federal agencies, supporting the President's clean technologies initiatives • **Use of smart technologies in metering; FEMP products** • Ability to delivery E-training • Understanding the market and potential opportunities - to market FEMP services; focus on technology opportunities; analysis and priorities – the opportunity is in EPACT; investment opportunities • Consolidate common tasks across subprogram; training, ESPC / EUSPC • Internal evaluation / program assessment	• **Mission Creep (Conflicting mission statements and different Executive Order and Congressional directives and goals)** • **Lack of sufficient funding, particularly given the charge to FEMP and the expectations placed upon FEMP** • **Increasing disconnect between who FEMP connects with due to increasing outsourcing** • **Changing and often confusing metrics imposed upon FEMP** • Somewhat confusing Congressional Authority given FEMP's responsibilities • Loss of energy managers at Federal agencies and lack of agency commitment • Risk of DOE Regional Offices closing, as FEMP relies heavily on Regional Offices in service delivery • Congress cutting back on funding for national laboratories that FEMP relies upon for program implementation and service delivery • Lack of interest, accountability from Federal agencies • **Loss of FEMP core competency with potential loss of national laboratories** • **Competing with other agency missions** • Uncertainty associated with new FEMP Leadership – it is unclear as of this writing where FEMP management is headed and what management's goals are

promotion of performance contracts engenders a conflict of interest for the programs. DEMP uses them for reduction of energy costs (not necessarily for energy use), while FEMP emphasizes energy efficiency rather than reductions in energy bills.

Nevertheless, DEMP staff should coordinate better with the FEMP Marketing Group and the Interagency Coordination Program to market their services more efficiently and promote their many successes.

Quality

Through the Interagency Coordination project, FEMP's coordination of the Interagency Energy Management Task Force connects FEMP directly to senior officials at other agencies. This approach effectively curtails competition and conflict of information. In FEMP's current survey of website visitors, 75 percent find the site easy to access and a primary source of Federal energy management news and issues. DEMP staff and contractors are highly knowledgeable, technically competent, and have strong relationships that allow them to accomplish significant savings for DOE at minimal program costs.

DEMP's quality is also excellent. Management is extremely "customer" focused and has been highly successful in meeting DEMP's goals. Staff and contractors are highly knowledgeable, technically competent, and have strong relationships that allow them to accomplish significant savings for DOE at minimal program costs.

Productivity

Clearly, FEMP's Interagency Coordination project is highly productive and has enjoyed many achievements. Currently, 21 Federal agencies are participating in the You Have the Power campaign. Moreover, while the Interagency Task Force committee does not meet six times a year as claimed, interagency meetings that occur three to four times a year are very valuable. With respect to general outreach, FEMP's annual energy workshop and exposition typically attracts more than 1,200 energy professionals from among its stakeholders: Federal procurement, energy, and facility managers; utilities; energy service companies; and vendors. The website, redesigned in October 2004, contains 3,100 documents and has been visited almost 350,000 times in the one year since its redesign even though reauthorization of the Federal Energy Savings Performance Contracting program was pending before Congress for 14 months and no new projects were initiated.

Accomplishments

Interagency Coordination, Outreach, and DEMP all show clear accomplishments. FEMP's participation in the Interagency Energy Task Force ensures that other agencies obtain critical, consistent guidance documents, verified energy savings credits, and clear policies and procedures. In the August 2005 task force meeting notes, the interagency group was ranked as one of the top three most valuable programs offered by FEMP services. FEMP's role as task force Chair kept the suspension of the ESPC at the forefront of group discussion and ultimately helped persuade Congress to reinstate the financing mechanism. In addition, the Interagency Sustainable Design Working Group is working with agencies to pursue high performance sustainable building construction guidelines. With respect to outreach, FEMP's website consistently ranks in the top five by major search engines. Over 50 percent of visitors to the website disclose that they are repeat visitors, and over 50 percent visit more than once (daily, weekly, and monthly).

That DEMP's accomplishments are less distinctive than the other projects is understandable given its role within DOE. Of over 50 facility sites, only 15 have active Energy Management programs. Over the last several years, DOE has lost the majority of its energy

managers. Almost all of the Facility Managers at these sites are contractors and not Federal employees, and energy management is a tiny fraction of their performance responsibilities. At the same time, DEMP staff was reduced to two.

Relevance to Mission and Goals

For the most part, the activities of the Planning and Reporting program are directly relevant to FEMP's mission and goals. All efforts under FEMP's Interagency Coordination activities and its general outreach activities are directly related to its mission and goals. To the extent interagency coordination of the task force is doing what it is mandated to do, it is performing effectively in coordinating energy management efforts and policy among Federal agencies, sharing lessons learned, and coordinating technical resources.

Better coordination within EERE and DOE is needed and FEMP leadership must champion this effort beginning with revisiting FEMP's multi-year strategic plan.

However, the organizational structure and mission goals for FEMP, DEMP, and DEMP's Utility Management Program are not cohesive. While FEMP measures achievements in energy saved and energy costs avoided, DEMP measures of success all relate to reducing energy costs. While DEMP and the Utility Management Program have contributed tremendous cost savings to DOE, they are obviously not as focused on energy efficiency and procurement of renewable energy. DEMP does utilize energy efficiency and new technology to the best of its ability in producing cost savings.

Relevance to Technical and Market Challenges

Overall, the activities of the Planning, Reporting, Analysis, and Departmental Energy Management Program appear relevant to addressing technical and market challenges. Focus is good and information obtained from customers attending the Peer Review support this finding.

Management

The Peer Review Panel found several areas where management's attention is needed to support integrated program planning and quantitative analysis. Now that leadership positions within FEMP are filled, an opportunity exists for the FEMP Program Manager and team leaders to put their mark on FEMP – creating strategic capability and following through on commitments to customers, the Congress, and the Administration. Better coordination within EERE and DOE is needed and FEMP leadership must champion this effort beginning with revisiting FEMP's multi-year strategic plan.

Regarding management of outreach efforts, several presenters reported that they had recognized the failures of the previous website and had redesigned it. Prior to the site's redesign, information was hosted on five different servers, and many sections were outdated. Interest in the current website demonstrates that the redesign worked.

Nevertheless, three strategic issues in particular should be addressed, including: (1) the weakness of FEMP's multi-year plan, (2) weak Program Assessment Rating Tools, and (3) inadequate data and reporting. These are addressed below.

- Multi-Year Plan

Overall, based on the review, the panel believes that serious priority attention must to be given to FEMP's planning and analysis activities, especially its multi-year planning process (MYP). The panel considers strategic planning extremely important and highly relevant to FEMP's mission and goals, yet the panel found the current FEMP MYP process

cumbersome, over-managed, and difficult to comprehend.

An effective MYP should articulate FEMP's program vision, provide a strategic blueprint to achieve that vision, and identify specific program priorities. The current MYP process appears to lack these elements and, in particular, provides little sense of program priorities. The current MYP planning process seems driven almost entirely by budget considerations dictated from above, with little appreciation for the responsibilities of FEMP. A long-term strategic plan should contain specific program milestones and should identify specific resource requirements necessary to meet these milestones. A long-term strategic plan also requires the support and active involvement of senior DOE officials.

- Program Assessment Rating Tool

The value of a metric, indeed the value of any program assessment tool, is directly related to the clarity of the program's strategic goals. Metrics can be invaluable tools for measuring progress toward goal achievement and should not substitute for having a vision and a strategic plan. This distinction is not always clear, probably because the MYP does not provide a clear set of goals and a strategic blueprint. FEMP's inability to assess its progress is compounded by changing metrics. FEMP uses the Office of Management and Budget (OMB) directed Program Assessment Rating Tool (PART) which uses a specific set of metrics to evaluate program performance. These metrics appear to include progress towards the agencies' 35 percent energy reduction goal contained in Executive Order 13123 and an evaluation of annual lifecycle energy savings from FEMP's Technical Assistance and Project Financing programs. Internally, in preparing its budget requests, DOE uses "Joule" metrics that rely heavily on project investment, the number of technical assistance projects, and the number of people trained. The panel was informed that for FY 2007, FEMP would be using both PART metrics and some elements of "Joule" metrics to evaluate budget requests and program performance.

While the panel cannot recommend the most appropriate metrics that could be used for assessing program performance within FEMP, the panel does believe that clarity, consistency, and certainty are critical. The recent change in metrics is suggestive of the general lack of clarity, vision, and predictability that are having a detrimental effect on FEMP.

- Data and Reporting

FEMP is responsible for collecting and maintaining the database of energy used by Federal agencies and for assisting Federal energy managers with their annual reporting. This database is the only mechanism available for quantifying the Federal Government's progress towards achieving the energy use, efficiency, and renewable energy goals established by the Congress and the President. Considering the limited funds available for this activity, FEMP is doing a very good job. The overall quality of FEMP work is high. FEMP staff deserve credit for the creative approaches they have developed to collect data and to maintain the overall quality of reporting. Constant attention must be given to improving the quality of the data since the data are critical to the program's planning and strategic goals. Greater standardization and consistency of data would strengthen FEMP's database and its uses. Reports, however, could be timelier. The internal DOE concurrence process appears cumbersome, forcing FEMP to split its consolidated annual report into two pieces: the Agency Scorecard and the Annual Report to Congress.

The Energy Scorecard is a useful tool for measuring an agency's progress and is the only tool by which agencies can be held accountable for meeting energy use, efficiency, and renewable energy goals. However, the term "Scorecard" is something of a misnomer since an agency does not actually receive a numerical score for its overall performance.

Overall Impressions and Recommendations

- Strategic planning is extremely important to the success of FEMP. Senior management within DOE and FEMP should be more actively involved in FEMP's planning and analysis activities.
- The FEMP planning process should articulate a clear vision of the Program's long-term goals. The current planning process requires thoughtful revision. The goal should be development of a long-term strategic plan that contains specific program milestones and identifies specific resource requirements.
- Metrics can be a valuable tool for assessing FEMP's progress towards attainment of its program objectives. Recently, however, the application of metrics as an assessment tool has suffered from a lack of clarity and consistency. Metrics cannot and should not substitute for having a vision and a strategic plan.
- Considering its limited resources and authority, FEMP has done a good job in collecting data on energy use by Federal agencies. FEMP staff has been creative in developing approaches to collecting data and maintaining the overall quality of reports.
- The current reporting system would be strengthened significantly if FEMP were given clearer authority to obtain energy data from Federal agencies and if these agencies were provided the resources necessary to install data collection equipment, e.g., individual meters, and to employ "energy managers." The lack of such authority and resources suggests that energy management is not a high priority within the Federal Government as it should to "lead by example."
- The Energy Scorecard is a useful tool (and apparently the only tool) for measuring an agency's progress and holding it accountable for meeting energy use, efficiency, and renewable energy goals. However, it is not being used powerfully enough to encourage greater energy conservation in the Federal sector.

SUBPANEL 2: TECHNICAL ASSISTANCE

Overview

The FEMP Technical Assistance Program (TAP) is designed to (1) fill the gap between declining appropriations and the increasing funding needed to support energy efficiency goals, (2) provide technical knowledge, expertise, and resources in order to achieve the best design and best practices related to energy efficiency and renewable energy, and (3) provide an efficient central financing and knowledge resource for Federal agencies' energy activities.

TAP encompasses a wide variety of projects supporting numerous technologies and constituents. Projects are grouped into various topics, including:

- Technical assistance
- Sustainable buildings
- Labs21 to improve energy efficiency in Federal laboratories
- Training
- Building Life Cycle Costing
- Renewable energy
- Operation and Maintenance
- Commissioning
- Facility and Industrial Assessments
- Energy efficient Federal procurement
- Emerging/New Technologies Initiatives

These programs help achieve quarterly and

annual energy reduction targets and help expand the market for new energy efficient technologies. Information dissemination is a central focus of TAP.

Overall, the panel was impressed by the quality and quantity of activities supported by TAP. However, some issues stand out as potential problems and concerns. The next section provides an assessment of the Program along with assessments related to individual Review Criteria.

Quality

Two forms of "quality" emerged in our review of TAP programs: (1) quality performance as demonstrated in the outcomes of TAP projects (also addressed in "accomplishments" below) and (2) quality assurance. The panel heard from eleven project leaders and their support staff. The overall quality for TAP was very high.

However, because the panel was not in a position to hear from the "customers" of these programs, fully assessing "quality" and "value" as perceived by TAP clients was difficult. That is, while the panel scored the TAP highly, this was largely a measure of whether TAP projects met their stated goals. For the most part, the panel was unable to address the quality of the process from the perspective of the customer (i.e., other Federal agencies).

The panel did recognize a seemingly high desire for quality assurance from project leaders and their support staff. This high level of quality assurance appears to have emerged organically from the passion and seriousness that DOE personnel and support staff apply to their individual program functions. However, no evidence was presented that senior management was instituting an overall program of "quality assurance" that addresses customers' perspectives. FEMP should undertake some level of quality training for project managers and senior management to outline a more systemic approach to quality assurance.

Productivity

TAP efforts produce a prodigious amount of outreach each year. Primary products are the Labs21 conferences, the Best Practices O&M manual, the Energy Efficient Federal Procurement online products catalog, and 4,000 energy management trainees per year.

Accomplishments

TAP initiatives within FEMP all demonstrate notable qualitative accomplishments and good potential for replicability. Measurable impacts in terms of actual energy saved and the cost-effectiveness of TAP are more difficult to determine, often because the thrust of project activities is toward training and information dissemination. Examples of hard-to-measure but worthwhile efforts include the Labs 21 conferences, the Best Practices O&M manual, and the Energy Efficient Federal Procurement online products catalog. Also laudable is the yeoman work of educating energy managers in the Federal sector: more than 4,000 individuals per year go through FEMP's energy management training program.

Several TAP successes over the past few years shine. The creativity and energy exhibited by TAP staff and contractors on these activities are well worth modeling across FEMP. First, both the Labs21 and the Best Practices O&M projects identified markets with a large potential for energy savings within Federal facilities. Both programs also demonstrate market savvy in terms of reaching clients with valuable information about energy conservation and efficiency. The O&M program also won a national award for its website and information products. Second, the Renewables Program is fulfilling a crucial role in helping the Federal sector meet its renewable energy targets through green power procurements and clear guidance for entering into green power contracts. Finally, the Sustainable Buildings program was able to success-

fully negotiate an OMB requirement that new Federal construction and major retrofits be sustainable designs as a matter of course rather than exception and that justifications must be presented when designs are not green.

The panel urges both FEMP and TAP management to take a broader view of indicators for successful TAP project outcomes. In the panel's view, the Joule and PART metrics are far too narrow to capture the richness of TAP initiatives. The panel also urges both FEMP and TAP management to carefully review how the cost-benefit measures that TAP reports are calculated: there appears to be some degree of misrepresentation of both benefit and cost data in these calculations.

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Relevance to Mission and Goals

Very simply, all but one of the TAP initiatives reviewed were considered highly central to either FEMP's official mission or those responsibilities mandated through separate Congressional legislation and executive orders. The exception is the Emerging Technologies program, which fits more closely to EERE's mission of "leading by example." As explained above, the peer panelists believe the "leading by example" concept represents a degree of mission creep that distracts FEMP from its central goals.

The panel's principal concern is that, because of budget constraints, core FEMP/TAP missions are being severely compromised. In particular, the Training Program and Life Cycle Cost (LCC) materials are absolutely essential to building and maintaining human capital in the Federal sector as it pertains to energy management. In addition, LCC is the Congressionally required method for determining the economic benefits of energy investments. FEMP appears to be rapidly losing its ability to provide high quality LCC training and accurate life cycle cost metrics for the Federal sector. In addition, although FEMP should not be in the business of actually conducting facilities audits, it does have a role to play in providing guidance to facilities (similar to the "Guide to Buying Green Power") on how to contract with the private sector for such audits. As a consequence, the panel strongly advises FEMP and TAP management to review the budgets for the training, LCC, and facilities assessment programs.

Relevance to Technical and Market Challenges

Within the individual projects, a number of outstanding examples of relevance and ingenuity stand out. Some anomalies deserve further examination. Operations and Maintenance, Commissioning, Training, and Building Life-Cycle Costing are all truly outstanding examples of programs with high technical and market relevance. Sustainable Buildings/New Construction, Labs21, and Energy Efficient Federal Procurement are also fine examples. The percentage of programs within the overall FEMP portfolio receiving high ratings for relevance is impressive.

Some concerns arose with respect to Facility Assessments and Industrial Assessments. While the services offered are highly relevant to the needs of the facilities served, that this is a strategic activity for FEMP is not clear. The questions of what alternative services are available (from utilities and other providers) and why FEMP should provide direct services were not clearly answered. Also unclear is why FEMP chose to provide services rather than train staff from facilities to procure the best possible services from other sources.

The panel was very concerned about FEMP's financial support for Building Life-Cycle Costing. The tools developed underlie much of what FEMP does and are not just relevant, but essential. Yet resources are not available to keep these tools and necessary supporting materials up to date and readily accessible. The mismatch of value and resources was striking.

Management

At the project level, for the most part, the panel witnessed motivated project managers providing the initiative to move their projects in new directions depending on market and technical conditions. The panel also saw managers apply creative efforts to overcome resource limitations. However, the panel noted a disconnect between FEMP senior management and management at the project level. In our view, top management lacks an overall strategic vision. A collective strategic vision for FEMP is critical and will help bridge the divide that seems apparent between project and senior management.

Overall Impressions and Recommendations

Despite some concerns stated below, the panel finds that the TAP programs are generally strong performers. The panel affirmed the crucial role that TAP plays in promoting energy efficiency and renewable energy in Federal facilities. The panel also recognized the many spillover effects that result from the knowledge, networks, and information dissemination created by TAP. The panel noted especially the wide range of information products produced by TAP including guidebooks, case studies, and technical fact sheets. Many project managers displayed good technical knowledge and great passion for their work and also inspired the panel. Moreover, the work the national laboratories conduct in supporting TAP is, for the most part, exceptional. The laboratories represent a national resource that should be protected and enhanced.

Even given this very positive review, the panel is concerned with several important issues. First, resource constraints are clearly restricting the ability of projects to fully develop and expand. Although projects consistently demonstrate positive outcomes, these projects are still starved for basic funding.

Second, the dependency of TAP on national laboratories and outside contractors may not be healthy for the long term sustainability of these programs. The panel believes that more personnel and technical knowledge needs to be institutionalized at FEMP within DOE, requiring additional full-time positions within FEMP.

Third, the management style observed at TAP may inhibit creativity and innovation in FEMP's programs. Projects seem to be driven by metrics that do not apply to the types of projects being funded. For example, attempting to measure the value of "information dissemination" through a conjured metric is not only not valuable, but perhaps destructive. The panel believes that top-down management and the emphasis on inappropriate metrics have created an environment that does not foster creativity or innovation.

SUBPANEL 3: FINANCING

Overview

FEMP operates two financing projects: (1) Energy Savings Performance Contracts (ESPCs) and (2) Utility Energy Service Contracts (UESCs). Both products provide alternative financing vehicles to facilities, with ESPCs performed by energy service companies and UESCs performed by utilities. Overall, in spite of numerous external barriers beyond FEMP's control, FEMP staff was able to demonstrate laudable successes in both project

areas. However, the successes are more often qualitative and anecdotal.

Alternative financing is regarded with some skepticism because it contradicts the Federal contracting officer training principle that agencies cannot spend money they do not have. FEMP appears to have more authority that it really does. The ESPC umbrella Indefinite Delivery Indefinite Quantity (IDIQ) contracting vehicle is between FEMP and the energy service companies (ESCOs) and not with the agency implementing the project, lending FEMP the appearance of authority. Yet FEMP has historically delegated ordering authority to agencies and is not a party to the delivery order that directs the work. The ESPC Project Facilitator has very little authority to control or reject suboptimal projects and can only advise the agency. Congress has also severely impeded FEMP. GAO faulted FEMP's ESPC performance data because it consisted solely of paper audits without site confirmation, while FEMP travel budgets were being cut. Most importantly, Congress failed to reauthorize the Federal Government's use of the ESPC, resulting in a 14-month lack of authority for agencies to finance projects with the alternative financing mechanism. While staff were able to restart the program and are now working to halve contracting timelines, EPACT 2005 added new requirements for FEMP to address renewable energy and other responsibilities.

FEMP's alternative financing staff and contractors produce a range of excellent achievements. Although the data are incomplete and the projects are few, they are excellent models for broader replication.

Nevertheless, FEMP's alternative financing staff and contractors produce a range of excellent achievements. Although the data are incomplete and the projects are few, they are excellent models for broader replication. The ESPC and utility projects demonstrate both energy and energy cost savings. Projects generally exhibit excellent quality in staff and tools and high productivity. In the view of this panel a startling outcome, given the lack of ESPC authority for 14 months. Creative approaches to identifying new resources have leveraged $100 million in investments from the $1 million utility program. ESPC staff has persuaded other agencies to standardize and align their own competing tools and processes with FEMP's model or to simply use FEMP's umbrella contract. Department of Defense (DOD) facilities are seeking out FEMP services and tools and are becoming an increasingly larger proportion of FEMP's clients. Although more needs to be done, staff has worked hard to improve prior weaknesses in monitoring, verification, and data collection. Finally, despite some perceived management weaknesses, staff and contractors work ardently and effectively to create successes and often lead strategy.

The panel perceived an imbalance of resources and quality between alternative finance's two main projects. ESPC, the flagship project, with the bulk of resources, could do more to improve the quality of staff skills and abilities as well as demonstrable accomplishments. The Utility project, using one-third the resources, has been able to demonstrate greater inventiveness, create better tools, and achieve surprising accomplishments despite a limited market.

The panel had difficulty reviewing the Energy Savings Performance Contract project due to the 14-month project lapse that contributed insufficient data and information for the project. In many respects, the project could be considered only one year old because:

- No alternative finance representatives existed until 2002
- A technology-specific financing guidance on combined heat and power (CHP) was

only introduced in 2003 and the renewable technologies component was introduced to the ESPC services in 2005

- ESPC IDIQ reforms were not instituted until FY 2005 to include new quality assurance functions
- Significantly increased emphasis on measurement and verification (M&V) began in FY 2004
- ESPC core teams were introduced beginning in FY 2005
- The ESPC Steering Committee was established in 2004
- The Federal ESPC project was pending reauthorization for 14 months throughout 2003 and 2004

Quality

The FEMP Financing subprogram and project staff and contractors appear very knowledgeable and capable. Staff and contractors are technically competent, well-organized, entrepreneurial, and innovative, whereas FEMP ESPC management is missing an opportunity to demonstrate clear leadership. The high quality of the ESPC Project Facilitators is due to the range of their responsibilities, clear dedication, and nimble thinking. Facilitators are typically involved in all aspects of the program, making them competently conversant with facility staff, lawyers, engineers, procurement officers, and other stakeholders. An NREL contractor presented an innovative way to make the case to one potential ESPC client by recalculating the payback terms in accordance with the value of NO_X emissions saved and sold onto the market. For this San Diego project, the value of the NO_X credit on the market dropped the payback by years.

National laboratory contractors brainstormed ways to be more efficient within more constrained budgets by using advanced meters to save monitoring and verification costs. This level of effort is uneven across ESPC management and staff, where the panel observed some passivity when it came to finding creative ways to improve efficiency and effectiveness. The ESPC alternative financing staff in Golden, Colorado, is highly innovative and shares a drive to populate serious gaps in data and information filing systems. Utility program contract staff at LBNL demonstrated exceptional quality in strategy, analytical thinking, delivery, and innovation. They were influential in getting FEMP to partner with state public benefit funds, leveraging $4 million in additional resources last year. Several examples were highlighted where LBNL staff helped an agency cut through bureaucratic hurdles to get funding approval. FEMP's website, which is maintained by LBNL staff, fills a unique market niche; its Federally oriented public benefit resources information receives 300 visits a day. Tools are above average and of exceptional quality. The UESC's technical assistance, website, products, and workshops present exactly the proper level and quality of information for its mission. Many of the ESPC pricing and evaluation tools are too new to evaluate, but seem appropriately designed.

A few project areas appear to enjoy less effective communications and retain fewer high quality staff. Staff in charge of ESPC's data quality monitoring unit presented somewhat confusing metrics and calculation methods. While much of the monitoring and verification work is new, better review might have been warranted prior to implementation.

Productivity

Elements of the ESPC and utility financing projects appear quite productive. The UESC budget of $1.7 million leverages $100 million in private sector investment. The ESPC project budget of approximately $5.1 million leverages $252 million, proportionately less than the UESC program. At the same time, FEMP is more directly involved in project facilitation of all of the ESPC projects and not directly

involved in all UESC projects. A budget of $100,000 for energy markets education outreach won $4-5 million in leveraged resources for clients from state public benefit funds. Both projects have high numbers of website visits, document requests, and site visits for sales and support. Productivity, however, is less instructive than achievement as a criterion for FEMP's success in reaching its goals to reduce energy use and energy bills. The panel believes that more can be done to demonstrate FEMP's accomplishments and productivity.

Some UESC and ESPC marketing and training materials appear duplicative. The two projects have their own infrastructure, administration, and steering committees without adequate justification for such separation. FEMP management should review opportunities for joint planning and sharing of administrative function.

Accomplishments

Overall, based on the evidence presented to the panel, the utility project appears to have achieved excellent accomplishments, and ESPC has provided strong results. However, the panel lacked detailed and comprehensive data from both projects to draw definitive conclusions.

The utility project leveraged over $100 million in private sector investment. Staff helped agencies secure an additional $11 million in demand side management funding for efficiency and renewable energy projects. Staff state that UESC projects save 74 percent more than UESCs without FEMP support, according to an ORNL study of voluntarily submitted data. The panel was told that LBNL research also shows Federal ESPCs are more aggressive than the private sector with respect to risky projects. If true, that is a valuable accomplishment, but the panel was unable to confirm it directly.

FEMP's tools and approach to serving Federal agencies are the top choices among, often competing, Federal services. DOE, DOD, GSA, and several other agencies have umbrella contracts, IDIQs contracts, and authority to implement performance contracting. However, as evidenced by FEMP's long list of DOD projects, both DOD and civilian agencies are rapidly migrating to FEMP's ESPC IDIQ and outreach. The Air Force plans to use FEMP's program, and roughly 80 percent of the Navy's projects use the FEMP model. FEMP staff has been told that the Army might use the FEMP program because FEMP is the only program with explicit monitoring and verification. Even GSA staff approach FEMP to use FEMP language on energy management guidance to Federal facilities, because GSA area-wide contracts cover all utilities (energy, telecommunications, water, and steam) and its contracting officers are overburdened. Finally, FEMP ESPC staff ultimately persuaded OMB and CBO to consider net savings when scoring of FEMP's program budgets. All these are worthy achievements.

The panel had difficulty concluding that the finance projects save energy and reduce energy costs, as panelists saw no detailed or verified information on energy saved from ESPCs. A list of completed ESPC projects described the ESCO, facility name, and location, but no information was presented on technologies installed, energy saved, energy costs reduced, kilowatts of renewable energy installed, or dollars invested. In the Utility project, the panel learned that only 20 percent of the UESCs each year contained performance guarantees in FY 2004. This suggests that FEMP's utility project cannot confirm energy savings in 80 percent of UESC contracts. This is largely a result of the fact that UESCs, unlike ESPCs, do not require guaranteed savings. However, the panel believes that energy savings data should be collected whether or not savings are guaranteed. Some UESC examples focused on reduced

energy costs but did not detail reduced energy use.

Whether UESC project successes can be repeated elsewhere is unclear. Although the panel agrees with staff that LBNL's contacts with the targeted Federal agencies helped negotiate early utility project agreements, the early results are also due in part to a few states' large public benefits resources and funding continuing.

No evidence was presented during the Peer Review process regarding the Federal Utility Partnership Working Group (FUPWG) in support of the claim that its workshops, newsletters, and events turn into new UESCs. Indeed, Consolidated Edison Company of New York, Inc. stopped offering UESCs and Pacific Gas and Electric's bankruptcy forced a shutdown of its UESCs. However, FUPWG is responsible for developing and improving the standard contracting vehicle for all UESCs called the "Model Agreement" and developing numerous best practices and guidance documents on implementing UESCs. GSA and DOD have used the model agreement as the foundation of their UESC contracting vehicle and to date, there has been over 1,000 UESCs awarded based on the Model Agreement. Outside of FUPWG, there is no other organization actively working to improve the quality of UESCs across the Federal Government. Also, the study conducted by ORNL, "Utilities Energy Service Contract Program Activity," confirmed that 74 percent of UESCs have been implemented by FUPWG utility partners. Additionally, FEMP staff did convince over one dozen electric and natural gas utilities, including Entergy, to enter or reenter the UESC market, which is certainly an accomplishment. UESC presentations focused on metrics such as copies of documents requested and number of trainees. Presentations covered the total number of UESCs released last year, energy saved, and energy costs reduced.

Another way of measuring achievement is to look at projects rejected or halted for lack of results. ESPC contractors provided anecdotal evidence that only two of 350 projects found lower than projected savings. In both cases, the ESCO itself discovered the discrepancy, brought it up with the agency, and either renegotiated their profit with the agency or brought the performance up to expected levels.

Relevance to Mission and Goals

Both the ESPC and Utility projects and their services are directly relevant to FEMP's mission and goals to reduce energy costs and energy use in Federal facilities. The concern arises as to whether FEMP's mission is too broad to achieve some of its goals. Across FEMP, staff conceded that the means to persuade facility managers to consider investments in energy efficiency and renewable energy projects is to first address the facility's utility rates. For example, the Utility Direct Assistance team helped Fort Totten save resources by having its rates renegotiated. While this relates directly to FEMP's mission to reduce energy costs, it reveals nothing about new investments in energy efficiency or new renewable energy. The panel reviewed a number of measures and activities that appeared related to FEMP's mission, but those activities could not be clearly linked to verified net achieved savings, to maximizing the number of agencies in compliance, or to the highest return on investment for dollars invested. Finance project staff did not remark on a third goal: "Leading the Market." Perhaps this goal has a lower priority. Because accomplishing the goal would distract FEMP from its primary mission of helping reduce energy use, assigning it a low priority is acceptable. In summary, the panel observed confusion among staff and management over the many missions and goals attributed to FEMP.

Relevance to Technical and/or Market Challenges

While the relevance of the ESPC to technical and market challenges is clear and undeniable, the Utility Project's relevance appears to be waning. The Utility Project has had excellent results to date, in spite of the large market and the bureaucratic challenges the project faces.

For example, facility managers in 20 states must negotiate public benefit programs that have myriad sources, targets, timing, and project requirements. The strategy of the Utility Project is to target the biggest public benefit states, send newsletters to Federal facility managers in their database in that state to provide them with up-to-date information on these rapidly changing programs, and provide in-depth direct assistance to customers that request information as a result of the newsletter.

Elsewhere, FEMP works to inform utilities that are not currently offering energy efficiency services to their Federal customers about their options to do so. FEMP specifically targets utilities that have responded to FEMP's outreach efforts through utility associations such as the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Gas Association or where a Federal customer has specifically asked FEMP to assist with developing the partnership. Both approaches are limited to focusing on areas that will provide the greatest return. Initial successes with large public benefit funds may not be easily replicable to other states that have smaller resources, limited access to funding, and other restrictions. Also, while FEMP has been successful helping utilities offer new UESC service to their Federal customers, FEMP has little influence with utility management that is not interested in these services.

FEMP found that Federal agencies are not enforcing data collection and reporting requirements. One reason for non-compliance with reporting requirements was nonstandardized reports. Since then, standardization of the reporting forms has been incorporated into the process. However, as a result, the ESCO, agency, and FEMP all collect and track data. Moreover, the GAO mandates that the projects are monitored properly, such that FEMP staff will have to do the savings calculations on current projects in three to five years. This responsibility should be assigned to the ESCOs and the agencies. FEMP should help the agencies enforce the ESCOs' contractual obligations to report. FEMP should make clear contractual language part of reporting requirements, including commissioning obligations, independent verification of savings, and the frequency of reports. The agency should be able to withhold payments when reporting goals are not met.

Management

As with the TAP program, the FEMP Peer Review Panel finds that more strategy and technical knowledge needs to be institutionalized at FEMP. The panel was concerned that the FEMP contractors appear to take the lead in establishing program direction and implementation.

- Strategy

In the ESPC project presentations, little or no discussion of strategy was presented. Although total budget data was presented, staff could not easily speak about the total budget without national laboratory or contractor assistance, and the number of staff who worked on the ESPC project and the pool from which the Project Facilitator's travel budgets are paid were unclear. No market study of facility energy use or prioritization of energy savings targets were available to guide staff. The panel also has concerns with respect to the ESPC project staff's use and interpreta-

tion of quantitative evaluation.

On the utility side, the dwindling market appears to be hindering development of a sound, long-term, replicable strategy. FEMP's utility project has no high-level study of the energy savings potential from Federal facilities or break down of such facilities by state. This is not specific to the utility program and would likely impact all project financing; the energy savings potential would be the same whether it is a UESC/ESPC. Developing a more comprehensive, long-term strategy for allocating resources would be useful.

- Prioritization

Without authority over other agencies, the entire FEMP program is dependent on an effective sales approach. However, ESPC managers have dedicated only four Alternative Financing Representatives (AFRs) across the country to persuade target facilities of FEMP's value. Those same four AFRs have wide responsibilities: educating agencies about the program, coaching acquisition teams during the early stages, arranging Project Facilitator support, directing inquiries to the sources of expertise, facilitating resolution of issues, and providing general support to agencies, and other demands. The panel believes that lower priority is given to providing resources for monitoring and verification (M&V). Staff believe that a high percentage of program savings comes from operations and maintenance, yet because of lower attention to M&V it cannot be discerned for certain where savings are found.

With respect to the Utility Direct Assistance initiative, staff could present no criteria guiding who they help and when. Utility and ESCO thresholds may be inconsistent, but FEMP does not seem to have clear thresholds for project acceptance. Staff said that even if the project is small, FEMP feels that helping the utility with small projects will somehow help the utility do larger projects. In the same vein, on the ESPC side, FEMP has no minimum dollar requirement for a contract. Although the participating ESCOs prefer projects valued at $1 million or more, some projects were negotiated down significantly. The panel suggests that FEMP staff involvement in negotiations might be an ineffective use of their time; rather, FEMP staff might consider identifying more projects.

- Benchmarking

Both FEMP utility and ESPC staff did not appear to know what the ESPCs and UESCs have actually saved relative to pre-project conditions or any other benchmarks. FEMP on the whole has not tracked its progress against the private sector's performance given state building codes, state and Federal appliance standards, market transformation, and technology advances. Staff said one Federal agency's IG study did compare FEMP's performance against the commercial market, but staff did not cite or produce the study. Staff reasons that because ESPCs make it easier to deal with Federal appropriations issues for infrastructure upgrades, the client agency would choose the lowest first-cost option (such as inefficient boilers) without FEMP's intervention. Moreover, higher ESPC financing rates would force the client agency toward aggressive savings targets. However, staff provided no data to support these claims.

The ESPC project does not benchmark the ESCOs' performance and costs to identify lessons learned and weaknesses. Staff have not studied ESCO projects results for individual technologies or per industries results for "deemed savings." Staff described a method of comparing real energy savings against projected energy savings after a project's completion, where the staff do their own calculations on new "scenario calculators" and compare the results against reported savings; however, the methodology was unconvincing. No plans for independent measurement and verification were offered.

The Utility project's UESCs presentations focused on metrics relating to copies of documents requested and number of trainees. While the energy market education presentation showed examples of energy and energy costs avoided, it was not comprehensive.

- Management of Performance Gaps

Where certain key oversight responsibilities lay during an ESPC project negotiation is unclear. As far as the panel could tell, the ESPC technological research staff rely on technological guidance from the Project Facilitator, whereas the Project Facilitator looks to the ESCO. The Project Facilitator serves in a central supervisory and guidance role for the project, yet an ESCO might have certain technological biases. At the same time, FEMP's technology transfer program does take the lead with respect to a few, select efficiency and renewables technologies, although how outreach efforts targeting ESCOs are coordinated with the Project Facilitator on the ground during the project negotiations is unclear. Management should work toward greater cooperation and coordination.

Overall Impressions and Recommendations

- FEMP's Finance subprogram might benefit greatly from a market potential study to help target its efforts towards the Federal agencies with the largest potential savings. Staff should identify the current state of energy use, technology applications, and practices within all Federal facilities and assess the agencies with potential high savings, building types, and technology applications.
- The ESPC program should develop its own strategic plan using existing data, market potential studies, and benchmarks, however limiting this information might be. The plan should have a clear mission, strategy, and delivery plan for outreach to agencies. FEMP's key position in the market is that of a knowledgeable third party that can help agencies assess energy savings opportunities and work through detailed implementation and contract issues. These materials will make FEMP's outreach more efficient, resulting in more projects, with higher savings and less waste.
- The ESPC project must develop specific goals to measure the level of success. At a minimum, goals should include energy saved per dollar invested. ESPC goals should include leveraging investment dollars through ESCOs, as well as partnering to leverage skills, information, and dollars with state and regional energy initiatives that are also training Federal facilities with local utilities.
- Data collection and analysis must become a top priority. FEMP should use historic project information to determine where the best applications of technologies exist by type of facility, until such time as a market potential study has been completed.
- FEMP should consider expanding its sales force to more than four ESPC staff a top priority.
- FEMP's Financing subprogram should begin benchmarking. Benchmarking would enable FEMP to know if it is meeting Congressional requirements and "leading by example" (within or beyond Federal facilities). FEMP should start with benchmarking projects against Federal sites. FEMP should also benchmark against private facilities to determine (1) progress against national model energy codes and (2) market performance above code. Finally, FEMP must benchmark the ESPC and UESC projects and specific technologies against private sector case studies to determine if the chosen ESCOs chosen are getting the right "bang for the buck."
- The Utility project should require performance guarantees and monitoring. The

panel recommends that more attention be paid to the benefit-cost analysis or return-on-investment criteria for projects.

- FEMP Project Facilitators should have greater authority and establish clearer criteria for targets. The Project Facilitator plays a role in determining the scope of the project. On the one hand, the Project Facilitator has no ability to reject projects with too small investments and too easy targets. If the agency wants deep demand cuts, the Project Facilitator is responsible for obtaining more aggressive targets from an ESCO. However, the facilitators do not have the authority to reject an ESCO nor to suggest a specific alternate ESCO.
- FEMP's Finance staff would benefit from more resources, as well as a better prioritization of resources. The Finance staff has achieved much success with few resources. At the same time, more discussion is needed on two facets of existing resources. First, is FEMP making the best use of national laboratory staff and of all their program tools? Second, can FEMP charge more for Project Facilitators?
- FEMP staff face too many reviews and supervisory meetings among DOE, OMB, GAO, and others. The ESPC project is spending a lot of time trying to regain normal operations after two GAO reviews and a 14-month hiatus, rather than planning ahead. With EPACT 2005's new water and renewable energy requirement, and tax credit opportunities, ESPCs will only fall further behind.
- FEMP Central will require strong coordination by the Finance program to ensure that much smaller utility projects needs are addressed by the database so that the Utility project receives accurate, valuable, and supportive data reports.
- While many Federal agencies' projects receive awards, FEMP staff themselves should also be recognized to acknowledge their innovation, collaboration, and entrepreneurial behavior in helping projects get implemented.
- Some UESC and ESPC materials, marketing, and training may be duplicative. FEMP management should review these activities and consider joint sponsorship.
- FEMP should consider expanding its sales force to more than four Alternative Financing Representatives a top priority.

APPENDICES

FEMP Peer Review

Introduction

On September 20 – 22, 2005, the Federal Energy Management Program (FEMP) will conduct its first Peer Review. The purpose of a Department of Energy (DOE) Peer Review is to obtain an independent assessment of a program or project area.

FEMP was established in response to the1974 oil embargo to ensure that the Federal Government could continue to operate its buildings and facilities without interruption. Today, the Federal Government is the single largest user of energy in the U.S., operating over 500,000 facilities at 8,000 locations nationwide. The government's building inventory consists of a cross section of facilities found in the public and private sector: residential, commercial, industrial, agricultural, and institutional. Given the number and type of new and emerging energy and water management technologies and practices, the Federal sector has achieved some success in improving the efficiency of its facilities. However, more can and should be done to reduce the government's use of energy.

FEMP Mission

FEMP serves as the lead coordinator for achieving Federal energy management goals as established by the *Energy Policy Act of 2002* and *Executive Order 13123 – Greening the Government through Efficient Management of 1999*. To help individual agencies achieve mandated energy management goals and "lead by example," FEMP offers its Federal customers four core services:

- Policy Guidance
- Technical Assistance and Training
- Alternative Financing Guidance
- Outreach and Communications

Peer Review Panel

FEMP is planning to conduct its first formal peer review, which will address approximately 90 percent of FEMP's program budget covering recently completed, current, and planned activities. DOE defines an "in-progress" peer review as:

> A rigorous, formal, and documented evaluation process using objective criteria and qualified and independent reviewers to make a judgment of the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects.

Peer Review Panel Composition

Paul DeCotis, the Director of Energy Analysis for the New York State Energy Research and Development Authority has been selected to serve as the Peer Review Chair. As the chair, Mr. DeCotis will lead the independent analysis of FEMP, guiding a panel of non-Federal officials knowledgeable about building energy and water efficiency. The chair's responsibilities include:

- Selection of the Peer Review panel members
- Establishment of review criteria
- Establishment of content and scope of material submitted by FEMP
- Ensuring the panel's independence during the review process
- Facilitating the review process
- Ensuring a review focused on substance
- Overseeing the production and approval of the final peer review report

Throughout the Peer Review process, Mr. DeCotis will be assisted by a DOE contractor, Energetics, Incorporated. Mary-Lynn Wrabel of Energetics will serve as Energetics' lead, reporting directly to Mr. DeCotis, serving as the point of contact for panel members, and planning the overall Peer Review process.

In assembling the panel, the chair's objective is to achieve a balance of expertise reflecting FEMP's program goals, objectives, and functional activities. Panel member nominations were solicited from FEMP staff, members of FEMP's national laboratory team, and outside officials familiar with FEMP and the peer review process. Nominees will be contacted by Ms. Wrabel to determine their interest in serving on the panel and additional information will be collected from those individuals expressing a desire to serve. To ensure an independent review, DOE guidance requires a determination that there is no conflict of interest in service in a Peer Review panel (candidates must sign a Conflict-of-Interest form as well as a Non-Disclosure form prior to serving on a panel).

Information on potential panel members will be organized to provide Mr. DeCotis with a composite of the range of expertise available to serve and he will use this information to make the final selection of panel members. Mr. DeCotis has determined that the ideal panel will include individuals from throughout the U.S. recognized for their knowledge and experience in one or more of the following areas:

- Energy Policy
- Energy and Water Building Technologies
- Technology Deployment
- Project Financing
- Utility Programs
- Program Design and Management
- Evaluation and Metrics
- Technical Assistance and Training
- Marketing and Communications

Peer Review Panel Responsibilities

FEMP anticipates conducting a two-day Peer Review in Washington, DC on September 20 – 21, 2005, followed by a one-day facilitated meeting of panel members to discuss the presentations and provide their comments and recommendations. DOE has the option of

conducting Peer Reviews in a public or private format and FEMP has elected to forgo a public meeting for its first Peer Review. (FEMP holds open meetings in various venues, including Federal Energy Management Advisory Committee public meetings twice a year). During the first two days, FEMP staff and selected members of its team of national laboratories and contractors will make presentations before the panel and respond to reviewer questions. In advance of the Peer Review, the chair will establish a set of criteria for panel members to evaluate the program's effectiveness during the third day of the review. ***The results of the review will be documented in a report in order to provide FEMP "managers with an independent assessment of the program's productivity, relevance, and management."*** The final Peer Review report will be submitted to DOE and posted on the FEMP website.

Panel member responsibilities include the following general tasks:

- Review program information in advance of the actual panel review.
- Serve on a two-day Peer Review panel (including sub-panels, as appropriate).
- Participate in an independent evaluation of the program and maintain a confidential evaluation of the program during and after the review.
- Participate in a one-day post-panel session to rate programs according to criteria, discuss program elements and presentations, and contribute to a Peer Review panel report.

Peer Review Format

FEMP, in concert with Mr. DeCotis is in the process of finalizing which program elements will be subject to a Peer Review. The general format will include three panels:

- Financing
- Technical Assistance
- Intergovernmental Activities

Mr. DeCotis and FEMP anticipate that three to four individuals will be assigned to each panel and assignments will be based on area of expertise and the program scope of each panel or sub-panel.

PANEL MEMBERS

Paul DeCotis, Chair

Planning, Reporting, and Analysis & Departmental Energy Management (DEMP) Panel

Francis J. Murray, Panel Leader
Kenneth James
Meg Matt
David Zabetakis

Financing Panel

Susan Stratton, Panel Leader
Bruce Gross
Rick Morgan
Polly Shaw

Technical Assistance Panel

Jamie Winebrake, Panel Leader
Floyd Barwig
Richard S. Brent
Maria Papadakis

Cross-Cutting Panel[1]

Paul DeCotis, Panel Leader
Meg Matt
Maria Papadakis
Polly Shaw

[1] Comprised of panel members from the Planning, Reporting and Analysis; Financing; and Technical Assistance panels – members will work with the FEMP Peer Review Chair to address cross-cutting issues, attending various other panel presentations as interests or needs arise. This panel will also work with the Chair to finalize the FEMP Peer Review Report.

FEMP PEER REVIEW PANEL

Member Biographies

Paul A. DeCotis

Paul A. DeCotis is Director of Energy Analysis at the New York State Energy Research and Development Authority (NYSERDA) where he oversees statewide energy planning and policy analysis, corporate strategic planning, program evaluation, and energy emergency planning and response. Prior to joining NYSERDA, Paul was Chief of Policy Analysis at the New York State Energy Office. Paul is a member of the New York Independent System Operator (NYISO) Management Committee and Business Issues Committee and a member of the Energy Working Group of the Coalition of Northeastern Governors (CONEG). Paul is Executive Vice President of the Association of Energy Service Professionals (AESP), and a member of the National Research Council, Board of Energy and Environmental Systems, Committee on Prospective Benefits of U.S. DOE's Energy efficiency and Fossil Energy R&D Programs. Paul is also President of Innovative Management Solutions, a management consulting business. He is also an adjunct faculty member in the MBA Program at the Sage Graduate School and formerly at the School of Industrial and Labor Relations at Cornell University. Paul has a B.S. in International Business Management from the State University of New York College at Brockport; M.A. in Economics from the University at Albany; and M.B.A. in Finance and Management Studies from Russell Sage College.

Floyd E. Barwig

Floyd E. Barwig is Director of the Iowa Energy Center, administered by Iowa State University. Floyd leads the Energy Center in its conduct and sponsorship of research, demonstration, and education in energy efficiency and renewable energy fields. He is responsible for the development of programs at the Center's two research facilities, including building systems research, and biomass to fuels and chemicals research.

Prior to joining the Energy Center, Floyd was Manager of Building Energy programs at Pacific Northwest National Laboratory. He is past Chair of the State Technologies Advancement Collaborative and Vice Chair of the Association of State Energy Research and Technology Transfer Institutions. Floyd is a member of the Editorial Board of *the Heating, Piping, and Air Conditioning Engineering* magazine. He is also a member of the Board of Directors for the National Lighting Products Information Program and is a member of the American Institute of Architects. Floyd has a Master of Architecture from the University of California at Berkeley, and a Bachelor of Architecture and a B.S. in Building Science from Rensselaer Polytechnic Institute.

Richard S. Brent

Richard S. Brent is Director of Government Affairs at Solar Turbines, Inc. Richard represents Solar Turbines, Inc. in global policy and regulatory forums that affect business development opportunities for the company. He is currently working with the U.S. Department of Energy on expanding the use of combined heat and power, distributed generation, and advance turbine technologies. Richard works with the U.S. Environmental Protection Agency in furthering the deployment of combined heat and power systems, and with the Federal Energy Regulatory Commission in devising rules for interconnection of distributed generation technologies. He also promotes distributed generation technologies to members of Congress and State Legislatures. Prior to his present work, Richard worked with Solar Turbines in various other roles, including Manager of Distributed Generation and Manager of Commercialization. Richard is a member of the Executive Committee of the U.S. Combined Heat and Power Association and is a founding party to the California Alliance for Distributed Generation. Richard has a B.A. from California State University at Rohnert Park.

Bruce W. Gross

Bruce W. Gross is Executive Vice President of Dominion Federal Corporation, providing financial, marketing, and consulting services to Federal Government contractors and Federal Government agencies. Prior to joining Dominion Federal, he was Vice President of GE Capital – Potomac Federal, a unit of the Vendor Financial Services organization within GE Commercial Finance. Prior to this, Bruce was a Program Manager at Motorola, Inc. Bruce has B.S. in Business Administration from the University of Florida.

Kenneth L. James

Kenneth L. James is Supervisor of Strategic Research & Evaluation in the Customer Energy Efficiency department at Pacific Gas & Electric Company (PG&E). Kenneth oversees the measurement and evaluation of California's energy efficiency and demand-side management programs. He is an adjunct professor at Holy Names University's School of Business in Oakland, California, offering courses in group dynamics, business communications, project management, and decision analysis. Prior to his current position at PG&E, Kenneth was a Senior Policy Analyst & Program Manager in the Customer Energy Efficiency Department. Kenneth is a member of the ACEEE Market Transformation Roundtable, Co-Chair of the ACEEE 2006 Summer Study; Co-Chair of the CEE Measurement and Evaluation Committee, a Member of the AESP Research and Evaluation Committee, and Planning Committee Member of the ACEEE Market Transformation Symposium. He is a member of the United States Association for Energy Economics, the San Francisco Bay Area Evaluator, and the American Evaluation Association. Kenneth has an Ed. D in Organization and Leadership from the University of San Francisco, a Certificate of Study in Business Management from the University of California Berkeley, an M.S. in Nuclear Chemistry from Eastern Michigan University, and a B.S. in Chemistry from Benedict College.

Meg Matt

Meg Matt, Principal and founder of The Matt Group, provides integrated marketing solutions to a variety of clients within the energy industry. Her services include market and brand strategy, competitive market assessments, customer satisfaction studies and public relations.. Prior to forming The Matt Group, Meg was president and principal of The Second Opinion, a marketing and brand strategy firm. Meg has also worked with A&C Enercom/EcoGroup, and Arizona Public Service in various positions. Meg is a board member of the Association of Energy Service Professionals (AESP) and immediate past president. She is a frequent seminar leader and speaker on a variety of subjects including SWOT analysis, crisis communications planning, and media relations. She is a contributing editor on marketing subjects for *Electric Light & Power* magazine, and is under contract with PennWell Publishing to write a book on corporate communications issues related to the energy industry. Meg has a B.S. in Management from Western International University.

Richard Morgan

Richard Morgan is founder and President of Morgan Marketing Partners, helping utilities and energy companies with their marketing and program design challenges. He assists clients with program design, strategic marketing, reengineering, creation of new products and services, and implementation management. Richard is the Principal Planner and Advisor to Wisconsin Energy Conservation Corporation and to the State of Wisconsin on the statewide residential and business public benefits efficiency program. *Wisconsin Focus on Energy*. He has also worked for over 12 years with Cinergy on their utility DSM programs in three states. He assists these clients and others with program design, annual planning, evaluation coordination, and overall management. Richard is also an instructor at the University of Wisconsin Small Business Development Center. Prior to founding Morgan Marketing Partners, Richard was a manager and consultant with A&C Enercom, a manager for a Mid-West electric & gas utility and an engineering consulting company. He is the past President of the American Marketing Association, Madison Chapter, and is a Board Member of the Association of Energy Service Professionals. Richard has a B.S. in Resource Management from Ohio State University.

Francis J. Murray, Jr.

Francis J. Murray, Jr. is an energy and environmental consultant providing strategic policy and market development guidance to the private sector on energy and environmental issues. Frank is a Senior Adviser to Ecology and Environment, an international environmental consulting firm. Prior to his current work, Frank was consultant to the U.S. Department of Energy's Office of the Assistant Secretary for Policy and International Affairs. Frank also served as Commissioner of Energy for the State of New York; Chairman, New York State Energy Research & Development Authority; Deputy Secretary to the Governor of New York for Energy & the Environment; and Sr. Legislative Counsel, New York State Office of Federal Affairs. He is a member of the New York Independent System Operator (NYISO) Environmental Advisory Council and a member of the National Research Council, Board of Energy and Environmental Systems, Committee on Assessment of Alternatives to Indian Point for Meeting Energy Needs. He has a B.S.F.S from the Georgetown University School of Foreign Service and a J.D. from the Georgetown University Law Center.

Maria Papadakis

Maria Papadakis is a political economist, specializing in the application and diffusion of new technologies, particularly energy and environmental technologies and distributed generation in the electric power sector. Maria is Professor of Integrated Science and Technology at James Madison University. Her current areas of research and teaching include the energy-environment interface, energy economics and policy, and green building design. Prior to her present work, Maria was an analyst in the Federal government. She has a Ph.D. and M.A. in Political Science from Indiana University and a B.A. in Political Science and International Relations from Virginia Polytechnic Institute.

Polly N. Shaw

Polly N. Shaw is a consultant working in the San Francisco Bay area. She previously served as Program Officer at The Energy Foundation in San Francisco, CA, where she managed grants to develop public policy models for the advancement of energy efficiency and renewable energy. Polly specializes in U.S. and Chinese building and industrial energy efficiency, but also has experience on as well as U.S. energy and climate change policy, renewable energy, and hydrogen issues. Prior to joining The Energy Foundation, Polly was an Associate at ICF, Inc., where she assisted the U.S. Environmental Protection Agency with the development and implementation of various public-private partnerships in an effort to help reduce greenhouse gas emissions in the US and in China. Polly is the Membership Chair of the San Francisco Mycological Society and member of Habitat for Humanity. Polly has taken MBA coursework in Financial Accounting, Statistics, and Managerial Economics at George Washington University. She has a Certificate in Chinese Law from the University of London, and has a B.A. in French from Tufts University.

Susan Stratton

Susan Stratton is Executive Director of the Energy Center of Wisconsin, a non-profit firm specializing in energy efficiency and environmental sustainability. She oversees four practice areas including Building Performance, Energy Literacy, Industrial Best

Practices, and Energy and Environmental Policy. Susan is currently leading Wisconsin's statewide study of the achievable potential for energy efficiency and customer-sited renewable energy on behalf of the Governor's Task Force on Energy Efficiency and Renewables. Prior to joining the Energy Center, Susan was Director of the Wisconsin Public Utility Institute at the University Of Wisconsin School Of Business. She also served for a combined 15 years at the Public Service Commission of Wisconsin and the Virginia State Corporation Commission. Susan is Secretary of the Board of Directors for the Association of State Energy Research and Technology Transfer Institutions, and Board Member of the Midwest Energy Efficiency Alliance. Susan is President of the Board of Directors for the Friends of the Arboretum at the University of Wisconsin, and on the Board of Trustees for LeMoyne College. Susan has completed coursework for a Ph.D. in Business and has an M.S. in Economics from the University of Wisconsin. She has a M.A. in Economics from Virginia Commonwealth University, and B.A. from LeMoyne College.

James J. Winebrake

James J. Winebrake is Chair of the STS/Public Policy Department and a professor at Rochester Institute of Technology (RIT). Jamie oversees the development of a new B.S. and M.S. program linking public policy and policy analysis with science and technology fields. Jamie's analytical research focuses on working to solve problems in the energy and environmental fields and in particular, developing and applying analytical tools to explore the impacts of technologies and policies on sustainable development and the environment. He is Director of the University–National Park Energy Partnership Program. Prior to joining RIT, Jamie was Associate Professor and Environment Team Leader in the Integrated Science and Technology Department at James Madison University. He is a Member of the New York Hydrogen Energy Roadmap Steering Committee. Jamie has a Ph.D. in Energy Management and Policy from the University of Pennsylvania, M.S. in Technology and Policy from MIT, and B.S. in Physics from Lafayette College.

David Z. Zabetakis

David Z. Zabetakis is an independent consultant providing executive level consulting services focused on corporate and market strategy development. David's work includes product planning and program operational development, business design development,

transformation and change management, operational process improvement directives, and customer and brand strategy development and execution. Prior to his consulting work, David was President and Chief Operating Officer and acting Chief Marketing officer at PEPCO Energy Services, Inc., and is a former U.S. Air Force Tactical Air Command Crew Chief and Operations Inspector. David is certified in Strategic Planning and Project Management. He has an M.B.A. from Loyola College and B.S. from Wichita State University.

FEMP PEER REVIEW PANEL

Presenter Biographies

PLENARY

Brian Connor serves as the FEMP Team Lead responsible for the Departmental Energy Management Program (DEMP), FEMP's training, O&M, Labs 21, and energy audit activities. Mr. Connor worked for DOE's Office of Energy Efficiency and Renewable Energy (EERE) prior to joining FEMP and was Acting Director of DOE's Mid-Atlantic Regional Office. He has also directed the government relations programs of professional engineering societies and construction associations, served on the professional staff of the U.S. House of Representatives, and worked in the Federal Energy Administration.

Joan Glickman serves as the Team Lead for FEMP. She manages FEMP's communication, policy, and interagency efforts. Ms. Glickman has also managed a number of Secretarial priorities, including EnergySmart Schools, brightfields, and Federal energy management policy. Prior to FEMP, Ms. Glickman worked with DOE's Environmental Management Program on property reuse and land use issues. She has a B.A. in African History and an M.A. in Public Policy.

Schuyler Schell serves as the FEMP Team Leader responsible for the Alternative Finance and Technical Assistance needs of Federal agencies. Prior to DOE, Mr. Schell served in a variety of positions at Freddie Mac, a government sponsored enterprise, facilitating the financing of U.S.-housing. He has a B.A. in Economics and an M.A. in Planning.

Mary-Lynn Wrabel serves as Energetics' Director of Federal Energy Programs and Manager of the company's Washington Operations. She specializes in legislative and policy analysis, program and strategic communications planning, and public-private sector partnership development. Ms. Wrabel has provided these services to FEMP as well as other DOE offices, including the Building Technologies Program, Industrial Energy Program, Utility Program, and Nuclear Energy Program and the Department of Homeland Security. She has an M.A. in Corporate and Political Communications and a B.A. in Fine Arts.

Financing Panel

Christopher Abbuehl serves as the Department of Energy (DOE) / Federal Energy Management Program (FEMP) Alternative Financing Representative for the program's Biomass and Alternative Methane Fuels contract and the Northeast Regional Super Energy Savings Performance Contracts (ESPC). Mr. Abbuehl also coordinates the combined heat and power projects for DOE's six Regional Offices. Previously, he worked for an international energy fund and an energy service company where he was involved with renewable energy projects in Europe and Asia. He holds a B.S. in Business Administration and a J.D.

Douglas Dahle serves as an NREL Senior Program Manager in Golden, Colorado. He provides advice, consultation, and technical support to FEMP in implementing innovative financing mechanisms for energy efficient and renewable energy projects. He also advises FEMP on legislative and regulatory improvements for Federal performance contracting business practices. He is a Professional Engineer in Virginia and has a B.S. in Mechanical Engineering.

Jeff Dominick serves as an NREL Technology Manger in Golden, Colorado. He specializes in financing and installation of solar and wind distributed energy systems and has extensive experience assessing and developing acquisition strategies to utilize private sector financing, preparing contracting documents for Federal procurement of private financed energy services, and advising technical proposal evaluation teams and contracting officials during negotiations and discussions with energy service firms. Mr. Dominick oversees all FEMP activities at NREL. He has a Bachelor's degree in Mechanical Engineering and an M.B.A.

Charles Goldman is a Staff Scientist and Group Leader in the Environmental Energy Technologies Division of DOE's Lawrence Berkeley National Laboratory (LBNL). He leads professionals working on electricity markets and policy issues for FEMP and DOE's Office of Electricity Delivery and Energy Reliability. Mr. Goldman specializes in energy efficiency and demand response policy, technology analysis, utility integrated resource planning, retail energy services, energy service company industry market trends, and electric industry restructuring. He holds an M.S. in Energy and Resources.

Tom Hattery serves as the FEMP Alternative Financing Representative for the Department's Mid-Atlantic and Mid-West Regional Offices. He works with various Federal agencies located in the Philadelphia Region to examine each agency's facility energy management needs. He specializes in providing assistance to identify the most appropriate financing vehicles (e.g., Energy Savings Performance Contracts, Utility Energy Savings Contracts) to meet each agency's unique energy management needs. He has a B.A. in Political Science.

Patrick Hughes oversees ORNL's group leaders for the laboratory's Engineering Science and Technology Division serving FEMP and the Building Technologies (BT) Program. He also serves as ORNL's Program Manager for FEMP and BT. Mr. Hughes has worked in the field of energy efficiency in buildings in various research, development, and demonstration capacities for 30 years. He is a P.E. and holds a B.S and M.S in Mechanical Engineering and an M.S in Engineering Management.

Timothy Kehrli is the Owner of TLK Consulting. Mr. Kehrli provides technical and financial analysis support for the development and implementation of the DOE Super ESPC program for NREL and DOE's Golden, Colorado office. He serves on several technical teams for the FEMP alternative financing program, with recent projects including the advancement of financial modeling tools, development of project information efficiency protocols and development of retro-commissioning guidelines. He has a B.S. in Mathematics and has completed the coursework for an M.S. in Mechanical Engineering.

Julia Kelley is Oak Ridge National Laboratory's (ORNL) Group Leader for the Commercial Buildings Group in the Engineering Science and Technology Division. For FEMP she serves as the ORNL Project Manager for FEMP's Utility Program with special emphasis on outreach activities, and serving as ORNL's lead on FEMP's New Technology Demonstration Program and FEMP's energy security projects. Ms. Kelly specializes in the area of utility demand-side management and building energy efficiency technology deployment programs. She holds a B.A. and an M.S.

David McAndrew serves as the Lead for FEMP's Utilities Project, Renewable Power Purchasing Project and works with the Departmental Utilities Management Program reviewing energy contracts at DOE facilities. Prior to FEMP, Mr. McAndrew worked at the Federal Energy Regulatory Commission serving as an analyst and expert witness for the Commission's trial staff. He also worked with the Defense Energy Support Center as an industry analyst.

Kate McMordie is a Research Engineer in the Technology Systems Analysis Group at PNNL. Ms. McMordie is the technical lead on the data management system for Utility Energy Service Contracts (UESC) which involves the collection and analysis of Federal energy-efficiency projects for the purposes of tracking critical trends and strategic outlook in UESC activity for FEMP. She is also the technical liaison for FEMP's Federal Utility Partnership Working Group (FUPWG), and the lead instructor for FEMP's Water Resource Management Workshops. She holds a B.S. Civil Engineering.

Dale Sartor heads LBNL's Building Technologies Applications Team. Mr. Sartor has over 30 years of experience in energy efficiency and renewable energy applications, including 10 years as a principal of an architecture and engineering company, and 7 years as the head of LBL's In-House Energy Management Program. He is a P.E., a licensed Mechanical Engineer, and a licensed General Building Contractor. He has an A.B. in Architecture and a M.A. in Business Administration.

John Shonder serves as a Senior Mechanical Engineer at ORNL. A member of ORNL's Engineering Science and Technology Division, Mr. Shonder has more than 20 years of experience in the design, implementation, and evaluation of energy conservation projects at Federal government sites. He holds a B.S. and an M.S. in General Engineering.

Tatiana Strajnic oversees FEMP's Super Energy Savings Performance Contract (Super ESPC) program. Ms. Strajnic provides program direction and policy and interacts with policy officials responsible for implementing Federal legislation. Prior FEMP responsibilities included FEMP's Outreach Program. Ms. Strajnic holds a B.A. and an M.A. in Public Administration.

Karen Thomas is a Senior Project Leader in NREL's Energy and Environmental Applications Office. She serves as the Lead Instructor for FEMP's Utility Energy Services Contracting Workshops and provides technical support for UESC projects. Ms. Thomas also served as the NREL/FEMP Program Coordinator for Federal Energy Saver Showcase facilities and was a representative for NREL/FEMP's New Technology Demonstration Program's Interlab Council. She holds a B.S. in Business Administration.

Joyce Ziesler serves as a Contracting Officer at the DOE Golden Field Office for FEMP. Her work includes SAVEnergy Audits, Interagency Agreements, FEMP Technical Assistance and Advisory contracts and the Super ESPC IDIQs. Ms. Ziesler has experience in petroleum storage, natural gas procurement, and logistical support of petroleum products to foreign governments. Prior to DOE, Ms. Ziesler was a Contracting Officer at the Defense Energy Support Center where she served on the ESPC team awarding several Delivery Orders under the DOE Super ESPC IDIQ contracts.

Technical Assistance Panel

Dan Amon serves as the National Energy Manager for the Environmental Protection Agency (EPA). He has 21 years of experience in mechanical design and construction including semiconductor facilities, pharmaceutical facilities, and other high technology industries. Mr. Amon is currently working on a variety of energy efficiency and water conservation projects at EPA. He is a Registered Mechanical Engineer, and has a Bachelor's degree in Structural Engineering and a Master's degree in Engineering and Management.

Nancy Carlisle is the FEMP Group Manager at the National Renewable Energy Laboratory (NREL) in Golden, Colorado, and is also a licensed Architect in the State of Colorado. She has worked over 25 years at NREL responsible for research, analysis, design, and outreach activities that promote the design of sustainable low-energy buildings. Ms. Carlisle leads NREL's FEMP renewable program and has been a core member of the Labs21 technical program since its inception. She holds a Bachelor's degree in Urban Planning with a concentration in Environmental Studies, a Master's in Architecture, and a Master's in Urban Planning.

Ted Collins serves as FEMP's Coordinator of Training for Federal agencies and is manages FEMP's New Technology Demonstration and Life-Cycle Costing activities. He previously worked in DOE's Industrial and Transportation offices and at the Commerce Department in domestic and international business areas. Mr. Collins has studied economics, business, and government.

Anne Sprunt Crawley manages FEMP's Renewable Energy Technologies Program. Ms. Crawley also manages the technical portion of FEMP's Sustainable Facilities Program Elements. Prior to working for FEMP, she consulted for the World Bank on building energy standards, managed the energy program for the City of Berkeley, California, and was a Contracting Officer for the Air Force Office of Scientific Research. She has a B.A. in Architecture and an M.S. in Energy and Resources.

Kevin DeGroat is the Director of Energy and Environmental Services Operations for the Consulting Services center at McNeil Technologies Inc. He has 20 years of professional consulting experience with EERE supporting research programs in biomass, geothermal, solar, building technologies, and FEMP. Mr. DeGroat oversees an operation that provides engineering analysis, program management and evaluation, and research planning, with practices in alternative energy and environmental technology. He has a B.A. in Public Administration and English and took graduate classes in Public Affairs with an emphasis on Energy and Environmental Technology.

Beverly Dyer serves as FEMP's Sustainability Program Representative, Chairs the Interagency Sustainability Working Group, and serves as facilitator for ENERGY STAR® bench marking and labeling of Federal buildings. Previously, she worked as a Manager at the Environmental Protection Agency's ENERGY STAR® Buildings program for Federal Agencies. Ms. Dyer holds a Master of Arts degree in Science, Technology and Public Policy and is a LEED (Leadership in Energy and Environmental Design) Accredited Professional.

Joan Glickman serves as the Team Lead for FEMP. She manages FEMP's communication, policy, and interagency efforts. Ms. Glickman has also managed a number of Secretarial priorities, including EnergySmart Schools, brightfields, and Federal energy management policy. Prior to FEMP, Ms. Glickman worked with DOE's Environmental Management Program on property reuse and land use issues. She has a B.A. in African History and an M.A. in Public Policy.

Brad Gustafson directs FEMP's new Technology Transfer Initiative to encourage Federal agencies to apply DOE funded emerging energy efficiency technologies. Mr. Gustafson previously managed FEMP's Utility Energy Services Program and led the activities of the Federal Utility Partnership Working Group. Before coming to DOE, he was Technical Lead for the development of the Super ESPC contracts while employed by LBNL. He is a registered Professional Engineer in California and has a B.S.M.E.

Shawn Herrera is a FEMP Project Manager for Technical Assistance and Distributed Energy Resources projects. Before joining FEMP in 2000, she worked for DOE in Nevada and managed several energy management projects. She holds a B.S. in Electrical Engineering.

Dave Hunt is the Pacific Northwest National Laboratory (PNNL) Program Manager for the FEMP Operations and Maintenance (O&M) Program. He leads and provides technical support for a number of O&M programs including the development of Federal metering guidance, the commercialization and demonstration of the web-enabled whole building diagnostician, the Resource Efficiency Manager (REM) Program, and the O&M Best Practices Guide.

Will Lintner serves as the Project Program Manager for the FEMP's Laboratories for the 21st Century Program for the Federal Sector and he serves on the Departmental Utilities and Energy Team. Mr. Lintner has more than 20 years of experience in the energy management and utilities management fields within the Federal Government. He is a Professional Engineer in the Commonwealth of Virginia and has a B.S. in Mechanical Engineering and a B.A. in Biology.

Melissa Madgett is a Research and Development Associate at ORNL Engineering Science and Technology Division. She has over 15 years of experience in the design, construction, and testing of Heating, Ventilating and Air-Conditioning Systems including nearly 10 years in development and evaluation of Federal energy conservation projects. Ms. Madgett currently serves as the laboratory lead for FEMP's Industrial Facilities Initiative. She holds a B.S. in Mechanical Engineering and is a registered Professional Engineer, a Certified Energy Manager, and a DOE Best Practices qualified steam tool specialist.

Paul Mathew is a Staff Scientist at LBNL. He has experience in technical research; tool development; and training in energy efficiency, sustainable design, and risk management. Mr. Matthew is currently focused on high performance, sustainable laboratory design for the Labs21 Program, as well as risk analysis in energy efficiency projects for FEMP. He holds a Bachelor's degree in Architecture and a Ph.D. in Building Performance and Diagnostics.

David McAndrew serves as the Lead for FEMP's Utilities Project, Renewable Power Purchasing Project and works with the Departmental Utilities Management Program reviewing energy contracts at DOE facilities. Prior to FEMP, Mr. McAndrew worked at the Federal Energy Regulatory Commission serving as an analyst and expert witness for the Commission's trial staff. He also worked with the Defense Energy Support Center as an industry analyst.

Steven Parker is an Engineer with Pacific Northwest National Laboratory. Mr. Parker has supported and led numerous research programs in the assessment and deployment of new and emerging energy-efficient technologies for DOE, primarily for FEMP, the Department of Defense, and other clients. He has a B.S and an M.S. in Industrial Engineering and Management, and is a Professional Engineer and a Certified Energy Manager.

Will Prue is a Mechanical Engineer for DOE and is the Program Manager for FEMP's SAVEnergy Program. Mr. Prue evaluates and prioritizes funding for DOE's Departmental energy management retrofit projects, and performs technical reviews of ESPCs for DOE sites. He has a B.S. in Mechanical Engineering and is a Registered Professional Engineer and a Certified Measurement and Verification Professional.

Ab Ream serves as FEMP's Manager of Operations and Maintenance programs. Prior to joining DOE, Mr. Ream created and managed a comprehensive approach to facilities energy management for the U.S. Coast Guard's hydroelectric licensing and site development / environmental design and review for the Corps of Engineers. He holds a B.S. degree in Civil Engineering and a M.S. degree in Engineering Technology Management.

Dale Sartor heads LBNL's Building Technologies Applications Team. Mr. Sartor has over 30 years of experience in energy efficiency and renewable energy applications, including 10 years as a principal of an architecture and engineering company, and 7 years as the head of LBL's In-House Energy Management Program. He is a P.E., a licensed Mechanical Engineer, and a licensed General Building Contractor. He has an A.B. in Architecture and a M.A. in Business Administration.

Barry Simon is the Principal of Simon Associates. He has experience analyzing and redesigning building energy systems for both public and private sector projects. Working under contract to

DOE, he has provided energy consulting services for projects that include the U.S. Capital, the Smithsonian Institution, and many GSA office buildings. Mr. Simon is a Registered Professional Mechanical Engineer in Massachusetts and has a B.S.C.E.

Edward St. Germain has more than 30 years of experience in the public and private sectors specializing in facility and equipment maintenance management, energy management, and commissioning. Mr. St. Germain and his team at Enviro-Management & Research, Inc. have provided facilities engineering support in reliability centered maintenance, computerized maintenance management systems (CMMS) evaluations, condition assessments, energy management, facility and equipment maintenance handbook and procedural guidance development, energy management, safety and environmental guidance, and real property database procedural guidance.

Andy Walker serves as a Senior Engineer at NREL. He conducts engineering and economic analysis of efficiency and renewable energy projects in support of FEMP. Prior to joining NREL, Dr. Walker worked at the Colorado Office of Energy Conservation, the Solar Energy Applications Laboratory, and as a Peace Corps Volunteer in Nepal. He has a B.S., M.S., and Ph.D. in Mechanical Engineering and he is a registered Professional Engineer in the State of Colorado.

Kirby Wilcher serves as the ORNL lead for FEMP's CHP Core team. He has over 15 years of experience with Federal HVAC design and construction practice and energy engineering. Mr. Kirby's experience encompasses all aspects of project engineering and includes conceptual feasibility studies, project design, equipment selection and specification, construction support, project inspection/commissioning/acceptance, energy auditing, and project pricing and financing analysis. Through FEMP, he also supports Federal agencies implementing projects through DOE's Super ESPC vehicle.

Planning, Reporting, and Analysis & DEMP

Carl Costello manages Greening America, a national nonprofit institute that he founded to educate the public about building and information technologies that benefit society. As President and CEO, Mr. Costello serves as a liaison between 21 Federal agencies, businesses, and the media to create coalitions and partnerships to grow markets to advance building technologies. He has also helped develop technology education programs for several National organizations. Mr. Costello has a B.A. in Sociology and Environmental Studies.

Rosemarie Field works for McNeil Technologies as the Database Manager for FEMP Central. She has more than 10 years of experience developing user requirements, maintaining databases, and training users for various databases in private industry, non-profit, and state organizations. A licensed Virginia teacher, Ms. Field has also taught Microsoft Access, Excel, PowerPoint and Word at the Junior College level.

Ernest Fossum is the Lead Engineer for the Energy Management Program at DOE's Idaho National Laboratory (INL). He is responsible for preparation, review, submittal, and performance of energy and water conserving studies and projects for more than 450 facilities at the INL, and for the development and implementation of ESPCs in conjunction with INL's ESCo partner. Mr. Fossum is also responsible for energy use reporting, and all monthly and annual commitments to the DOE Idaho Field Office. He holds a Bachelor's degree in Engineering.

Alan Gann serves as a FEMP Field Manager. He is responsible for reviewing and approving all technical aspects of utility options studies and utility contracts for DOE National Laboratories, the weapons complex, uranium enrichment facilities, and Strategic Petroleum Reserve sites. Mr. Gann provides economic, financial, electrical, and mechanical engineering support to DOE in technical negotiations, rate interventions, and site utility options studies. He holds a B.S. in Electrical Engineering.

Joan Glickman serves as the Team Lead for FEMP. She manages FEMP's communication, policy, and interagency efforts. Ms. Glickman has also managed a number of Secretarial priorities, including EnergySmart Schools, brightfields, and Federal energy management policy. Prior to FEMP, Ms. Glickman worked with DOE's Environmental Management Program on property reuse and land use issues. She has a B.A. in African History and an M.A. in Public Policy.

Annie Haskins serves as FEMP's Lead Program Analyst for Communications and Outreach. With 28 years of DOE experience, Ms. Haskins currently leads a government-wide communications and outreach program and provides analysis and support of program issues. She participates in all aspects of FEMP's communication activities, including the development of publications, CD ROMS, videos, web casts, and web sites. Ms. Haskins has a Bachelor of Science degree in Business Administration.

Anne Jones is a Senior Communicator and Team Leader at NREL. She has expertise in managing print, web, and multimedia projects; marketing and communication planning; media outreach; preparing exhibits; and audience analysis. She is currently responsible for developing communications for FEMP. She holds a B.A. in Communications.

Jennifer Landsman-Ayres works for McNeil Technologies Inc. and specializes in communications and outreach, technical writing and editing, and event planning, primarily in the energy and environmental fields. Ms. Landsman-Ayres assists FEMP in the planning and conduct of three annual awards ceremonies and has also handled FEMP's Federal outreach and awareness campaign, managed FEMP's technical awareness publication program, performed website maintenance, and provided energy program marketing. She has an M.P.A. in Environmental Policy and Natural Resource Management and a B.A. in Environmental Science.

Will Lintner serves as the Project Program Manager for the FEMP's Laboratories for the 21st Century Program for the Federal Sector and he serves on the Departmental Utilities and Energy Team. Mr. Lintner has more than 20 years of experience in the energy management and utilities management fields within the Federal Government. He is a Professional Engineer in the Commonwealth of Virginia and has a B.S. in Mechanical Engineering and a B.A. in Biology.

Nick Malik is a Project Manager/Mechanical Engineer with Argonne National Laboratory's (ANL) Plant Facilities and Services. He has extensive experience managing projects encompassing energy conservation technologies, including planning, project design and management, construction management, commissioning, operations, and training. He is a Registered Professional Engineer, with a B.E. in Mechanical Engineering, an M.A. in Applied Mathematics, and an M.S.E. in Mechanical Engineering.

William Martin is a Task Manager/Subject Matter Expert -- FEMP Specialist at NCI Information Systems Inc. in Reston, Virginia. Mr. Martin has 16 years of experience with government programs, general contracting, private business accounting, and community hospital accounting. He has also managed multiple contractors and coordinated responses to Federal and private requests for proposals. He has a B.S. in Business Administration/Accounting.

Leslie Nicholls is the Senior Contracting Officer/Associate Manager at Battelle Memorial Institute, Pacific Northwest Division, Pacific Northwest National Laboratory. She has over 16 years of experience in diversified contracting and project management. Ms. Nicholls also serves on the Energy Workshop Planning Committee and supports the Technology Procurement Program Project. She has a B.A. in Business Administration and an M.B.A. with an emphasis in Management.

Bob Payn is a Web Developer and Project Manager for db interactive Inc. His current responsibilities include design, development, and maintenance of FEMP's website. Mr. Payn has 13 years of experience in the technology industry and 7 years experience with web development, particularly with non-profit and government agency projects. He holds a B.A.

Victor Petrolati is responsible for DOE's Departmental Energy Management Program. Mr. Petrolati has more than 20 years of experience in energy management at government facilities and previously worked for DOE's In-House Energy Management program. He is a Professional Engineer and a Certified Measurement and Verification Professional and holds a B.S. in Mechanical Engineering, an M.A. in Engineering Administration, and a Professional degree in Energy Systems.

Dale Swan is a Senior Economist and Principal at Exeter Associates Inc. His areas of expertise include energy supply and demand analysis, electric industry restructuring, utility cost allocation and rate structure design, utility contract negotiation, antitrust policy, and public utility regulation. Dr. Swan has a B.S. in Business Administration, an M.A. in Economics, and a Ph.D. in Economics.

Chris Tremper is a Program Manager for McNeil Technologies Inc. He has supported FEMP for 18 years and specializes in the collection, analyzing, and reporting of energy consumption data for the Federal Government. Mr. Tremper is an authority on Federal energy management goals and requirements related to Legislative and Executive Branch mandates. He has a B.A. in English.

Mary-Lynn Wrabel serves as Energetics' Director of Federal Energy Programs and Manager of the company's Washington Operations. She specializes in legislative and policy analysis, program and strategic communications planning, and public-private sector partnership

development. Ms. Wrabel has provided these services to FEMP as well as other DOE offices, including the Building Technologies Program, Industrial Energy Program, Utility Program, and Nuclear Energy Program and the Department of Homeland Security. She has an M.A. in Corporate and Political Communications and a B.A. in Fine Arts.

FEMP Peer Review

AGENDA

Day 1: Tuesday, September 20, 2005

8:30 – 12:00 pm **Opening Session**

8:30 – 10:00 am **Plenary Session**

Opening Remarks – Rick Khan, Program Manager, FEMP

Introduction of Panel Members – Paul DeCotis, NYSERDA
Peer Review Chair Remarks

Logistics and Guidance – Mary-Lynn Wrabel, Energetics

10:00 – 10:15 am **Break**

10:30 am **Plenary Session**

Subprogram Presentations:

- Financing & Technical Assistance – Schuyler Schell, FEMP
- Planning, Reporting, and Analysis – Joan Glickman, FEMP
- Departmental Energy Management Program – Brian Connor, FEMP

12:00 – 12:15 pm **Panel Members Only**

12:15 – 1:00 pm **Panel Member Luncheon**

1:00 – 3:00 pm **Presentations**

Financing Panel	Technical Assistance Panel	Planning, Reporting, and Analysis & Departmental Energy Management Program Panel
Utility Program 1:00 – 1:30 **Overview** (McAndrew) 1:30 – 2:30 **Energy Markets Education** (Goldman) 2:30 – 3:00 **Federal Utility Partnership Working Group** (McMordie)	**New Construction, Major Renovation and Retrofit Projects** 1:00 – 2:30 **Project Technical Assistance** (Herrera, Walker, Wilcher) 2:30 – 3:00 **Sustainable Buildings/ New Construction** (Dyer)	**Planning, Reporting, and Analysis** 1:00 – 1:15 **Overview** (Glickman) **Planning & Analysis** 1:15 – 1:30 **Multi-Year Plan** (Connor) 1:30 – 2:00 **Program Assessment Rating Tool** (Glickman) 2:00 – 3:00 **FEMAC, Legislative Tracking** (Wrabel)

15 Minute Break

3:15 – 5:30 pm **Presentations**

Utility Program (*Continued*)	New Construction, Major Renovation and Retrofit Projects (*Continued*)	Data & Reporting
3:15 – 4:15 **Direct Assistance, Training & Guidance** (Thomas)	3:15 – 4:45 **Labs 21** (Lintner, Amon, Sartor, Mathew)	3:15 – 5:30 **Data Collection and Review, Annual Report, Scorecard** (Tremper)
4:15 – 4:40 **Utility Program Outreach Activities** (Kelley)	4:45 – 5:30 **Training/Building Life Cycle Costing** (Collins)	**FEMP Central** (Field)
4:40 – 5:05 **Data Collection and Analysis** (McMordie)		
5:05 – 5:30 **Project Impact Assessment** (Kelley)		

5:30 – 5:45 pm **Panel Members Only**

Day 2: Wednesday, September 21, 2005

8:00 – 10:00 am **Presentations**

Financing Panel	Technical Assistance Panel	Planning, Reporting, and Analysis & Departmental Energy Management Program Panel
Energy Savings Performance Contracts Overview	**New Construction, Major Renovation and Retrofit Projects (*Continued*)**	**DEMP**
8:00 – 8:30 **Super ESPC Program and Goals** (Strajnic)	8:00 – 9:30 **Renewables** (Crawley, Carlisle, McAndrew, DeGroat)	8:00 – 8:15 **Departmental Energy Management Program Overview** (Petrolati)
Operations	**Facilities Management Best Practices**	8:15 – 8:25 **Model Program Subprogram Overview** (Lintner)
8:30 – 9:15 **Golden Field Office Role** (Ziesler)	9:30 – 10:15* **O&M/Commissioning** (Ream, Hunt, St. Germain)	8:25 – 8:35 **Energy Retrofits Subprogram Overview** (Prue)
9:15 – 10:15 **ESPC Process** (Dominick)	*(This panel will break 15 minutes later than the other panels, and resume at 10:30 am.)	8:35 – 9:05 **Energy Retrofit and Model Program Projects** (Fossum)
		9:05 – 9:30 **Energy Retrofit and Model Program Projects** (Malik)
		9:30 – 10:00 **Q & A Session**

15 Minute Break

10:15 – 12:00 pm **Presentations**

Operations (*Continued*)

10:15 – 10:30 **ESPC Process** (Dominick)

10:30 – 11:15 **ESPC and Advanced EE and RE Technologies** (Abbuehl)

Quality Assurance and Improvement

11:15 – 12:00 **Federal ESPC Steering Committee** (Strajnic, Dahle)

Facilities Management Best Practices (*Continued*)

10:30 – 12:00 **O&M/Commissioning** (Ream, Hunt, St. Germain)

DEMP (*Continued*)

10:15 – 10:30 **DEMP Utility Program Overview** (Gann)

10:30 – 11:15 **Rate Intervention and Utility Procurement Projects** (Swan)

11:15 – 12:00 **Q & A Session**

12:00 – 12:15 pm **Panel Members Only**

12:15 – 1:00 pm **Panel Member Luncheon**

1:00 – 3:00 pm **Presentations**

Financing Panel

Quality Assurance and Improvement (*Continued*)

1:00 – 2:15 **ESPC Tools and Quality Assurance** (Hughes, Shonder)

2:15 – 3:00 **ESPC M&V and Quality Assurance** (Sartor)

Technical Assistance Panel

Facilities Management Best Practices (*Continued*)

1:00 – 2:30 **Facility Assessments** (Prue, Simon, Parker)

Industrial Assessments (Madgett)

Technology Transfer

2:30 – 3:15* **Energy Efficient Federal Procurement** (Glickman)

*This panel will break 15 minutes later than the other panels and resume at 3:30 pm.

Planning, Reporting, and Analysis & Departmental Energy Management Program Panel

Interagency Coordination

1:00 – 1:40 **Interagency Coordination** (Tremper)

Outreach

1:40 – 3:00 **Overview** (Haskins)

FEMP Web Site (Payn, Jones)

EERE/FEMP Information Center (Martin)

15 Minute Break

3:15 – 5:30 pm **Presentations**

Quality Assurance and Improvement (*Continued*)

3:15 – 4:45 **Project Facilitator on the Ground** (Kehrli)

Marketing and Outreach

4:45 – 5:30 **ESPC Representatives in the Field** (Hattery)

Technology Transfer (*Continued*)

3:30 – 5:30 **Emerging Technologies Initiative**

New Technology Demonstration (Gustafson, Collins, Parker)

Outreach (*Continued*)

3:15 – 5:30 **Annual Award Programs** (Landsman-Ayres)

You Have the Power Outreach Campaign (Costello)

Annual Energy Conference (Schell)

5:30 – 5:45 pm **Panel Members Only**

5:45 – 6:30 pm **Cross-Cutting Panel Deliberations**

PROJECT SUMMARIES

DEMP Panel

Project Summary

Project Title Departmental Energy Management Program

Presenters

1. Victor Petrolati
2. Will Lintner
3. Will Prue
4. Nick Malik (Argonne National Laboratory)
5. Ernest Fossum (Idaho National Laboratory)

FEMP Contact Victor Petrolati 202-586-4549

Overall Budget

FY 2004 - $2 million
FY 2005 - $2 million
FY 2006 - $2 million

Goal

Reduce energy and water consumption, improve energy efficiency, and reduce utility costs throughout DOE's facilities nationwide.

Legislative/Executive Order Mandates

1. Energy Policy Act of 1992
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
3. *Energy Policy Act of 2005*

Target Audiences

Department of Energy – 1) DOE facility and energy managers.

Private Sector – 1) DOE Management and Operations (M&O) facility contractors.

Project Description

The Departmental Energy Management Program (DEMP) works with DOE site personnel across the U.S. to help the agency's facilities rank potential retrofit projects and provide financial and technical support to implement projects. DEMP also advises site personnel on strategies and opportunities for leveraging private sector resources to finance facility projects. Departmental facilities include DOE Headquarters operations as well as DOE laboratories operating throughout the U.S. Retrofit projects cover a wide range of tasks including, but not limited to lighting upgrades, central heating plants upgrades, water efficiency improvements, building controls, chiller replacement, incorporation of sustainable design practices, application of commissioning best practices, and reduction in operating and maintenance costs.

The Energy Efficiency Working Group was established in 1991 to promote sustainable and energy efficient design practices at DOE facilities. DEMP; energy management professionals from DOE's Headquarters, field and operations facilities, and Regional Offices; the National Laboratories; and DOE's M&O contractors serve on the committee to exchange information and discuss opportunities to improve the efficiency of DOE faculties.

PROJECT SUMMARIES

Departmental Energy Management Program

Panel Departmental Energy and Utilities Management Program (DEMP)

Project Title DEMP Utility Program

Presenters

1. Alan Gann (FEMP)
2. Dale Swan (Exeter Associates, Inc.)

FEMP Contact Alan Gann

Overall Budget

FY 2004 - $562,000
FY 2005 - $584,000
FY 2006 - $606,000

Goal(s)

Enable DOE's utility service to meet mission needs at maximum reliability and lowest costs.

Protect DOE's consumer interests.

Legislative/Executive Order Mandates

1. GSA Delegations of Authority for utilities contracting and rate interventions
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
3. DOE Order 430.2A Departmental Energy and Utilities Management

Target Audiences

Federal Government – 1) Facility and energy managers and 2) Procurement officials.

Private Sector – 1) Utilities and 2) Energy Service Companies

Project Description

Department of Energy sites spend about $250M annually for electricity (85 percent) and natural gas (15 percent) to meet mission needs. Mirroring most major corporations, DOE utilities acquisition is the responsibility of the field offices. All such acquisitions are reviewed and approved by DOE-HQ (FEMP, Counsel and Procurement), using a graded approach. FEMP supplies guidance in utility acquisitions and, on request, can provide technical assistance to best meet mission needs, and also provide assistance in contract negotiations. To protect DOE's consumer interests, DOE intervenes before state and Federal regulatory commissions in rate increase cases and proposed changes of service.

Web site

Utility Program
http://www.eere.energy.gov/femp/program/utility/utilityman.cfm

PROJECT SUMMARIES

Technical Assistance Panel

Panel Technical Assistance

Project Title Project Assistance: 1) Technical Assistance and 2) Distributed Energy Resources

Presenters

1. Shawn Herrera (FEMP)
2. Andy Walker (NREL)
3. Kirby Wilcher (ORNL)

FEMP Contact Shawn Herrera

Overall Budget

FY 2004 - $2,200,000
FY 2005 - $1,800,000
FY 2006 - $1,600,000

Goal(s)

The FEMP Technical Assistance (TA) and Distributed Energy Resources (DER) activity helps Federal Energy Managers identify, design, implement, and evaluate new construction and facility improvement projects. The objective is to help agencies meet goals set by legislation and *Executive Order 13123*. The project contributes to the following FEMP Joule metrics set by EERE:

FY05 Joule Target-TA

Technical and design assistance for 60 projects which include energy efficiency, renewable energy, O&M, Distributed Energy Resources, Combined Heat and Power, SAVEnergy Audits, ALERTS and water conservation projects.

In FY06, the focus shifts to a fewer number of larger projects, because larger projects have delivered the bulk of the savings in previous evaluations of the program. Also new in FY 2006 is inclusion of a goal for Implemented Energy Savings, rather than just the number of projects.

FY06 Joule Target -TA

Technical and design assistance for 27 projects which include energy efficiency, renewable energy, O&M, Distributed Energy Resources, Combined Heat and Power,

ALERTS, and water conservation projects, which we expect to result in about 60 billion Btus in energy saved.

Legislative/Executive Order Mandates

TA and DER Project Assistance delivers energy savings contributing directly to Executive Order 13123 goals of 35 percent less building energy use 1985-2010, and Reduce source energy use (by on-site CHP).

Project Assistance delivers energy savings contributing directly to the goals of *Energy Policy Act of 2005* to reduce energy use 2 percent each year from FY 2006 - FY 2015 (2003 baseline), and that new buildings are to be designed to 30 percent below ASHRAE or IEC standard.

Target Audiences

The FEMP Technical Assistance program provided technical assistance to over 33 different Federal agencies in FY 2004 and FY 2005. The Department of Defense with all the branches of the service adds up to 31 percent of the projects, which is the largest agency customer (Army 14 percent; Navy 8 percent; Air Force 6 percent; Marine Corps 4 percent; DOD 1 percent). The General Services Administration is the second largest agency user with 10 percent of the projects. The National Park Service is also a large user of FEMP services with 9 percent of the projects. Other agencies assisted in FY 2004 and FY 2005 include: Department of Labor, National Geospatial-Intelligence Agency, National Institute of Standards and Technology, Princeton University Plasma Physics Laboratory, Internal Revenue Service, National Science Foundation, Bureau of Land Management, National Oceanic and Atmospheric Administration, Environmental Protection Agency, Indian Health Service, Department of Interior, U.S. Fish and Wildlife Service, Federal Aviation Administration, Social Security Administration, Department of Homeland Security, Air National Guard, Department of Veterans Affairs, U.S. Coast Guard; U.S, Postal Service, National Guard, National Aeronautics and Space Administration, Forest Service, and Department of Energy.

FEMP builds the most effective customer relationships with organizations that consider energy efficiency and renewable energy to be supportive of their mission. For example, the Department of Defense and National Park Service both operate many small facilities remote from the utility system, and both of these agencies look to FEMP for expertise with autonomous energy systems.

Project Description

The project may be described in three elements, listed with FY05 funding for each:

A. Planning and Analysis [23 percent]
B. Direct Project Assistance [68 percent]
C. Information and Outreach [9 percent]

A. Planning and Analysis

TA Planning and Analysis consists of:

- Multi-Year Plans (MYP)
- Quarterly TA Analysis Reports
- Status of Projects
- Energy and Cost Savings Estimates
- Trends in types of projects, agencies, etc
- Status of data quality
- Evaluation of the project and recommendations by LBNL
- Special Reports:
- Procurement of A&E Services for Energy Efficient Sustainable Buildings
- Enhancing ESPC in TA Projects
- Study of LEED in Federal Sector
- Targeting High-Energy-Use Buildings
- FEMPCentral Database maintenance and data quality

Additional considerations for Planning and Analysis of DER include:

- Market Analysis
- Headwind Analysis
- DOE CHP Multi-Year Plan (MYP)
- Integrated FEMP Support
- Follow-Up Support
- Executive Summary of FEMP's DER/CHP Current Knowledge
- Analyze DER/CHP Barriers and Maintain Solution Resources
- Maintain DER Database

B. Direct Project Assistance

Management strategy for the FEMP Technical Assistance program emphasizes performance metrics. Elements of the management strategy include:

- Developing expert resources to provide technical assistance
- Selecting projects to maximize savings and leverage resources (Call for Projects)
- Planning and coordination among projects.
- Reporting to measure the efficacy of the program.
- Follow up with past projects.

In order to select projects to assist, FEMP uses a well-defined "Call-for-Projects" process. DOE Regional Offices evaluate applications submitted by agencies according to a standard evaluation criterion (potential savings, replicability, etc). Regional Office representatives forward their recommendations to headquarters staff for allocating funding and designate national experts to provide the assistance. FEMP assists projects in any phase, but focuses on the early steps of project development. Work on each project consists of state-of-the-art energy and economic calculations involving new technologies. Assistance is also provided with procurement and financing strategies and specifications. Projects are tracked in a central database, FEMPCentral, which maintains detailed project information including energy and cost savings resulting from a project.

FEMP uses the following set of criteria to evaluate technical assistance requests.

- Cost Sharing
- Financial and Technical Merit
- Strategic value and Replicable/Showcase Potential
- Agency Support
- Project Description
- Project Implementation Plan

C. Information and Outreach

FEMP Technical Assistance and Distributed Energy Resources project provides information and outreach through publications, training/workshops/webcasts, conferences (Energy 200X tracks and others), case studies, and the *FEMP Focus* newsletter. Project experience is consolidated and made available through publications, websites, and conference presentations. For example, the Technical Assistance program condensed lessons learned from projects into the 2004 publication, "Procurement of Architectural and Engineering Services for Sustainable Buildings: a Guide for Federal Project Managers," DOE /GO-102004-1770. Technical assistance team members also contribute to the Whole Building Design Guide (http://www.wbdg.org).

Web site

Distributed Generation / Combined Heat and Power
http://www.eere.energy.gov/femp/technologies/derchp.cfm

Project Technical Assistance
http://www.eere.energy.gov/femp/services/projectassistance.cfm

Project Summary

Panel Technical Assistance

Project Title Sustainable Facilities

Presenter Beverly Dyer (FEMP)

FEMP Contact Beverly Dyer

Overall Budget

FY 2004 - $700,000
FY 2005 - $600,000
FY 2006 - $500,000

Goal

Encourage the adoption of life cycle cost effective sustainable design, construction, and operation of Federal facilities; ensure that energy efficiency and water conservation are key to implementation.

Legislative/Executive Order Mandates

1. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
2. *Energy Policy Act of 2005*

Target Audiences

Federal Government - 1) Federal facility and energy managers, Design and Construction Managers, procurement officials, 2) Interagency Sustainable Working Group, 3) Office of the Federal Environmental Executive, and 4) Federal Green Building Council.

Private Sector – 1) Architects and designers, 2) Construction industry, 3) Manufacturers of environmentally friendly products, 4) U.S. Green Building Council membership

Project Description

FEMP has been promoting sustainability since 1993, when the program assumed lead responsibility for coordinating the "Greening of the White House." Since then, FEMP has developed a program to transform the Federal sector through sustainable policy development, technical assistance, improved design and performance metrics tools, training, and information dissemination. Coordination and information exchange with other agencies is accomplished through the Interagency Sustainable Working Group

(ISWG). The ISWG was established by FEMP in 2001, and is now composed of over 200 Federal representatives representing a cross section of Federal agencies, including the Departments of Energy, Defense, Interior, Agriculture, State, and Health and Human Services; General Services Administration; Environmental Protection Agency; Office of Management and Budget; and National Aeronautics and Space Administration.

In addition to the greening of the White House and the Pentagon, the FEMP sustainable facilities program has been active in its accomplishments which include: a draft Interagency Memorandum of Understanding on Sustainable Design and Construction of Federal Buildings; "The Business Case for Sustainable Design and Construction" study and report; improved design and construction of federal building projects through design charrettes and direct technical assistance; the development of draft protocols and indicators for measuring sustainable building performance, and the on-line posting of sustainable Federal buildings as well as Federal policies, guidelines and directives on sustainable design and construction.

Website

Sustainable Design and Operations
http://www.eere.energy.gov/femp/technologies/sustainable.cfm

Interagency Sustainable Working Group
http://www.eere.energy.gov/femp/technologies/sustainable_workinggroup.cfm

Project Summary

Panel Technical Assistance

Project Title Laboratories for the 21st Century

Presenters

1. William Lintner (FEMP)
2. Dan Amon (Environmental Protection Agency)
3. Paul Mathew (Lawrence Berkley National Laboratory)
4. Dale Sartor (Lawrence Berkley National Laboratory)

FEMP Contact William Lintner

Overall Budget

FY 2004 - $330,000
FY 2005 - $330,000
FY 2006 - $300,000

Goal(s)

Increase energy efficiency and performance of new and existing laboratories through targeted technical assistance.

Increase capacity building in the laboratory sector through training and peer-to-peer information exchange.

Legislative/Executive Order Mandates

1. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
2. *Energy Policy Act of 2005*

Target Audiences

Federal Government – 1) Laboratory facility and energy managers, 2) Laboratory environmental, health, and safety managers, and 3) Laboratory users.

Private Sector – 1) Laboratory designers and builders, 2) Laboratory owners

Project Description

FEMP and the Environmental Protection Agency (EPA) founded the Laboratories for the 21st Century (Labs21) Program and FEMP has co-funded the program since 2001. FEMP and EPA recognized that standard energy conservation strategies were not

effective in laboratories, whether in the public and private sector, even though they are four to six times as energy intensive as a conventional office building. The Labs21 program has demonstrated that by using a whole building approach, laboratories can achieve annual operating cost savings of 30 to 50 percent by installing existing energy saving technologies, without compromising safety.

The Labs21 program leverages funding and resources from its partners and supporters to provide technical assistance and specialized training to laboratory owners and designers. This assistance includes helping laboratory designers and operators identify opportunities for improvement. Training programs include an Introductory Design course, advanced training on LEED and ventilation, and an annual Labs21 conference and exposition. In addition, a Toolkit has been developed providing design guidance, case studies, energy benchmarking information, and best practices guides.

Web site

Laboratories for the 21st Century
http://www.eere.energy.gov/femp/technologies/labs21.cfm

Project Summary

Panel Technical Assistance

Project Title Training

Presenter(s) Ted Collins (FEMP)

FEMP Contact Ted Collins

Budget History *

FY 2004 - $670,000
FY 2005 - $500,000
FY 2006 - $400,000

** Funding does not include FEMP training for project financing and several other FEMP-sponsored training activities.*

Goal

Improve the energy and water efficiency of Federal facilities by training Federal agency officials.

Legislative/Executive Order Mandates

1. *Energy Policy Act of 1992*
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management*
3. *Energy Policy Act of 2005*

Target Audience(s)

1) Federal facility and energy managers, 2) Federal procurement officials, and 3) Contractors involved in Federal facility projects.
2) On a space available basis: non-Federal government personnel.

Project Description

Each year, FEMP publishes a *Training Catalog* of workshops for Federal officials and project partners. The catalog is posted on the FEMP web site and distributed in print through the EERE clearinghouse and at workshops and conferences. Participants are encouraged to prepare and submit evaluation forms describing the effectiveness of each workshop; this information is entered into FEMP Central and reviewed by program staff to enhance future training workshops. Training workshops cover the following topics:

1. Operations and maintenance
2. Lighting
3. Design strategies
4. Renewable energy
5. Water resource management
6. Facility energy decision screening
7. Life-cycle costing
8. Energy management
9. Distributed generation
10. Laboratory design
11. Evolving energy markets
12. Buying energy efficient products
13. Energy Savings Performance Contracting
14. Utility Energy Services Contracting

Web site

Training
http://www.eere.energy.gov/femp/services/training.cfm

Online Training Catalog and site to download Training Catalog
http://www.eere.energy.gov/femp/services/training_catalog.cfm

Project Summary

Panel Technical Assistance

Project Title Renewable Energy

Presenters

1. Anne Crawley (FEMP)
2. David McAndrew (FEMP)
3. Nancy Carlisle (National Renewable Energy Laboratory
4. Kevin DeGroat (McNeil Technologies, Inc.)

FEMP Contact Anne Crawley

Overall Budget

FY 2004 - $1,250,000
FY 2005 - $1,250,000
FY 2006 - $1,250,000

Goal(s)

By 2005, obtain the equivalent of 2.5 percent of Federal electricity use from renewable energy.

Increase the acquisition of electricity from renewable resources for Federal use:

- 2007 – 2009 – increase to 3 percent
- 2010 – 2012 – increase to 5 percent
- 2013 and beyond – increase to 7.5 percent

Legislative/Executive Order Mandates

1. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
2. *Energy Policy Act of 2005*

Target Audiences

Federal Government – 1) Facility and energy mangers, 2) Contracting officers, 3) Agency Headquarters contacts, 4) Federal Land Owning Agencies, 5) Federal Procurement Agencies, 6) Other DOE EERE Offices, and Green Power Partnership.

Non-Federal Organizations – 1) Renewable industry stakeholders. 2) Utilities, 3) State and local government agencies,

Project Description

To achieve the mandated renewable energy goals for the Federal sector, FEMP has designed and implemented a program to achieve mainstream use of renewable energy in Federal buildings through purchases of renewable power and installation of on-site renewable energy projects. To accomplish this, FEMP provides Federal agencies with technical information on renewable energy, direct technical assistance for the purchase of power from renewable resources and for construction of on-site renewable projects, and conducts an ongoing education and outreach program. In addition, FEMP leverages the resources of other Federal agencies and state and utility renewable programs to support the renewable energy program.

Web site

Renewable Energy
http://www.eere.energy.gov/femp/technologies/renewable_energy.cfm

Project Summary

Panel Technical Assistance

Project Title Facility Assessments

Presenters

1. Will Prue (FEMP)
2. Barry Simon (Simon Associates)
3. Steve Parker (Pacific Northwest National Laboratory)
4. Melissa Madgett (Oak Ridge National Laboratory)

FEMP Contact Will Prue

Overall Budget

FY 2004 - $950,000
FY 2005 - $525,000
FY 2006 - $525,000

Goal

Identify ways to reduce energy consumption and costs, water usage and costs, and operations and maintenance costs in Federal facilities through the use of audits and other measures. Industrial assessments may also identify productivity improvements and waste reductions.

Legislative/Executive Order Mandates

1. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
2. *Energy Policy Act of 2005*

Target Audiences

1) Federal facility, energy, and maintenance managers and staff, 2) Federal facility operations managers of energy-intensive processes, and 3) Agency top-level managers of their respective Federal facilities.

Project Description

SAVEnergy Audits FEMP provides direct technical assistance to Federal facilities. SAVEnergy audits, identify cost-effective energy conservation measures, and operations and maintenance practices to reduce energy use at Federal facilities. Audits are conducted by competitively selected small businesses.

ALERT Teams Facilities experiencing oil and natural gas price volatility and supply shortages are primary candidates for FEMP's Assessment of Load Energy Reduction Techniques (ALERTs) Team. This service is performed by DOE's National Laboratories and small business contractors.

The Industrial Facilities Initiative provides assessments which focus on energy intensive, process-related operations. The assessments are conducted by DOE's Industrial Technologies Program's experienced assessment teams consisting of Industrial Assessment Centers, BestPractices Qualified Specialists, and National laboratories.

Web sites

SAVEnergy Audits
http://www.eere.energy.gov/femp/services/assessments_savenergy.cfm

ALERT Teams http://www.eere.energy.gov/femp/services/assessments_alert.cfm

Industrial Assessments
http://www.eere.energy.gov/femp/services/assessments_industrial.cfm

Project Summary

Panel Technical Assistance

Project Title A Federal Initiative for Deployment of Emerging Technologies

Presenters Brad Gustafson (FEMP)

FEMP Contact Brad Gustafson

Overall Budget

FY 2004 - $ 635,000
FY 2005 - $ 1,018,000
FY 2006 - $ 1,018,000

Goal

Increase acceptance and rate of adoption for new/underutilized technologies through added emphasis on the emerging technologies. Elements of the activity include: FEMP's current New Technology Demonstration Program (NTDP), more extensive technology identification and rigorous analysis of technologies, greater collaboration across FEMP program elements and with other EERE programs, and developing partnerships with private sector energy service providers and NGOs.

Legislative/Executive Order Mandates

1. *Energy Policy Act of 1992*
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management*
3. *Energy Policy Act of 2005*

Target Audiences

Federal Government - 1) Facility and energy managers and 2) Procurement officials.
.
Private Sector – 1) Technology developers and manufacturers, 2) Energy Service companies, and 3) Utilities.

Project Description

Legislative mandates, executive orders, and the need to contain rising energy costs, and environmental concerns have demanded that Federal agencies improve energy efficiency since the 1970s. These efforts have been highly successful and remain important in a time of rising energy costs, concerns about grid reliability, and supply constraints. For continued success in containing energy costs and addressing new more demanding energy goals there must be an added emphasis on the

implementation of emerging technologies. Management of the risks inherent in new technologies and rapid acceptance and adoption of those technologies are essential if we are to meet the new goals and manage increasing costs. FEMP's new Emerging Technologies Initiative is a natural extension of FEMP's work with Federal agencies to bring viable technologies to the federal marketplace.

Previous goals have been met through projects implemented without special attention to deployment of new and emerging technologies. This special attention is necessary if we are to meet the challenges of energy cost containment and the energy reduction goals for Federal facilities. Accelerating acceptance and deployment of emerging technologies in the Federal sector represents an opportunity to accelerate receiving the benefits of cost and energy saving associated with innovative technologies.

The following activities are included under the Emerging Technologies Initiative. The NTDP is a sub-element of Emerging Technologies.

1. Develop an understanding of R&D technologies
2. Identification and analysis of technologies available for deployment.
3. Testing and Validation
4. Demonstration
5. Design assistance
6. Training
7. Implementation tools
8. Publications and outreach

Web sites

New Technologies
http://www.eere.energy.gov/femp/technologies/tech_demos.cfm

Technology Publications
http://www.eere.energy.gov/femp/technologies/techdemo_publications.cfm

Energy Efficient Technologies
http://www.eere.energy.gov/femp/technologies/eeproducts.cfm?print

Project Summary

Panel Technical Assistance

Project Title Life-Cycle Cost Methodology

Presenter Ted Collins (FEMP)

FEMP Contact Ted Collins (FEMP)

Budget History

FY 2004 - $255,000
FY 2005 - $ 55,000
FY 2006 - $ 55,000

Goal

Implement life-cycle costing government wide to ensure cost effective energy and water conservation and renewable energy projects in Federal facility projects.

Legislative/Executive Order Mandates

1. *Energy Policy Act of 1992*
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management*
3. *Energy Policy Act of 2005*

Target Audience(s)

1) Procurement officials, 2) Facility and energy managers, 3) Building engineers and architects, 4) Federal energy analysts, 5) Federal budget analysts, 6) State and local government agencies, and 7) Private sector consultants.

Project Description

The purpose of this project is to integrate agency-specific criteria and Federally mandated directives to help Federal agencies incorporate life-cycle costing (LCC) into facility project design. To accomplish this, FEMP develops methods and software that provides agency officials with the most current information on energy price projections and discount rates and related information. FEMP also sponsors training workshops and provides technical assistance to educate Federal officials about LCC. Information products include, but are not limited to:

1. Handbook 135 and Supplement
2. Student Manuals
3. Instructor's Guide

4. LCC Guidance for Executive Order 13123
5. FEMP web site tutorial (Energy Management Workshop)
6. LCC software:
    - B:CC% Building Life Cycle Cost Program
    - ERATES (electricity cost calculations)
    - EERC (Energy escalation Rate Calculator for ESPC analyses)
    - DISCOUNT (discount factors)
    - EMISS (customized emissions)

Website

Life-Cycle Costing http://www.eere.energy.gov/femp/program/lifecycle.cfm

BLCC software http://www.eere.energy.gov/femp/information/download_blcc.cfm

Project Summary

Panel Technical Assistance

Project Title New Technology Demonstrations

Presenters Ted Collins (FEMP)

FEMP Contact Ted Collins
Overall Budget

FY 2004	$450,000
FY 2005	$450,000
FY 2006	$450,000

Goal

Assist Federal agency personnel in making informed decisions regarding the potential applications of new and emerging energy and renewable energy technologies in Federal facilities and operations.

Legislative/Executive Order Mandates

1) Energy Policy Act 1992

SEC. 549. DEMONSTRATION OF NEW TECHNOLOGIES.

(a) DEMONSTRATION PROGRAM- The Secretary, in cooperation with the Administrator of General Services, shall establish a demonstration program to install, in federally owned facilities or federally assisted housing, energy conservation measures for which the Secretary has determined that such installation would accelerate commercial viability.

2) Executive Order 13123 – Greening the Government through Efficient Energy Management

Call for the Federal Government to foster markets for emerging technologies.

Target Audiences

Federal Government – 1) Facility and energy managers, 2) Facility engineers, 3) Utility managers, and 4) Procurement managers.

Private Sector – 1) Design engineers and 2) Contractors

Project Description

The purpose of this initiative is to provide Federal officials with timely information on new and emerging energy saving technologies. The review and selection process

includes technologies funded by the Department of Energy as well as technologies recommended by the Inter-Laboratory Council and approved by FEMP. Selected technologies are promoted through FEMP's communication's network, including the FEMP web site, the EERE Information Center, the *FEMP Focus* newsletter, Technology Demonstration reports, Federal Technology Alerts, and other publications.

Web site

New Technology Demonstration Program
www.eere.energy.gov/femp/prodtech/newtechdemo.html

PROJECT SUMMARIES

Planning, Reporting, and Analysis Panel

Panel Planning, Reporting, and Analysis

Project Title Policy Analysis and Related Activities

Presenter(s)

1. Joan Glickman (FEMP) – Program Assessment Rating Tool (PART)
2. Brian Connor (FEMP) – Multi-Year Plan (MYP)
3. Mary-Lynn Wrabel (Energetics, Incorporated) – Legislative Monitoring and Reporting, Federal Energy Management Advisory Committee (FEMAC)

FEMP Contact Joan Glickman and Rick Klimkos

Budget History

FY 2004 - $330,000
FY 2005 - $420,000*
FY 2006 - $270,000

* In FY2005, funding increased to accommodate MYP and PART deliverables.

Goals

To prepare and update FEMP's Multiyear Plan and the Program Assessment Rating Tool.

To monitor and report on Federal, state, and local energy-related legislative initiatives, especially policies and programs that impact the Federal sector.

To coordinate the Federal Energy Management Advisory Committee.

Legislative/Executive Order Mandates

1. *Energy Policy Act of 1992*
2. *Executive Order 13132 – Greening the Government through Efficient Energy Management*
3. *Energy Policy Act of 2005*

Project Description

Planning and Analysis – FEMP engages in a number of planning and analytical activities including development of multi-year plans on a semi-annual basis and completion of the OMB-directed Program Assessment Rating Tool process. FEMP works with staff, its larger team of laboratory and regional office contacts, as well as outside stakeholders to develop and refine its strategy and services. In addition to these major planning and assessment activities, FEMP undertakes a range of analytical efforts to ensure that its services are appropriate, effective, and well targeted.

Legislative and Policy Analysis – Federal, state, and local energy legislation, policies, and directives are monitored and reported on a regular basis. This information is used to help Federal agencies meet mandated energy goals and remain current on Administration and state and local government initiatives that impact the Federal Government. Information is reported in multiple venues, including:

1. *Insights* – electronic newsletter on Congressional hearings and legislation and Administration policy initiatives (distributed to Federal officials weekly while Congress is in session and posted on FEMP web site).
2. *FEMP Monthly Update* – electronic newsletter that reports on the policies and energy programs of Federal, state, and local governments; utility and supplier industry activities; private sector energy projects; new energy-related studies, reports, and analyses; new energy-related conferences, workshops, and training programs; new and emerging technologies. (distributed to Federal officials monthly and posted on FEMP web site).
3. Side-by-Side Analysis of Annual Appropriations bills that include funding for Federal construction, renovation, and energy projects.
4. Summary of Annual Appropriations bills – includes funding for specific Federal construction and renovation projects.
5. Legislative Data Base – Reports and monitors pending Federal legislation of interest to FEMP and Federal energy officials.

Federal Energy Management Advisory Committee – FEMAC was established by *Executive Order 13123* to provide the Secretary of Energy with advice on enhancing energy management in the Federal sector. The committee generally holds two public meetings a year to obtain input from Federal officials and the building community on issues and barriers inhibiting energy management in the Federal sector as well as examples of successful energy management projects. FEMAC holds monthly conference calls in which the committee is briefed by FEMP staff on the status of pending legislative and policy initiatives, FEMP's budget, and FEMP's policy planning activities (e.g., Multiyear Plan, Program Assessment Rating Tool, Peer Review). FEMAC also receives briefings on FEMP's key program activities. The committee

establishes working groups to address FEMAC priorities, including Energy Savings Performance Contracting, and Performance Metrics.

Target Audiences

Multiyear Plan – 1) FEMP Team (FEMP, national laboratory, and contractor staff), 2) EERE Management Team, 3) Interagency Energy Management Task Force, and 4) Office of Management and Budget.

Program Assessment Rating Tool – 1) Office of Management and Budget

Legislative and Policy Analysis – 1) FEMP Team, 2) All Federal officials interested in energy management in the Federal Sector, 3) other EERE program staff, 4) building community

Federal Energy Management Advisory Committee – 1) FEMP Team, 2) EERE Management Team, 3) Secretary of Energy, 4)) All Federal officials interested in energy management in the Federal Sector, and 5) building community

Web sites

Planning and Analysis
http://www.eere.energy.gov/femp/about/about.cfm

FEMAC
http://www.eere.energy.gov/femp/about/femac.cfm

Legislative and Policy Analysis
http://www.eere.energy.gov/femp/about/legislation.cfm

Project Summary

Panel Planning, Reporting, and Analysis

Project Title Interagency Coordination

Presenter(s) Chris Tremper (McNeil Technologies, Inc.)

FEMP Contact Rick Klimkos

Budget History

FY 2004 - $240,000
FY 2005 - $240,000
FY 2006 - $260,000

Goal(s)

Interagency Coordination – Stimulate increased energy efficiency throughout the Federal sector.

Legislative/Executive Order Mandates

4. *Energy Policy Act of 1992*
5. *Executive Order 13123 – Greening the Government through Efficient Energy Management*

Target Audience(s)

1) Agency headquarters energy coordinators, 2) Office of Management and Budget, 3) Assistant Secretary-level decision makers, 4) Working group technical staff, and 5) Business community stakeholders.

Project Description

Interagency Coordination

The Interagency Energy Management Task Force, which is chaired by FEMP, is the Federal Government's primary interagency entity involved in energy management. The task force meets approximately six times a year and establishes working groups to address ongoing issues or issues requiring immediate, but short-term attention (e.g., preparation of legislative guidance) by the task force. Tasks force members serve as the key Energy Coordinators for their agencies and meet to address and resolve technical issues associated with achieving the energy and water management goals of the *Energy Policy Act* and *Executive Order 13123*. Current working groups include:

1. Renewable Energy Working Group

2. Sustainable Energy Working Group
3. Reporting Working Group
4. Procurement Working Group

FEMP Central

Created in the 1990s, the FEMP Central data base collects and documents information on FEMP projects and related contract information. In addition, the data base is used to document the names of individuals who register for FEMP's annual conference and the program's various training programs and workshops. The data base is also used to disseminate program-related materials and information to targeted audiences (e.g., procurement officials, facility managers) whose contact information is contained in the data base.

Project-related data includes: 1) award date, 2) completion date, 3) facility locations, 4) energy savings (Btu), 5) cost savings, 6) investment, and 7) other fields as directed by FEMP Program Leads.

Contact-related data includes: 1) Associated projects, 2) affected facilities, 3) trainings and meeting participation, 4) materials ordered/ongoing subscriptions to FEMP newsletters, and 5) basic information.

Websites

Interagency Coordination
http://www.eere.energy.gov/femp/about/policy.cfm

FEMP Central http://www.fempcentral.com

Project Summary

Panel Planning, Reporting, and Analysis

Project Title Communications and Outreach

Presenters

1. Annie Haskins (FEMP) - Overview
2. Bob Payn (db interactive Inc) – FEMP Web Site
3. Ann Jones (National Renewable Energy Laboratory) – FEMP Web Site
4. Bill Martin (NCI Information Systems) - EERE Information Center (IC)
5. Jennifer Landsman-Ayres (McNeil Technologies, Inc) – Annual Awards Program
6. Carl Costello (Greening America) – *You Have the Power* Outreach and Communications Campaign
7. Skye Schell (FEMP) – Annual Energy Workshop and Exposition
8. Rosemarie Field (McNeil Technologies, Inc.) – FEMP Central

FEMP Contact Annie Haskins

Budget History

FY 2004 - $1,047,900
FY 2005 - $ 938,400
FY 2005 - $ 937,400

Goals

FEMP Web Site – Develop and maintain the FEMP web site as the primary channel for the dissemination of Federal energy management Information to Federal officials government wide.

EERE Information Center – Provide a centralized location for disseminating all EERE products and services, including material prepared by FEMP, to federal energy managers, individual federal employees, as well as public and private sector stakeholders.

Annual Awards Program - Provide recognition to Federal agencies, individuals, or teams of Federal employees for outstanding performance in conducting energy and water conservation programs.

You Have the Power Outreach and Communications Campaign – Support and coordinate the energy management outreach efforts of the 21 largest Federal energy users.

Annual Workshop and Exposition – Provide an annual forum in which Federal facility and energy managers, procurement officials, and private sector partners (e.g., utilities, energy service companies, equipment manufacturers) can attend information and

training sessions and network to increase the number and effectiveness of energy and water-saving projects in Federal facilities nationwide.

Legislative/Executive Order Mandates

1. *Energy Policy Act of 1992*
2. *Executive Order 13123 – Greening the Government through Efficient Energy Management.*
3. Assistant Secretary Directive (2003) – consolidate all existing EERE hotlines and clearinghouses.
4. *Energy Policy Act of 2005*

Project Description

FEMP Web Site - The FEMP web site provides Federal agencies and other interested parties with a "one stop" resource for program information, including staff contacts, descriptions of program services, FEMP publications and products, and registration for FEMP's annual energy conference and topic-specific training programs. Visitors also gain access to a wide array of information on energy efficiency and renewable energy technologies, federal energy management policies, and energy efficient products procurement assistance.

EERE Information Center (IC) - functions as a clearinghouse of information under the jurisdiction of the Assistant Secretary for Energy Efficiency and Renewable Energy. The IC supports the 11 EERE programs including FEMP, and the Offices of Building Technologies, the Solar Technology, Industrial Technology, among others.

IC services include:

1. "Ask an Energy Expert" and the Customer Support Service
2. Advanced Service Program – Tiers 1,2, 3 customer support
3. Comprehensive Data Base of information on EERE programs
4. Integrated access to all EERE program office publications, including publications developed by FEMP.
5. Support for FEMP's outreach efforts, including Earth Day and Energy Awareness Month (October of each year).
6. Support for FEMP's conferences and training programs, providing bulk distribution of program materials for distribution at these events.

Each year, FEMP develops new and updates existing program material. Information includes the quarterly *FEMP Focus* newsletter. FEMP also publishes a variety of technical and non-technical materials, including program overviews, case studies, fact sheets, Technology Alerts, reports, software, etc.

Annual Awards Program – On an annual basis, FEMP solicits nominations for award recognition for outstanding performance in the conduct of energy and water-saving programs in the Federal sector. Awards are presented each October during Energy Awareness Month in Washington, DC. Award categories include:

1. Presidential Award

2. Federal Energy and Water Management Award
3. DOE Departmental Energy Management Awards
4. Showcase Awards

You Have the Power Outreach and Communications Campaign – The program was launched in 1998, as a partnership involving 10 Federal agencies. The government wide campaign currently involves the participation of 21 Federal departments and agencies throughout the U.S. and overseas. The program, which is funded and coordinated by FEMP involves a compelling, unified, and visually stimulating educational approach to communicating with Federal facility and energy managers and Federal employees. The campaign's themes include:

1. Federal energy management is sound business practices – good for the bottom line.
2. Energy management is a government wide shared responsibility, carried out through individual agency action and the efforts of "Energy Champions."

The campaign includes three components:

1. The Federal Government should "Lead by Example."
2. "Energy Champions" spearhead programs at the agency or facility level.
3. Energy projects result in energy and cost savings for the Federal Government.

Annual Workshop and Exposition – FEMP's annual workshop and exposition is conducted on in a different location and serves as the major Federal energy management event of the year. The workshop is cosponsored by the Department of Defense and the General Services Administration and provides three days of issue-oriented tracks to help Federal officials and their private sector partners design and implement energy and water saving projects in Federal facilities nationwide. Energy 2005 was held in August in Long Beach, California and drew approximately 1,500 participates and 128 exhibitors. Energy 2006 will be held in Chicago in August 2006.

Target Audiences

Federal Government - 1) FEMP Team, 2) Facility and energy managers, 3) Federal employees, 4) Senior Energy Officials government wide, 5) Training officials, 6) Procurement and Contracting officials, and 6) Agency Training officials.

Private Sector – 1) Energy Service Companies, 2) Utilities, 3) Technology companies, and 4) associations representing the building industry.

Other – 1) State and local governments, 2) Non-profit organizations, and 3) the General Public.

Web site

FEMP Web Site http//www.eere.energy.gov/femp

EERE/FEMP Information Center http://www.eere.energy.gov/informationcenter

Annual Awards Program and *You Have the Power* Outreach and Communications Campaign http://www.eere.energy.gov/femp/services/outreach.cfm

Annual Energy Workshop and Exposition
http://www.eere.energy.gov/femp/energy_expo/2005/

Project Summary

Panel Planning, Reporting, and Analysis

Project Title Interagency Coordination

Presenter Chris Tremper (McNeil Technologies, Inc.)

FEMP Contact Rick Klimkos

Budget History

FY 2004 - $50,000
FY 2005 - $50,000
FY 2006 - $70,000

Goal(s)

Interagency Coordination – Stimulate increased energy efficiency throughout the Federal sector.

Legislative/Executive Order Mandates

6. *Energy Policy Act of 1992*
7. *Executive Order 13123 – Greening the Government through Efficient Energy Management*
8. *Energy Policy Act of 2005*

Project Description

Interagency Coordination

The Interagency Energy Management Task Force, which is chaired by FEMP, is the Federal Government's primary interagency entity involved in energy management. The task force meets approximately six times a year and establishes working groups to address ongoing issues or issues requiring immediate, but short-term attention (e.g., preparation of legislative guidance) by the task force. Task force members serve as the key Energy Coordinators for their agencies and meet to address and resolve technical issues associated with achieving the energy and water management goals of the *Energy Policy Act* and *Executive Order 13123*. Current working groups include:

5. Renewable Energy Working Group
6. Sustainable Energy Working Group
7. Reporting Working Group
8. Procurement Working Group

Target Audience(s)

1) Agency headquarters energy coordinators, 2) Office of Management and Budget, 3) Assistant Secretary-level decision makers, 4) Working group technical staff, and 5) Business community stakeholders

Web site

Interagency Coordination http://www.eere.energy.gov/femp/about/policy.cfm

PROJECT SUMMARIES

Financing Panel

Project Summary

Project Title Utilities

Presenters

1. David McAndrew (FEMP) - Overview
2. Chuck Goldman (Lawrence Berkeley National Laboratory) - Energy Markets and Education
3. Kate McMordie (Pacific Northwest National Laboratory) - Federal Utility Partnership Working Group and Data Collection and Analysis
4. Karen Thomas (National Renewable Energy Laboratory) – Utility Energy Service Contract: Direct Assistance
5. Julia Kelley (Pacific Northwest National Laboratory) – Outreach Activities and Project Impact and Assessment

FEMP Contact David McAndrew

Overall Budget

FY 2004 $1.78 million
FY 2005 $1.48 million
FY 2006 $1.38 million

Goal

To improve utility management decisions and reduce energy use at Federal sites by:

Providing federal agencies with the guidance, training and technical assistance needed to implement Utility Energy Service Contracts (UESC) in a responsible and cost effective manner

Encouraging partnerships between Federal sites and the local serving utility to implement EERE projects

Educating agencies about developments in the utility industry including industry restructuring and the availability of public benefits funding

Legislative/Executive Order Mandates

1. *42 USC 8256 Energy Policy Act 1992*
2. *10 USC 2865 Energy Savings at Military Installations*
3. *10 USC 2866 Water Savings at Military Installations*
4. *Federal Acquisitions Regulations Part 41*
5. *Executive Order 13123*
6. *Energy Policy Act 2005*

Target Audiences

1) Federal procurement officials, 2) Federal facility and energy managers, 3) franchised utilities, 4) energy service companies, and 5) financiers

Project Description

Energy Markets Education Through its web site, FEMP provides Federal agencies with current information, on a state-by-state basis, on energy efficiency and demand response programs. FEMP also provides agencies with direct assistance to access these programs to fund projects at their sites. FEMP also provides state-by-state information on electric and natural gas industry restructuring. The Utility Management section of the FEMP web site is the most comprehensive source for this information on the web and it is tailored to Federal customers.

Additionally, FEMP prepares regional newsletters that highlight significant opportunities in energy efficiency, demand response and renewable energy in regions with the most opportunities for Federal customers. FEMP also annually conducts an Evolving Energy Markets Workshop to discuss trends in the industry and provide advice to agencies on how to procure electricity and natural gas in restructured markets.

Federal Utility Partnership Working Group (FUPWG) FUPWG serves as the only forum to encourage Federal agencies, local utilities and energy service companies to develop strong partnerships aimed at implementing energy efficiency improvements in Federal facilities. FUPWG members also work to address common issues and barriers related to cost effective utility management. Additionally, FUPWG provides FEMP with the opportunity to develop and implement necessary guidance for UESCs and obtain agency and stakeholder support by including members in guidance development and review.

FEMP provides leadership as well as technical and logistical support to FUPWG. Utility partners take turns hosting semiannual workshops. During FUPWG workshops, members share best practices and lessons learned in implementing UESCs. Workshops also include presentations by FUPWG members and other interested parties on a wide variety of issues; including legislative requirements and guidance,

contracting for utility services, project case studies, utility privatization, new and emerging technologies, utility industry restructuring, effective energy purchasing and metering etc…(see agendas in book).

Guidance, Training and Direct Assistance FEMP has taken a leadership role in ensuring that agencies have the necessary guidance to implement UESCs in a cost effective and responsible manner. FEMP's guidance encompasses: enabling legislation, agency legal opinions and policies, model agreements, lessons learned, best practices, and performance assurance recommendations. FEMP works through FUPWG and the Interagency Energy Management Task Force to enlist agency and stakeholder support for FEMP's guidance documents.

FEMP provides the only comprehensive training for Federal agencies and their utility and ESCO partners on the implementation of UESC projects. FEMP's training centers operate on a project team approach and cover project implementation from energy conservation measure (ECM) identification through performance verification. For agencies and sites that need additional assistance, FEMP provides direct technical assistance tailored to respond to each facility's unique needs. FEMP's assistance may vary from simple advice and consultation on a specific issue to in-depth project facilitation where an experienced FEMP team member joins the agency's project team.

Utility Outreach and Publications FEMP conducts workshops, publishes and disseminates information on UESCs to ensure that Federal agencies and industry stakeholders have access to the most current information on these programs. FEMP also works to encourage greater participation by local utilities and Federal agencies in implementing UESCs by enhancing their education and awareness of available utility programs and services. FEMP regularly presents information to utility trade association and Federal procurement officials' meetings and assists agencies and utilities in starting new programs.

Utility Energy Service Contracts Data Collection and Analysis The FEMP Utility Program supports the only systematic data collection of information on UESC projects. The data is collected on a voluntary basis from Federal agencies and FEMP's utility partners in an effort to identify and understand key trends in UESC activity. Data is collected on an ongoing basis and analyzed to determine by fiscal year, the number of projects financed by UESCs, total capital investment, private sector investment, project financing rate, estimated annual cost savings, and estimated annual energy savings (billion Btu). Collecting this data provides FEMP and our agency partners with critical information for management to demonstrate the effectiveness of the UESC contracting vehicle.

Assessment of FEMP Utility Project In an effort to identify the impact FEMP's Utility Program is having on Federal agency use of UESC, FEMP is conducting an analytical assessment of the program. To accomplish this, FEMP has developed a "Logic Model" to identify and describe the UESC program's inputs, outputs, and outcomes. By conducting this evaluation FEMP will be better able to determine the value of FEMP's UESC activities relative to other potential uses of this funding.

Project Summary

Project Title Financing

Presenters:

1. Tatiana Strajnic (FEMP) – Super ESPC Program and Goals, Federal ESPC Steering Committee
2. Joyce Ziesler (Golden Field Office) – Golden Field Office and the Super ESPC Role
3. Jeffery Dominick (NREL) ESPC Process
4. Chris Abbuehl (FEMP) – ESPC and Advanced EE and RE Technologies
5. Doug Dahle (NREL) Federal ESPC Steering Committee
6. Patrick Hughes (ORNL) - ESPC Tools and Quality Assurance
7. John Shonder (ORNL) – ESPC Tools and Quality Assurance
8. Dale Sartor (LBNL) – ESPC M&V Quality Assurance
9. Tim Kehrli (TLK Associates) – Project Facilitator on the Ground
10. Thomas Hattery (FEMP) – ESPC Representatives in the Field

FEMP Contact
Overall Budget:

FY 2004 – $6,447,000
FY 2005 – $5,963,000
FY 2006 – $5,106,000

Goal(s):

To provide an innovative and alternative mechanism (Energy Savings Performance Contracts or ESPCs) to finance energy management projects in Federal facilities government wide.

Legislative/Executive Order Mandates:

1. *Executive Order 13123 – Greening the Government through Efficient Energy Management*
2. *FY 2005 Defense Authorization Act*
3. *Energy Policy Act of 2005*

Target Audiences:

1) Agency HQ Facility Management Policymakers, 2) Federal Procurement Officials, 3) Federal facility and energy managers, 4) utilities, 5) energy service companies, and 6) financial community.

Project Description

Super ESPC Contracting Overview and Goals Super ESPC contracts were designed to streamline the cumbersome Federal procurement process. Super ESPCs function as an "umbrella" contract allowing agencies to finance projects to address facility-specific needs. Super ESPCs reduce transaction costs, standardize terms and conditions, and streamlined process.

Golden Field Office and Super ESPCs Since 2000, the office has served as the lead Contract Administrator for ESPCs and Super ESPCs. GO's role is to standardize and centralize ESPC contracts; the office's responsibilities include monitoring and documenting ESPC and Super ESPC project costs and conducting an annual review of the FEMP Services pricing structure. The GO prepares quarterly reports for FEMP, documenting project costs, recovered funding budget forecasts, and the distribution of those funds.

DOE Super ESPC Process FEMP has assembled a team of expert contracting and technical resources to help agencies implement as many Super ESPC Deliver Orders as economically and technically possible. The team includes Project Facilitators and National Laboratory Personnel to work directly with facility officials to pre-screen projects. Laboratory staff provides the first line of technical support to the Contracting Officer and Project Facilitators. Labs provide in-depth assistance on Measurement and Verification, projects risks and responsibilities, and technology reviews.

ESPC's and Advanced Energy Efficiency/Renewable Energy Technologies Through the use of technology-specific ESPCs, FEMP expects to mainstream advanced energy efficiency and renewable energy technologies through alternative financing mechanisms. A number of proven and advanced technologies are saving energy in the public and private sector every day. As a result, agencies are encouraged to consider the range of available advanced technologies for their projects through the use of technology-specific ESPCs: solar photovoltaic (1998), geothermal heat pump (1998); biomass and alternative methane fuels (2002), combined heat and power (2003), and ESPC replication for renewable energy (2005).

Federal ESPC Steering Committee The committee, which has evolved since first established in 1998, meets quarterly to address ESPC policy and legal and contracting interpretation issues. The committee develops consistent procedural mechanisms for implementing ESPCs government wide. Committee members share experiences and lessons learned and identify opportunities as well as barriers to implementing ESPCs. Working groups are established to examine and resolve specific barriers. The committee is composed of headquarters officials form the major Federal agencies and is chaired by Cdr Rob Tomiak of the Defense Department and Tatiana Strajnic.

ESPC Tools and Quality Assurance and Improvement FEMP continuously examines the program's Super ESPC tools to ensure value to the Federal customer. This ongoing review involves developing performance metrics and monitoring and improving the quality of the overall program. FEMP has determined that all ESPC projects should

result in significant energy savings and provide a fast cycle time, competitive pricing of energy conservation measures and performance period services, competitive financing, and savings that accrue through the life of the contract. In addition, all ESPC projects must operate in compliance with Federal legislation and guidance.

FEMP Super ESPC Measurement & Verification (M&V) – Quality Assurance & Improvement M&V is regarded as the "core" of an ESPC; without adequate M&V, an ESPC is not a performance contract. To ensure that every ESPC includes M&V, FEMP has developed and updates M&V guidance documents and tools for Federal agencies. This effort includes standardizing M&V across the Federal Government while taking into to account state-of-the-art M&V procedures.

DOE Super ESPC Project Facilitator Program DOE has long recognized the need for specialized assistance on ESPC projects. Project Facilitators were provided since 1998 in order to provide Federal agencies with consistent, thorough, and competent technical assistance and guidance for implementing Super ESPC projects. Project Facilitators focus on all government agencies within a given DOE region. Project Facilitators work one-on-one with individual facility officials to design and implement Super ESPC projects.

Super ESPCs - Alternative Financing Representatives FEMP launched Alternative Financing Representative (AFR) in the field in 2002 to promote ESP and other alternative financing mechanisms. AFRs provide agencies with consistent information serve as a conduit to providing facilities with more specialized information on designing and implementing energy efficiency and renewable energy projects.

Peer Review Criteria: DOE FEMP Program Level

I. Quality

1 2 3 4 5
Very Poor Outstanding

Quality an Adequacy of Resources – What is the quality of FEMP's technical approach to fulfilling its mission, quality of its staff and contractor resources, facilities, and support services? Does FEMP have the capability and capacity to provide technically competent services to its Federal customers? Are FEMP's staffing and administrative resources adequate?

II. Productivity

1 2 3 4 5
Very Poor Outstanding

Contribution – What is the value of the Program's outputs and accomplishments compared to its costs?

III. Accomplishments

1 2 3 4 5
Very Poor Outstanding

Effectiveness in Changing Attitudes, Behaviors, and Ability to Implement ECMs – How effective is FEMP in bringing about changes from "business as usual" at other Federal agencies? How effective is FEMP in bringing about substantial increases in the agencies' ability to implement energy savings projects? How effective is FEMP in reaching senior energy officials throughout the Federal Government to address energy management issues? How effective is FEMP in convincing senior agency officials that saving energy in their facilities will help them achieve their agency-specific missions? Provide specific examples.

Effectiveness in Increasing Investment – How effective is FEMP in bringing about significant, direct investment in energy efficiency and renewable

projects in the Federal sector? Provide specific examples, including actual or potential effects on the buildings market generally. How effective is FEMP in deploying new and emerging technologies? Provide specific examples, including technologies funded through DOE research.

IV. Relevance to Mission and Goals

1 2 3 4 5
Very Poor Outstanding

Contribution and Integration – Does the Program contribute critically to EERE's mission in supporting DOE? What does the Program and its activities provide in terms of important actual and potential contributions to EERE's and DOE's missions, goals, or strategies, and to society generally?

Accomplishment Highlights – What are FEMP's most important accomplishments to date (*e.g.*, meeting goals, strategic significance – explain why the success of this activity is so significant to Federal energy management).

Measures of Success – What quantitative measures of success and progress support FEMP's achievements? For example:

a. BTUs of energy and dollars saved (peak energy use reductions)
b. Emissions reduced
c. Actions by individual Federal agencies
d. Commercialization of technologies in the public and private sectors
e. Adoption of new energy management practices
f. Jobs created
g. Other effects?

Strategies – Are FEMP activities relevant to the markets and barriers the Program is trying to overcome and address?

V. Relevance to Technical and/or Market Challenges

1 2 3 4 5
Very Poor Outstanding

Disappointments – What are FEMP's greatest disappointments (*e.g.*, describe an effort with the most disappointing results and the reasons for failure to achieve the activity's goals). What action, if any, has been taken to correct the problem (or prevent a similar problem in the future)?

Barriers External to FEMP – What external issues, policies, regulations, and other factors prevent FEMP Program goal achievement?

VI. Management

1 2 3 4 5
Very Poor Outstanding

Portfolio and Priorities – What is the quality of FEMP's strategic planning and program portfolio selection, and planning and decision-making process? How are priorities determined? Is there logic to Program activities? Are program risks identified and managed?

Partnerships and Leverage – How effective is the program in managing and dealing with crosscutting activities in partnerships with EERE and other Federal agencies? How well are FEMP resources applied and leveraged (*e.g.*, public-private partnerships)?

Implementation and Monitoring – Does the program collect performance information, hold people accountable, and use data and information to improve programs? How effective is program execution and integration in improving outputs and overall program delivery?

Responsiveness and Communication – Do FEMP staff respond professionally and in a timely manner to EERE and DOE management? Are mechanisms in place to ensure that coordinated and frequent communications take place between EERE and DOE management?

Responsiveness and Programmatic Change – Does FEMP have the flexibility and nimbleness to take action in response to new and emerging opportunities, technologies, ideas, and issues? Is FEMP responsive to the needs of Federal customers and DOE facilities? Is this level of responsiveness adequate?

VII. Overall Impressions

1 2 3 4 5
Very Poor Outstanding

Peer Review Criteria: FEMP Projects

I. Quality

1 2 3 4 5
Very Poor Outstanding

Quality of Resources – What is the quality of the project's technical approach, quality of the people, and quality of the facilities and other resources involved? Is the project capable of providing technically competent services to Federal customers? Are the project's staffing and administrative resources sufficient?

Effectiveness – How effective is this effort in bringing about significant and direct investment in energy efficiency and renewable projects in the Federal sector? Provide specific examples, if any, including actual or potential effects on the building market generally. How effective is this effort in advancing the deployment of new and emerging technologies? Provide specific examples, including technologies funded through DOE R&D.

II. Accomplishments

1 2 3 4 5
Very Poor Outstanding

Measures of Success – What quantitative measures of success and progress support FEMP's achievements? For example:

h. BTUs of energy and dollars saved (peak energy use reductions)
i. Emissions reduced
j. Actions by individual Federal agencies
k. Commercialization of technologies in the public and private sectors
l. Adoption of new energy management practices
m. Jobs created
n. Other effects?

III. Relevance to Mission and Goals

1 2 3 4 5
Very Poor Outstanding

Contribution – Does the project contribute to FEMP meeting its Program goals and those of EERE and DOE? What does the project contribute to FEMP's portfolio of projects? Is it relevant and critical?

Integration – Does the project provide important actual and potential contributions to FEMP, EERE, and DOE missions, goals, and strategies, and to society generally?

IV. Relevance to Technical and/or Market Challenges

1 2 3 4 5
Very Poor Outstanding

Strategies – Are FEMP activities relevant to the markets and barriers the Program is trying to overcome and address?

Barriers External to FEMP – What external issues, policies, regulations, and other factors prevent FEMP Program goal achievement?

Disappointments – What are FEMP's greatest disappointments (*e.g.*, describe an effort with the most disappointing results and the reasons for failure to achieve the activity's goals). What action, if any, has been taken to correct the problem (or prevent a similar problem in the future)?

V. Management

1 2 3 4 5
Very Poor Outstanding

Leverage – How well are project resources applied and leveraged (*e.g.*, public-private partnerships)? Has this project leveraged resources (funding, staff, in-kind equipment, or services) from other EERE programs, other Federal agencies, non-governmental organizations, or the private sector? Provide examples.

Project Management – Does the project have an effective project management system? What metrics, tools, and methods are used to measure the effectiveness of the project?

Responsiveness – Is the project responsive to Federal customers and DOE facility management?

VII. Overall Impressions

1 2 3 4 5
Very Poor Outstanding

Temperature Charts (Evaluation Results)

Financing Panel

(Note: Reviewer #1 only completed evaluations for the subprogram levels)

Lab Presenter REVIEWERS	Financing: DOE FEMP Program Level							
	Quality	Productivity	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 1	5	-	4	4	4	3	4	4.00
Reviewer 6	4	4	3	4	3	3	4	3.57
Reviewer 7	4	4	3	4	5	3	3	3.71
Reviewer 8	4	4	3	4	3	3	4	3.57
Reviewer 9	4	4	3	5	3	4	4	3.86
Average Total	4.20	4.00	3.20	4.20	3.60	3.20	3.80	3.74
High Rating								4.00
Low Rating								3.57

Lab Presenter REVIEWERS	Financing: Energy Saving Performance Contracting (ESPC)						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 6	4	3	5	4	3	4	3.83
Reviewer 7	4	3	5	4	2	4	3.67
Reviewer 8	4	3	5	4	3	4	3.83
Reviewer 9	4	3	5	4	2	4	3.67
Average Total	4.00	3.00	5.00	4.00	2.50	4.00	3.75
High Rating							3.83
Low Rating							3.67

Lab Presenter REVIEWERS	Financing: Utility						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 6	5	3	5	3	5	4	4.17
Reviewer 7	5	3	5	3	5	4	4.17
Reviewer 8	5	3	5	3	5	4	4.17
Reviewer 9	5	3	5	3	4	4	4.00
Average Total	5.00	3.00	5.00	3.00	4.75	4.00	4.13
High Rating							4.17
Low Rating							4.00

Technical Assistance Panel

- **Reviewer 10 and 12 used fractions that were rounded down since the guidance was to circle the appropriate number, not to write it in.**

Lab Presenter REVIEWERS	Technical Assistance: DOE FEMP Program Level							Total
	Quality	Productivity	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 1	4	-	2	4	4	3	3	3.33
Reviewer 10	4	4	4	4	4	3	3	3.71
Reviewer 11	4	4	4	4	4	3	3	3.71
Reviewer 12	4	4	4	4	3	3	3	3.57
Reviewer 13	4	4	4	4	3	3	3	3.57
Average Total	4.00	4.00	3.60	4.00	3.60	3.00	3.00	**3.64**
High Rating								3.71
Low Rating								3.33

Lab Presenter REVIEWERS	FEMP Projects -Project Technical Assistance						Total
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 10	4	3	4	4	3	4	3.67
Reviewer 11	4	3	4	4	3	4	3.67
Reviewer 12	4	4	4	4	3	4	3.83
Reviewer 13	4	3	4	4	3	4	3.67
Average Total	4.00	3.25	4.00	4.00	3.00	4.00	3.71
High Rating							3.83
Low Rating							3.67

Lab Presenter REVIEWERS	Technical Assistance: Sustainable Buildings/New Construction						Total
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 10	4	4	4	4	4	4	4.00
Reviewer 11	4	4	4	4	4	4	4.00
Reviewer 12	4	4	4	4	4	4	4.00
Reviewer 13	4	4	4	4	4	4	4.00
Average Total	4.00	4.00	4.00	4.00	4.00	4.00	4.00
High Rating							4.00
Low Rating							4.00

Lab Presenter REVIEWERS	Technical Assistance: Labs21						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	4	4	4	4	4	4	4.00
Reviewer 11	4	4	4	4	4	4	4.00
Reviewer 12	4	4	4	4	4	4	4.00
Reviewer 13	4	4	4	4	4	4	4.00
Average Total	4.00	4.00	4.00	4.00	4.00	4.00	4.00
High Rating							4.00
Low Rating							4.00

Lab Presenter REVIEWERS	Technical Assistance: Training						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	3	3	5	5	3	4	3.83
Reviewer 11	3	3	5	5	3	4	3.83
Reviewer 12	3	3	5	5	3	4	3.83
Reviewer 13	3	3	5	5	3	4	3.83
Average Total	3.00	3.00	5.00	5.00	3.00	4.00	3.83
High Rating							3.83
Low Rating							3.83

Lab Presenter REVIEWERS	Technical Assistance: BLCC						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	4	5	5	-	4	3	4.20
Reviewer 11	4	5	5		4	3	4.20
Reviewer 12	4	4	5	5	4	3	4.17
Reviewer 13	4	4	5		4	3	4.00
Average Total	4.00	4.50	5.00	5.00	4.00	3.00	4.14
High Rating							4.20
Low Rating							4.17

Lab Presenter REVIEWERS	Technical Assistance: Renewables						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	3	4	5	3	3	4	3.67
Reviewer 11	3	4	5	3	3	4	3.67
Reviewer 12	3	4	5	3	4	4	3.83
Reviewer 13	3	4	5	3	3	4	3.67
Average Total	3.00	4.00	5.00	3.00	3.25	4.00	3.71
High Rating							3.67
Low Rating							3.83

Lab Presenter REVIEWERS	Technical Assistance: Operations & Maintenance						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	4	5	5	5	4	4	4.50
Reviewer 11	4	5	5	5	4	4	4.50
Reviewer 12	4	5	5	5	4	4	4.50
Reviewer 13	4	5	5	5	4	4	4.50
Average Total	4.00	5.00	5.00	5.00	4.00	4.00	4.50
High Rating							4.50
Low Rating							4.50

Lab Presenter REVIEWERS	Technical Assistance: Commissioning						
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 10	4	4	4	5	4	4	4.17
Reviewer 11	4	4	4	5	4	4	4.17
Reviewer 12	4	4	4	5	4	4	4.17
Reviewer 13	4	4	4	5	4	4	4.17
Average Total	4.00	4.00	4.00	5.00	4.00	4.00	4.17
High Rating							4.17
Low Rating							4.17

Lab Presenter REVIEWERS	Technical Assistance: Facility Assessments and Industrial Assessments						Total
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 10	4	3	4	3	3	3	3.33
Reviewer 11	-	-	-	-	-	-	
Reviewer 12	4	3	4	3	3	3	3.33
Reviewer 13	4	3	4	3	3	3	3.33
Average Total	4.00	3.00	4.00	3.00	3.00	3.00	3.33
High Rating							3.33
Low Rating							3.33

Lab Presenter REVIEWERS	Technical Assistance: Energy Efficient Federal Procurement						Total
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 10	4	4	4	4	3	3	3.67
Reviewer 11	4	4	4	4	3	3	3.67
Reviewer 12	4	4	4	4	3	3	3.67
Reviewer 13	4	3	4	4	3	3	3.50
Average Total	4.00	3.67	4.00	4.00	3.00	3.00	3.61
High Rating							3.67
Low Rating							3.50

Lab Presenter REVIEWERS	Technical Assistance: Emerging Tech						Total
	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	
Reviewer 10	4	4	3	3	4	4	3.67
Reviewer 11	4	4	3	3	4	4	3.67
Reviewer 12	4	4	3	3	4	4	3.67
Reviewer 13	4	4	3	3			3.50
Average Total	4.00	4.00	3.00	3.00	4.00	4.00	3.63
High Rating							3.67
Low Rating							3.50

Reporting, and Analysis and DEMP Panel

Lab Presenter	Planning, Reporting, and Analysis: DOE FEMP Program Level						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 1	4	2	4	4	3	4	3.50
Reviewer 2	2	2	4	4	2	3	2.83
Reviewer 3	2	2	4	4	2	3	2.83
Reviewer 4	2	2	4	4	2	3	2.83
Reviewer 5	2	2	4	4	2	3	2.83
Average Total	2.40	2.00	4.00	4.00	2.20	3.20	2.97
High Rating							3.50
Low Rating							2.83

Lab Presenter	Planning, Reporting, and Analysis: Data Collection and Review						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 2	5	5	5	5	4	5	4.83
Reviewer 3	5	4	5	5	5	5	4.83
Reviewer 4	5	4	5	5	5	5	4.83
Reviewer 5	5	4	5	5	5	5	4.83
Average Total	5.00	4.00	5.00	5.00	5.00	5.00	4.83
High Rating							4.83
Low Rating							4.83

Lab Presenter	Planning, Reporting, and Analysis: Interagency Coordination						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 2	4	4	5	4	4	4	4.17
Reviewer 3	4	4	5	4	4	4	4.17
Reviewer 4	4	4	5	4	4	4	4.17
Reviewer 5	4	4	5	4	4	4	4.17
Average Total	4.00	4.00	5.00	4.00	4.00	4.00	4.17
High Rating							4.17
Low Rating							4.17

Lab Presenter	Planning, Reporting, and Analysis: Outreach						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 2	5	5	5	5	5	5	5.00
Reviewer 3	5	5	5	5	5	5	5.00
Reviewer 4	5	5	5	5	5	5	5.00
Reviewer 5	5	5	5	5	5	5	5.00
Average Total	5.00	5.00	5.00	5.00	5.00	5.00	5.00
High Rating							5.00
Low Rating							5.00

Lab Presenter	Departmental Energy Management Program (DEMP): DOE FEMP Program Level - DEMP							
REVIEWERS	Quality	Productivity	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 2	5	5	5	4	3	5	5	4.57
Reviewer 3	4	4	5	5	5	5	5	4.71
Reviewer 4	4	4	5	5	5	5	5	4.71
Reviewer 5	4	4	5	5	5	5	5	4.71
Average Total	4.25	4.25	5.00	4.75	4.50	5.00	5.00	4.68
High Rating								4.71
Low Rating								4.57

Lab Presenter	Departmental Energy Management Program (DEMP): DEMP Overview						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	Total
Reviewer 2	5	5	5	5	5	5	5.00
Reviewer 3	-	-	-	-	-	-	
Reviewer 4	5	5	5	5	5	5	5.00
Reviewer 5	5	5	5	4	5	5	4.83
Average Total	5.00	5.00	5.00	4.67	5.00	5.00	4.94
High Rating							5.00
Low Rating							4.83

Lab Presenter	Departmental Energy Management Program (DEMP): DEMP Utility						
REVIEWERS	Quality	Accomplishments	Relevance1	Relevance 2	Management	Overall	**Total**
Reviewer 2	5	5	3	3	5	5	4.33
Reviewer 3	-	-	-	-	-	-	
Reviewer 4	5	5	5	-	5	5	5.00
Reviewer 5	5	5	5	3	5	5	4.67
Average Total	5.00	5.00	4.33	3.00	5.00	5.00	4.67
High Rating							5.00
Low Rating							4.67

FEMP Peer Review

Participant List

PANELISTS

Paul A. DeCotis, *Peer Review Chair*

Financing Panel
Susan Stratton, *Panel Leader*
Bruce Gross
Richard A. Morgan
Polly N. Shaw

Technical Assistance Panel
James J. Winebrake, *Panel Leader*
Floyd E. Barwig
Richard S. Brent
Maria Papadakis

PR & A / DEMP Panel
Francis J. Murray, Jr., *Panel Leader*
Kenneth L. James
Meg Matt
David B. Zabetakis

Cross Cutting Panel
Paul DeCotis, *Panel Leader*
Meg Matt
Maria Papadakis
Polly N. Shaw

PRESENTERS - FEMP STAFF

Financing Panel	Presentation Title
Christopher Abbuehl	ESPC and Advanced EE and RE Technologies
Thomas Hattery	ESPC Representatives in the Field
David McAndrew*	Renewables
Tatiana Strajnic	Super ESPC Program and Goals; Federal ESPC Steering Committee
PR & A / DEMP Panel	
Brian Connor	Multi-Year Plan
Alan Gann	DEMP Utility Program Overview
Joan Glickman*	Program Assessment Rating Tool; Energy Efficient Federal Procurement
Annie Haskins	Outreach Overview
Victor Petrolati	DEMP Overview
Wilfred Prue*	Energy Retrofits Subprogram Overview; Facility Assessment
Schuyler Schell	Annual Energy Conference

Technical Assistance Panel

Theodore Collins	Training/Building Life Cycle Costing; New Technology Demonstration; New Technology Demonstration
Anne Crawley	Renewables
Beverly Dyer	Sustainable Buildings/New Construction
Brad Gustafson	New Technology Demonstration
Shawn Herrera	Project Technical Assistance
William Lintner*	Labs 21; Model Program Subprogram Overview
Ab Ream	O&M/Commissioning

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Danette Delmastro
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Rick Klimkos
Nellie Tibbs-Greer

CONTRACTOR AND LABORATORY PRESENTERS

Financing Panel	Presentation Title
Joyce Ziesler, DOE	Golden Field Office Role
Charles A. Goldman, LBNL	Energy Markets Education
Douglas Dahle, NREL	Federal ESPC Steering Committee
Jeffrey Dominick, NREL	ESPC Process
Karen Thomas, NREL	Direct Assistance, Training & Guidance
Patrick Hughes, ORNL	ESPC Tools and Quality Assurance
Julia S. Kelley, ORNL*	Utility Program Outreach Activities; Project Impact Assessment
John Shonder, ORNL	ESPC Tools and Quality Assurance
Kate McMordie, PNNL*	Federal Utility Partnership Working Group; Data Collection and Analysis
Tim Kehrli, TLK Associates	Project Facilitator on the Ground

Planning, Reporting and Analysis

Joan Glickman	
Mary-Lynn Wrabel, Energetics, Inc.	Federal Energy Management Advisory Committee, Legislative Monitoring
Bob Payn, DB Interactive	FEMP Web Site
Carl Costello, Greening America	You Have the Power Outreach Campaign
William Martin, RSIS	EERE/FEMP Information Center
Anne Jones, NREL	FEMP Web Site
Rose Marie Field, McNeil Tech.	FEMP Central
Jennifer Landsman-Ayers, McNeil Tech.	Annual Award Programs
Chris Tremper, McNeil Tech.	Data Collection and Review, Annual Report, Scorecard; Interagency Coordination
Leslie Nicholls, PNNL	Energy 2005 Workshop and Exposition

Departmental Energy Management Program

Nick Malik, ANL	Energy Retrofits and Model Program Projects
Ernest Fossum, INEL	Energy Retrofits and Model Program Projects
Dale Swan, Exeter Associates	Rate Intervention and Utility Procurement Projects

Technical Assistance Panel

Edward St. Germain, EMR	O&M/Commissioning
Dan Amon, EPA	Labs 21
Kevin DeGroat, McNeil Tech.	Renewables
Barry Simon, Simon & Assoc.	Facility Assessments
Paul A. Matthew, LBNL	Labs 21
Dale A. Sartor, LBNL*	Labs 21; ESPC M&V and Quality Assurance
Nancy Carlisle, NREL	Renewables
Andy Walker, NREL	Project Technical Assistance
Melissa Madgett, ORNL	Industrial Assessment
Kirby Wilcher, ORNL	Project Technical Assistance
Dave Hunt, PNNL	O&M Commissioning
Steven Parker, PNNL*	Facility Assessments; New Technology Demonstration

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Jeff Dowd
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PARTICIPANTS – OTHER ATTENDEES

Charles D. Johnson, USDA
Bill Zwack, Sentech

* This individual was a presenter on more than one panel

Subpanel 1
Extended Discussions

1.1 INTERAGENCY COORDINATION: INTERAGENCY ENERGY MANAGEMENT TASK FORCE

Interagency: Overview

The purpose of the Interagency Coordination team is to coordinate communications across Federal agencies through the Federal Interagency Energy Management Task Force (referred to as the "task force"). The task force is the government's primary forum for collaboration among Federal agencies, Office of Management and Budget, and industry stakeholders that addresses energy issues in the Federal sector as to specific energy efficiency, legislative, and technical activities. The task force convenes several times a year to discuss budget, guidance for reporting, and legislative updates; this information is documented in the task force's Memorandum of Record meeting notes and Annual Report. The Peer Review panel was informed that groups meet approximately six times a year; however, a review of the meeting notes indicates that meetings average three to four times a year, with approximately 50-75 attendees per meeting. The task force currently maintains four working groups to address specific issues. The working groups include: Renewable Energy, Sustainability, Reporting, and Procurement.

FEMP's Program Manager chairs the Task Force. FEMP, the Office of Management and Budget (OMB), and other agencies were created by different legislative acts and have different missions. While each of these agencies shares the common responsibility for addressing energy efficiency issues in Federal facilities, the authority and accountability among them are not clearly delineated in each organization's energy priorities, activities, and responsibilities.

As task force chair, FEMP's Program Manager allows FEMP to align its program goals and interests with those of the participating Federal agencies and their decision makers. Task force strengths include: (1) FEMP has sole responsibility for the development, dissemination, and guidance related to Federal energy management, (2) there is consistent application of the goals to the specific energy issues that are addressed by the individual working groups, and (3) the forum is a successful format for information sharing and dissemination. The task force's weakness is the lack of clarity with respect to ownership and accountability. These roles are not clearly defined and each agency has different energy efficiency priorities, based on each agency's unique mission(s).

Other significant interagency energy committees include the Federal Interagency Energy Policy Committee, commonly referred to as the "656 Committee." The 656 Committee is

chaired by DOE's Assistant Secretary for Energy Efficiency and Renewable Energy. A second important interagency committee is the Senior Energy Officials Committee, which was established by Executive Order 13123; the committee is chaired by a representative of the Office of Management and Budget.

Interagency: Relevance to Mission and Goals

To the extent interagency coordination of the task force is doing what it is mandated to do; the group is performing effectively in coordinating energy management efforts and policy initiatives among Federal agencies, sharing lessons learned, and coordinating technical resources. The task force provides valuable services to other agencies, such as providing guidance documents, examining energy savings credits, and clarifying policies and procedures. Among its outcomes, FEMP's role as task force chair helped to keep the ESPC authorization hiatus as a paramount issue of concern among other agencies. This effort helped to persuade Congress to authorize Federal use of ESPCs in the Defense Authorization Act of 2005. Another example of the task force's importance is the role it plays in developing facility construction guidelines. While many agencies maintain their own construction guidelines, FEMP's lead role, through the Interagency Sustainable Working Group was instrumental in working with key agency decision makers to identify key cross cutting issues and issuing basic criteria to construct and renovate sustainable buildings.

While the interagency examples described above may be aligned with FEMP's mandates, FEMP may find it helpful to explore ways to renew itself in order to be more useful to major agencies and stakeholders.

Interagency: Overall Impressions and Recommendations

- Most of the interagency work appears to be performed by the task force. Thus, of concern to the panel is the potential for duplication of effort with other committees and lack of integration of various committee outcomes. The committees give varying levels of attention to the times when they meet and seem to have different agendas when it comes to addressing energy efficiency goals. One challenge is to ensure that energy efficiency is recognized as a high priority on the agencies' agendas and in their budgeting processes.
- OMB and DOE / EERE chair two significant committees: DOE chairs the Interagency Energy management Task Force and the 656 Committee. Their authority over FEMP can compete with and eclipse FEMP efforts. The panel recommends that the task force better engage the Senior Energy Officials Committee, which is chaired by OMB.
- FEMP's present restructuring process provides an opportunity to establish more effective arrangements for interagency coordination and to strengthen coordination between the Senior Officials Committee and the task force. This coordination would include increasing staffing and funding resources to exploit connections with other agencies.
- FEMP should more proactively use the interagency group to seek improvement ideas and to explore how the task force could be a tool to market FEMP.
- Coordination of the Interagency Energy Management Task Force provides FEMP with an

important connection to Senior Officials. By tapping into this connection more strategically, the FEMP program could benefit from higher visibility and help in terms of accountability, budget requests, and assistance from senior government officials.

- FEMP needs more focus on the strategy to win champions for FEMP's visibility and viability in the long term. FEMP should consider benchmarking a DOD facility.
- FEMP's challenges and opportunities lie in the high turnover of resources within Federal agencies.
- FEMP should be strategic and innovative in applying Executive Order 13123 and EPACT requirements for addressing accountability.
- Ongoing relevance is critical to the long-term viability of FEMP. As a government agency, FEMP should rely upon the task force to help anticipate stakeholder needs and wants, and innovate program strategies to adapt to changing circumstances.

1.2 OUTREACH

Outreach: Overview

FEMP has excellent projects and services but fails at times to communicate them effectively and efficiently to its target audiences.

FEMP's Outreach project has five key activities: (1) website, (2) EERE/FEMP Information Center & FEMP Publications, (3) Annual Energy Management Awards, (4) You Have the Power outreach campaign, and (5) the Annual Energy Workshop and Exposition. These programs are administered with numerous partners. The audiences for outreach efforts include: (1) Federal energy and facility managers, (2) Federal employees, (3) Federal procurement officials, (4) Public sector energy providers, and (5) Energy efficient products manufacturers.

1.2.1 WebSite

The FEMP staff has worked prodigiously to improve the look and navigability of the FEMP website. Until 2004, information was hosted on five different servers, and many of the sections were outdated. The redesigned site, which debuted in October 2004, contains 3,100 documents and has been visited almost 350,000 times in the past year. The site is promoted on all FEMP print materials and exhibits.

The site has made notable achievements:

- Consistently ranks in the top five on major search engines
- "Federal energy management" on Google and Yahoo appears first out of almost 22 million listings
- "Federal energy efficiency" on MSN appears 1st out of 1.2 million listings
- "Energy management" on Yahoo ranks 3rd out of 97.8 million listings

During the Panel's review, FEMP was in the process of surveying its website users to ensure that the program is reaching FEMP's target audience and to determine the effectiveness of the

new site. Preliminary survey results are quite encouraging:

- 36.5 percent of survey respondents are either Federal energy or facility managers
- Over 50 percent are repeat visitors
- Over 50 percent visit the site more than once (daily, weekly, and monthly)
- Respondents found that the site is a primary source of information for Federal energy management news and issues
- Nearly 75 percent of respondents find the site easy to access

1.2.2 EERE / FEMP Information Center (EERE IC) and FEMP Publications

The Energy Efficiency and Renewable Energy Information Center was created in January 2004 and supports all eleven EERE program offices including FEMP. EERE IC's FEMP site was established to assist Federal agencies reduce energy and water consumption and to meet Executive Order 12123 and EPACT 2005 energy goals for Federal agencies. This service provides information and materials to Federal agencies throughout the government and state and local governments, the private sector, non-profit organizations, and the general public. Services include a support line (Ask an Energy Expert or Customer Support) and various publications, software packages, and other materials developed by the eleven EERE program offices.

1.2.3 Annual Energy Management Awards

The annual awards program recognizes Federal agencies for conducting outstanding projects that contribute significantly to mandated Federal energy and water management goals. The annual recognition program: (1) encourages replication, innovation, and "model projects"; (2) provides outside validation of the projects to help agencies garner support for increased project funding; and (3) leads to additional energy savings, cost savings, environmental benefits, and improved energy security and reliability. The three general award categories are: (1) Department of Energy Management Awards, (2) Federal Energy and Water Management Awards, and (3) Presidential Awards for Leadership in Federal Energy Management.

1.2.4 You Have the Power

This grass roots program is administered by a FEMP contractor, Greening America and promotes an individual approach to saving energy via an employee awareness program. Currently, 21 Federal agencies participate in the "You Have the Power" outreach campaign.

1.2.5 Annual Energy Workshop and Exposition

This two and a half day workshop and exposition typically attracts over 1,200 energy professionals including: (1) Federal procurement officials; (2) Federal energy and facility managers; (3) vendors of energy efficiency, renewable power, and water conservation products; (4) electric and gas utilities serving the Federal sector; (5) Energy Service Companies; and (6)

trade, technical, and professional organizations with member companies involved in Federal energy projects. The purpose of this annual event is to provide training focused on facilitating energy efficiency, renewable energy, and water conservation projects at Federal installations nationwide.

Other event benefits include:

- Technical tours of Federal, state, and local facilities with energy and water management projects located in the vicinity of each annual workshop and exposition.
- Networking opportunities among Federal, state, and local government officials, utilities, energy service companies, and vendors to exchange information and ideas and promote Federal project opportunities.
- Vendor exposition to present and demonstrate energy and water saving technologies and management tools
- Pre- and post-specialized technical training and agency meetings

The benefits of the workshops are clear. In particular, the workshops:

- Provide information to help agencies implement energy-efficient projects.
- Assist agencies in developing overall strategic implementation plans as required by executive order and public law.
- Provide a venue for specialized training (e.g., renewable energy projects, energy savings performance contracts, building commissioning, and LEED certification).
- Provide Federal employees the opportunity to obtain certifications as a:
  - Certified Energy Manager
  - Certified Measurement and Verification Professional
- Demonstrate top level commitment to Federal energy management.

Outreach: Overall Impressions and Recommendations

- The Peer Review Panel found that FEMP does an exceptional job of outreach.
- FEMP's website is a proven, effective tool. The panel recommends continued level funding for this activity.
- This annual workshop and exposition is a valuable and productive forum, providing participants with valuable information for developing and implementing energy-efficient programs at their respective facilities. FEMP does a credible job of organizing the workshops.
- FEMP should post as many print publications as possible on the website.
- While awards are a great way to recognize the efforts of the agencies, senior management should increase the level of recognition with award ceremonies that are meaningful to the participants. For example, a powerful message would involve the participation of the Presi-

dent in presenting the President's Award.

- The "You Have the Power" outreach campaign clearly communicates to Federal employees. However, FEMP could save money by putting the material on CDs and posting documents and related material on its website rather than printing.

1.3 DEPARTMENTAL ENERGY MANAGEMENT PROGRAM (DEMP)

DEMP: Overview

The Departmental Energy Management Program (DEMP) was established to provide "Leadership by Example" within the Federal Government in order to reduce energy and water consumption, improve energy efficiency, and reduce utility costs throughout DOE's facilities and operations. DEMP accomplishes this goal by promoting the deployment of cost-effective technologies.

DEMP is virtually a separate entity within FEMP and the DEMP Utility Management Program (DUMP) is a separate entity within DEMP. While the emphasis within the rest of FEMP is on energy efficiency for all Federal facilities, DEMP's primary objective appears to be the reduction of energy costs for DOE facilities. While energy efficiency is a key component to accomplish this goal, the measure of success is not on energy use but on energy costs. The Utility Management Program appears to have the same cost savings objective as DEMP but for all Federal agencies and not just DOE.

Within DOE, over 50 facilities include 21 laboratory sites. DEMP calculates that only 15 of the 50 sites have active energy management programs. Almost all of the Facility Managers at these sites are contractors and not Federal employees. Although energy efficiency is a part of the performance measure for Facility Managers, energy represents less than five percent of their total responsibilities. Over the last several years, DOE lost most of the Energy Managers operating at these sites, and, as a result, there are now few, if any, energy "champions" at the site level. During the same time period, DEMP's staff levels was reduced by over 60 percent leaving DEMP with only two full time equivalent positions for this critical "Lead by Example" program. Finally, while DEMP and the Utility Management Program receive funding under EERE, EERE, which is located at DOE headquarters, is only one building out of over 10,000 buildings operated by DOE nationwide.

Strategic Issues

DEMP and the Departmental Utility Management Program are faced with many challenges. None is more critical and challenging than personnel resources, which represent the programs' strengths. DEMP staff and DOE site energy managers have been depleted. The remaining DEMP staff, while highly knowledgeable and committed to the program's purposes, may be considering retirement in the near future. The panel recommends that DOE give immediate attention to implementing succession planning for each program to assure that the knowledge and experience of these managers is captured for the benefit of future program investments.

Other critical challenges confronting the two programs include:

- Providing adequate funds for DOE site energy management in order to retain qualified and trained Energy Managers who are focused on energy management goals and can champion energy management initiatives.
- Facilitating good energy management decisions. DEMP needs to consider the current energy management infrastructure (limited number of Energy Managers, management priorities, old facilities), a continually changing mission, and the challenge of a growing surplus of DOE buildings (equally approximately 20 percent of their total building stock).
- Many of DOE's facilities are located in areas where utility and retail energy costs are already low, which hampers the financial feasibility of many efficiency programs.
- Energy Management is an unimportant element and receives little, if any, top management support.
- Separating strategy and mission development among FEMP, DEMP, and the Utility Management Program.

DEMP: Quality and Accomplishments

The FEMP Peer Review Panel is very impressed with the quality of the DEMP subprogram and believes that it should be mirrored throughout FEMP EERE and DOE. Management is very "customer" focused and has been highly successful in meeting energy goals. DEMP staff and contractors are highly knowledgeable, technically competent, and have established very strong relationships that allow them to accomplish significant savings for DOE at minimal program costs. Given additional resources, the DEMP initiative will far exceed any and all expectations to generate energy cost savings, promote energy efficiency, and continue to be a true "Leader By Example." With limited resources, the DEMP and Departmental Utility Management subprogram has proven to be effective.

DEMP: Relevance to Mission and Goals

The organizational structure and mission goals for FEMP, DEMP, and DEMP's Utility Management Program are not cohesive. On the surface, FEMP and DEMP have roughly the same mission. The Federal Government is charged with reducing energy use and environmental impact with FEMP's help. DOE has charged DEMP "To demonstrate leadership in the Federal Government by reducing energy and water consumption, improving energy efficiency, and reducing utility costs throughout DOE's facilities and operations." While FEMP measures achievements in energy saved and energy costs avoided, DEMP staff use measures of success that relate to reducing energy costs.

DEMP's Departmental Utility Management Program described its mission as: "(1) Utility services meet mission needs at maximum reliability and lowest costs and (2) Protect DOE's consumer interests" with no remark on energy use. While DEMP and the Utility Management Program have obviously contributed tremendous cost savings to DOE, they are not equally focused on energy efficiency and the procurement of renewable energy. DEMP does utilize energy efficiency and new technology to the best of its ability in producing cost savings.

DEMP: Overall Impressions and Recommendations

The DEMP and its Departmental Utility Management Program are extremely valuable and effective in producing measurable cost savings within the Federal Government. The management staff is knowledgeable and passionate in meeting the needs of the Energy Managers in the field. They employ strong project management and reporting skills while staying focused on the bottom-line results of their efforts. They have such a strong relationship with their customers that two customers attended the Peer Review to underscore the relevance and demonstrate the need for the DEMP programs. These Energy Managers made it clear that without DEMP, the energy efficiency and cost reduction programs they implemented would not have taken place.

The DEMP staff should coordinate their efforts with the FEMP Marketing Group to promote increasingly active participation from the limited Energy Managers available in the field. They also need to make use of the Interagency Coordination activity in order to promote the need for top-down management support of energy efficiency programs. This same interagency venue should maximize exposure of DEMP program successes as examples of "Leading By Example."

As new technologies emerge, DEMP should be prepared to take advantage of and utilize these technologies to advance their program mission. As an example, DEMP already has an exemplary data collection and project management process. With smart metering, this subprogram will be well positioned to offer and implement more advanced programs and services to reduce energy use in DOE facilities.

Management needs to better define the "fit" of DEMP and the Utility Management Program within the FEMP organization. In general, the DEMP staff identified the following issues that represent the divergence of these organizations:

- The DEMP organization is not a "customer" of FEMP.
- There is great concern that funding for DEMP comes from FEMP, which has different mission.
- Promotion of Performance Contracts seems to give rise to a conflict of interest for the two programs. DEMP uses these contracts for reduction of energy costs, while EERE promotes specific implementations that may not produce reductions in energy bills.

DEMP has accountability but no authority to meet its energy goals. Facility and Energy Managers must directly fund their facility projects. DEMP has done a good job facilitating participation in their programs; however, they must continue to find ways to engage Facility decision makers in the energy efficiency mission. This could be accomplished by using the Score Card and other tools.

Workforce issues present a significant threat to this subprogram. DEMP has limited staff to promote and meets its goals, although performance is still excellent. Energy Management staffing in the DOE facilities is virtually non-existent and has little leverage to "champion" energy reduction and energy efficiency programs. Both DEMP and Energy Management staffs need to be strengthened in quantity and quality to prevent the loss of this core competency. The lack of staff and funding has resulted in DEMP's failure to meet audit and water manage-

ment plans.

The Departmental Utility Management subprogram mirrors the DEMP organization: minimal resources producing significant results within a mission divergent from FEMP. They have effectively intervened on behalf of Federal facilities in rate cases and energy procurement. Management should pay attention to the lack of risk management oversight and policy relating to this group's procurement efforts.

ACRONYMS

Acronym	Definition
A&E	Architect and Engineering
AFR	Alternative Financing Representative
AHU	Air Handling Units
ALERT	Assessments of Load and Energy Reduction Techniques
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
BAMF	Biomass and Alternative Methane Fuels
BFRL	Building and Fire Research Laboratory
BLM	Bureau of Land Management
BTP	Building Technologies Program (DOE)
Btu	British Thermal Unit – measures energy
CHP	Combined Heat and Power
CO	Contracting Officer
CPS	Corporate Planning System
Cx	Commissioning
DER	Distributed Energy Resources
DESC	Defense Energy Support Center
DG	Distributed Generation
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DSM	Demand-side management
ECM	Energy conservation measures
EERC	Energy Escalation Rate Calculator
EERE	Energy Efficiency and Renewable Energy Program
EO 13123	Executive Order 13123 – Greening the Government through Efficient Energy Management. Presidential order directing Federal agencies to reduce building energy consumption per gross square foot by 30 percent and 35 percent by 2005 and 2010 respectively. Order enhances EPACT goals and existing Federal energy management activities.

Acronym	Definition
EPA	Environmental Protection Agency
EPACT	Energy Policy Act
ESCO	Energy Saving Company
ESPC	Energy Savings Performance Contracting
EUI	Energy Use Index
FAR	Federal Acquisition Regulations
FEMP	Federal Energy Management Program
FTA	Federal Technology Alert
FUPWG	Federal Utility Partnership Working Group
GHP	Geothermal Heat Pump
GPP	Greenpower Partnership Program
GSA	General Services Administration
GSF	Gross square feet
GWh	Gigawatts per hour
HHS	Health and Human Services
HVAC	Heating, Ventilation, and Air Conditioning system
IAA	Interagency Agreement
IDIQ	Indefinite-Delivery, Indefinite-Quantity contract
IDS	Investor's Deal Summary
ILC	Inter-Laboratory Council
LBNL	Lawrence Berkeley National Laboratory
LCC	Life Cycle Cost
LED	Light emitting diodes
LEED	Leadership in Energy and Environmental Design
LEED-EB	LEED-Existing Building
LEED-H	LEED-Homes
LEED-NC	LEED-New Construction
M&V	Measurement & Verification
MMBtu	One million British thermal units
MOU	Memorandum of Understanding
MWh	Megawatt per hour
MYP	Multi-Year Plans
NASA	National Aeronautics and Space Administration
NGO	Non-governmental organization
NIST	National Institute of Standards and Technology
NPS	National Park Service

Acronym	Definition
NREL	National Renewable Energy Laboratory
NTD	New Technology Demonstration
NTDP	New Technologies Demonstration Program
NYSERDA	New York State Energy Research and Development Authority
O&M	Operations and Maintenance
OAE	Office of Applied Economics (NIST)
OFEE	Office of the Environmental Executive (EPA)
OMB	Office of Management and Budget
ORNL	Oak Ridge National Laboratory
PB	Public Benefit
PF	Project Facilitator
PNNL	Pacific Northwest National Laboratory
PV	Photovoltaic
R&D	Research and Development
RE	Renewable Energy
REC	Renewable Energy Certificate
REM	Resource Efficiency Managers
RFP	Request for Proposal
ROI	Return on Investment
RWG	Renewables Working Group
SEL	Spectrally Enhanced Lighting
SFO	Standard Finance Offer
SOW	Statement of Work
TA	Technical Assistance
TF	Technology Focuses
TIR	Technology Installation Review
TVA	Tennessee Valley Authority
UESC	Utility Energy Saving Contract
USCHPA	U.S. Combined Heat and Power Association
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USPS	U.S. Postal Service
WAPA	Western Area Power Administration
WBDG	Whole Building Design Guide
WRI	World Resources Institute