

ENERGY EFFICIENCY WORKING GROUP (EEWG) 2006 ANNUAL REPORT TO THE DIRECTORS

Introduction

EEWG is a working committee of energy management professionals from various DOE/HQ, field, operations and support offices, national laboratories and M&O contractors throughout the DOE complex.

Our goal is to promote excellence in energy management through the active exchange of management and technical information, timely and effective communications, and by facilitating the application of information and techniques.

Key vehicles we use to further this goal are periodic working meetings. We normally conduct working meetings once or twice a year lasting 1-2 days. We encourage DOE/HQ and local DOE office attendance at each working group meeting. We do not require EFCOG membership to attend our working meetings. Interested energy management professionals from other federal agencies and organizations are welcome and encouraged to participate. There is no fee for meeting participants. Working meetings are normally scheduled to coincide with other energy related conferences and technical seminars. This strategy leverages the limited travel budgets of members and participants.

Membership

Our membership includes over 50 members and regular participants representing national laboratories, M&O contractors, energy management firms, DOE/HQ, field, operations and support offices.

Primary sponsor:

DOE's Federal Energy Management Program (FEMP)
Rick Khan, FEMP Program Manager

Executive Sponsor: Mike Schlender, PNNL

EEWG Chair: Mike Moran, PNNL

EEWG Steering Committee:

Ernie Fossum, Vice Char, INL

James Hedin, WIPP

Blair Horst, LLNL

Mike Holda, LBNL

Marc Berman, PNNL

Brian Connor, DOE's Departmental Energy Management

Kim Fowler, PNNL

Dale Sartor, LBNL

Otto Van Geet, NREL

Carter Ward, Energy Information Systems

Objectives and Achievements

Over the past year the primary focus of the working group has been on issues associated with the development and implementation of sustainable and energy efficient design and best practices at DOE facilities as well as offering our group support to DOE in interpretation and implementation of the Energy Policy Act of 2005.

The EEWG published its second EFCOG Best Management Practice (BMP #42) in April, 2006. It is the Guidance for Retro-commissioning, authored by Ernest Fossum of the INL.

The Guidance for Retro-commissioning provides suggestions for successful development and incorporation of commissioning activities in existing Federal facilities. These guidelines have been recommended through research on commissioning practices and through their implementation at various DOE sites. The purpose of this guidance is to provide high level, adaptable recommendations that will enhance retro-commissioning processes used at DOE sites.

The Guidance for Retro-commissioning can be viewed as a checklist and contains numerous recommendations that should become normal practice. However, DOE sites are welcome to adapt all or portions of the entries into site-specific operational standards with the goal of a sustainable commissioning program for existing buildings that will provide DOE with the best facilities possible.

Also, the EEWG presented a Value Proposition to the DOE Program Energy Management Officials (PEMO) Council at the July meeting to establish a seat at the decision making table before a directive is issued to the Field/Site Offices for implementation. The following bullets summarize the proposition:

EFCOG and the EEWG can add value to the PEMO and its Working Group(s) by:

- Being an active listener at the PEMO table to work high level challenges toward resolution prior to implementation at the Program Offices and landlord sites.
- Providing a laboratory or field level voice to HQ, this will assist for policy/program decision making by addressing the concerns and needs of all stakeholders.
- Providing working level technical reviews of draft policy/program documents.
- Assist with energy policy strategic forecasting/planning for the Federal government and its contractors.
- Expand assistance to DOE's Federal Energy Management Program with timely and effective communication from the PEMO and between sites, field and operations offices and HQ to more effectively champion policy/program changes.

The Value Proposition was accepted by the PEMO Council and the EEWG now has a seat at that important table. Our first assignment from the PEMO was to review and comment on the DOE Building Exclusions Self-Certification Criteria document. This document is used by both Program and Site Offices to help DOE adjust the 2003 baseline for meeting the EPACT 2005 energy efficiency goals. The task was a tremendous opportunity for the EEWG to add immediate value to DOE and the PEMO Council and was a successful tool for sites to use in the field.

Other goals of the working group have been to support DOE/HQ and site energy coordinators as follows:

1. Increase the number of DOE sites that participate in departmental energy management program funding initiatives and have active energy management programs
2. Continue implementation of Energy Policy Act of 2005 including:
 - a. Implementing water efficiency programs, plans and best management practices
 - b. Selection of DOE/EPA energy star products
 - c. Strategies for reducing energy consumption in Laboratory and Industrial Facilities
 - d. Increased use of off-grid generation systems including renewable energy systems
 - e. Establishing exclusion criteria for energy intensive buildings
 - f. Participation in the DOE Program Energy Management Officials (PEMO) Council meetings
3. Develop and/or work to establish Best Management Practices through the Departmental Model Programs initiative including:
 - Re-commissioning (for both new and current facilities); Sustainable Design for new facilities
 - Acquiring Energy Star Labels for DOE office buildings
 - Expanding the use of private sector financing for DOE facilities
 - Water Management Plans and accomplishment of best practices
 - Expanding the purchase of Energy Star Products

These model programs provide a springboard for the introduction of best practices in energy management at DOE facilities. Presentations featuring the progress and results of these and other topics were included at the August 2006 EEWG meeting in Chicago, Illinois.

4. Integrate EEWG with other EFCOG Working Groups. The Chair of the EFCOG Maintenance Working Group invited the EEWG to present at their annual meeting at NREL. The presentation was well received and created a forum of idea sharing opportunities between the two groups. Based on the success of this information transfer and face time we will continue to identify opportunities with the EPWG and others that would be of benefit to each Working Group and EFCOG members.

Summary of other Energy Efficiency Working Group (EEWG) activities during 2006:

The EEWG held two teleconferences in 2006. All teleconferences included: DOE HQ updates, EFCOG updates, status of subgroup progress regarding sustainable design work, energy topics/hot items and open forum membership roundtables. Participation was solid for each call, with up to 30 participants, and never fewer than 16.

The annual EEWG meeting was held August 10, 2006 in conjunction with the Energy 2006 Conference in Chicago, Illinois. The meeting attendance was good with 30 all day participants and additional visitors/vendors throughout the day. All National Labs (except BNL) were represented and other agencies were also present. The agenda included Federal Energy Management Program HQ/Update; EPACT 2005 update; duct sealing efforts at LBNL; retro-commissioning at INL and LBNL; high performance fume hoods; measuring green building performance; and a sustainable design interest group progress report. Our meeting adjourned early this year as a result of inclement weather and travel restrictions for security reasons that was causing airport delays.

The EEWG Sustainable Interest sub group was used as a mechanism for sustainable design site lessons learned networking and to learn about new sustainable design tools through guest speakers.

The two guest speakers who participated in conference calls were:

1. U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Application Guide for Multiple Buildings and Campuses and
2. ASHRAE Advanced Energy Design Guide for Small Office Buildings

In addition, progress was tracked of policies and regulatory requirements to determine how they might impact the sites.

FY2007 Plans - The EEWG will continue to focus on:

- Support DOE in implementation of the EPACT 2005
- Provide suggestions to the PEMO Council
- The EEWG will have at least two scheduled teleconferences
- Our next EFCOG/EEWG meeting is scheduled for August at the end of Energy 2007 in New Orleans. The agenda for the meeting will include:
 - DOE FEMP/HQ update
 - Presentation on EEWG FY2007 BMP publications
 - EPACT 2005 site implementation progress updates
- In 2007 we will continue to assist DOE FEMP with promoting and implementation of alternative financing mechanisms for energy efficiency and infrastructure improvements projects at DOE sites.
- We will continue to interact with representatives from other EFCOG Working Groups to exchange information, share common goals, and to take advantage of synergies between the working groups and their members
- EEWG will continue to take a comprehensive customer focused approach responsive to FEMP's vision to assist DOE and federal agency sites increase energy efficiency, conserve water, promote renewable energy technology use and manage energy costs.
- We will continue to increase communication and participation of energy management professionals from DOE, other federal agencies and other appropriate EFCOG working groups at workshops to extend the pool of knowledge available to support DOE's energy management initiatives.

Recommendations

Recommend that the Energy Efficiency Working Group (EEWG) be continued.