

**O&M Working Group Meeting Notes**  
**Meeting #4 - Thursday, August 26**  
**10:00 AM - 12:00 PM**  
**Energetics' Conference Room – Washington, D.C.**

**Welcome/Previous Meeting Recap**

Ab Ream provided a synopsis of the discussions from previous meetings including a review of O&M Working Group documents, interests expressed by the working group members, as well as past action item updates.

**O&M Working Group Charter Review:**

- As discussed at the previous meeting:
  - A revised and expanded definition of O&M has been included in the charter (referenced from *The Whole Building Guide*)
  - Additional details have been included in Section 3 (A-E) to include common challenges to O&M
  - An agreement by the working group members to meet every 2 months was included
  - The charter is now considered finalized

**Gas Meter Economics and Steam Meter Economics:**

- Each of these documents were developed and distributed by Bill Sandusky
- A revision of Steam Meter Economics was released and is now available
- Both of the documents will be incorporated into the Metering Best Practices Guide (currently under revision)

**Metering Best Practices Guide:**

- O&M group's most recent challenge to revise and update
- The last Metering Best Practices Guide was released in 2007

**Energy Audit Guidebook (EMR)**

- EMR developed an energy audit guidebook and training course as a guide for the Los Alamos Lab (also available for federal agencies)
- Comments/feedback were received and incorporated since the last O&M Working Group meeting
- The guidebook and training course will eventually be developed into an e-learning course
- EMR plans to coordinate with Jesse Dean at NREL who has developed similar tools
  - Guidebook and NREL tools will tie in with EISA Section 432 (Chris Tremper, DOE)

**O&M Working Group Interests:**

- The economics of metering (how to make cost effective decisions) – should be included in the revision of the Metering Best Practices Guide
- The O&M group will be called upon to help provide technical content as well as comments/feedback during the review process
- Address the need for O&M Training and Education
  - CALIBRE has developed a new program for O&M training called the Government Energy Practitioner Program (GEP)
    - Similar to the Energy Manager Program at AEE
    - Targets entry level energy managers
    - Covers O&M 101 and best practices
    - Satisfies the need for training and education in O&M while addressing energy issues as well
    - CALIBRE is coordinating with AEE to obtain certification

**Past Action Item Updates:**

- Action Item (Bill Sandusky): Develop a Water Metering Guidance and decision tree

- Documents currently in development
- Action Item (Ab Ream): Develop an O&M Toolkit
  - Requires further input from the working group (please send ideas)
- Action Item (Working Group): Provide feedback and/or comments on the Metering Best Practices Guide
  - Valuable comments were received from the working group members
  - Bound copies were finalized and made available prior to GovEnergy (a PDF copy also exists with online/interactive options being considered)
  - Final comments are now being accepted
- Action Item (Working Group): Provide feedback and/or comments on the O&M Best Practices Guide
  - Valuable comments were received from the working group members

National Conference on Building Commissioning (NCBC) Update:

- FEMP co-sponsored the event
- Ab Ream gave a presentation on commissioning
- NCBC observations:
  - Commissioning is still in the beginning stages with a range of variability in certification processes (lack of standardization)
  - Commissioning Agent certification requires development and solidification to ensure Commissioning Agents receive equal training

FEMP First Thursday Seminars:

- Two first Thursday Seminars were presented recently:
  - O&M Best Practices, Ray Pugh (PNNL) and Ab Ream (DOE)
  - Metering Best Practices, Greg Palko (ORNL)
- Significant participation during both seminars (over 4,000 people)
- Apparent demand for this type of O&M and Metering education
- Please submit ideas for seminars

Evan Mills' (LBNL) paper "Building Commissioning: A Golden Opportunity for Reducing Energy Costs and Greenhouse Gas Emissions":

- Connects O&M and retro-commissioning efforts
- Addresses proving the value of O&M (common challenge)
- Examines several types of buildings and supports retro-commissioning in a systematic approach for significant paypacks (avg. simplepay back 1.8 years)
- Emphasizes the value of commissioning (never a federal building that does not have an inefficiency)
- Available at: <http://cx.lbl.gov/documents/2009-assessment/LBNL-Cx-Cost-Benefit.pdf>

**Metering Industry Day (Advanced Metering Solutions) Planning**

Ab Ream provided a recap of the Metering Industry Day efforts (now called Advanced Metering Solutions) and called for suggestions from the group.

- Original concept: provide a mini expo/small scale exhibit hall with metering vendors to interact with federal customers; host the event by partnering with an existing conference (WEEC) at the convention center in D.C.
  - WEEC conference partner not an option; would incur a significant cost per person
- Proposed solution: expand an upcoming O&M Working Group Meeting to half a day, possibly with a rotating agency host (host would have an opportunity to make a "featured" presentation regarding a case study from their agency)
- Working Group suggestions:
  - Host the event at a hotel near WEEC and provide an opportunity to walk through the exhibit hall
  - Host the event in conjunction with ESPC's ESCO day (mid-November)

- Structure the event similar to past metering show and tell “industry days” (in conjunction with an upcoming O&M Working Group Meeting)
- Host at an independent venue (do not partner with an existing event)
- Promote the event as an outreach opportunity for the O&M Working Group
- Seek attendance from agency decision makers

### Group Discussion

Ab Ream facilitated an open group discussion.

### Group Needs/Expectations:

- Need to address O&M contracting and the process of incentivizing contracts
- NASA: information regarding “moth-balling” federal facilities (recent dissolution of the shuttle program has resulted in upcoming decisions whether to demolish or maintain buildings for future use)
  - Working Group suggestions: Contact the Base Realignment Commission (DOD); possible case studies to consider in Mississippi and Alaska; leasing options; offer unused buildings to other federal agencies
- Need for Case studies
  - Seeking current case studies that emphasize the value of E-4s, energy audits and retro-commissioning and how they lead to additional opportunities (especially case studies that can demonstrate results using data)
  - A recent FEMP Focus featured a case study about USDA efforts in Texas (Sandy Morgan)
    - Article summary: An E-4 energy audit was conducted by EMR in 2007 showing 500K in possible improvements. Due to a lack of funds USDA explored financing via a UESC and an ESPC (not a large enough project). Therefore, USDA bundled 12 labs together and found 89 possible ECMS. The 89 ECMS were whittled down to 18 ECMS and of those 18, 6 were done at 2 locations. Of the remaining ECMS, 6 locations decided it was cost effective to do 27 of the ECMs without the ESCO. All of this resulted from one energy audit – great success story.
  - Case study suggestions
    - Empire State Building (net zero) – presented at GovEnergy
    - EMON case studies
    - Building Technology Research & Development (BTRD) at DOE case studies (public and private)
- GSA Goals (Patrick Fee)
  - Communicate with tenants to reduce energy costs
  - Contract language: adjustments being discussed (not currently in use)
- Establish contract incentives for M&O contractors
  - Provide guidance to procurement officers in modifying contract language to incentivize contractors
  - Emphasize the “how” not the “what” for contract incentives (Ex: reduce energy usage through commissioning, etc.)
  - Modify existing contracts
  - Establish a fee structure to encourage a holistic approach using performance specification modifications in the contract
  - Address human behavior/culture challenges
  - Develop systematic approach for M&O contracts (business management plan)
  - O&M Working Group will develop a document on how to incentivize contracts guidebook for federal facilities aimed at facility managers and contracting officers
- Outreach programs
  - Energy efficiency bonds (similar to war bonds) specific to wind, solar, etc. as an alternative to an ESPC to solicit private sector funding for energy efficiency projects (pay “x” percentage over the

life of the bond) – would require a major change in legislation, may be useful for financing smaller projects that ESPCs will not cover

- Market success stories (post online or develop an awards program)
- Agencies should work with communications departments to promote case studies and successes
- De-bunking energy myths
  
- Financing for small projects
  - Work with Small Business Administration
  - Develop a program to provide backing for small businesses to borrow large sums of money to complete small energy projects at federal sites (funded through SBA guarantee); paid back over time such as in ESPCs
  - Mentor/Protégé Program for small businesses trying to break into the federal sector
  - Challenge: persuading a large business to take on a small ESPC-type project (must include M&V; be a streamlined, easy financing process)
  - Revolving pool of money appropriated by congress (\$500 million) – has been authorized under EPAct, but was never funded
  - Re-investing money from energy savings projects (existing need to identify pockets to re-invest these funds); upcoming USDA bulletin will address a similar process by using funds from rebates or money obtained by selling materials to a recycler

#### **O&M Toolkit**

Ab Ream re-opened discussion on the development of an O&M Toolkit.

- Past suggestions
  - Case studies
  - Best practices guide
  - Model policy
  - Labs21 energy benchmarking tool (by LBNL)
  - User friendly low cost/no cost/ high cost calculator
  - List of common problems and common solutions to common problems.
    - Trend analysis
  - Create a self O&M audit guide
- New needs/suggestions
  - Quality control of resources in a central location (calculators, position descriptions, common problems, guides, certifications, etc)

#### **NEXT MEETING: Thursday, October 14, 10AM-12PM, location TBD**

- Please contact Ab ([Ab.Ream@ee.doe.gov](mailto:Ab.Ream@ee.doe.gov)) to volunteer as an agency host for the October O&M Working Group Meeting

### Action Items

- Action Item: (All) Submit final comments for the Metering Best Practices Guide
- Action Item: (Ab/Leslie) Develop agenda for the Advanced Metering Solutions day; send to working group
- Action Item: (Ab/Leslie) Secure location for the Advanced Metering Solutions day on December 7
- Action Item: (Ed/Ab) Send out link for the Commissioning E-Learning Course to the working group
- Action Item: (Ed) Coordinate with NREL to develop appendices for the Energy Audit Guidebook (spreadsheets)
- Action Item: (Sarah) Add NREL spreadsheets to Dropbox for review
- Action Item: (Ab) Incorporate BTRD into O&M Working Group
- Action Item: (Ab/Leslie) Develop an outline for a document regarding how to incentivize contracts at federal facilities aimed at facility managers and contracting officers

<b>O&amp;M Working Group Meeting Attendance</b>				
<b>First</b>	<b>Last</b>	<b>Organization</b>	<b>Email</b>	<b>In person/Call in</b>
Pete	Aitcheson	NASA	<a href="mailto:Peter.aitcheson@nasa.gov">Peter.aitcheson@nasa.gov</a>	In person
Bob	Buchanan	FDIC	<a href="mailto:BBuchanan@FDIC.gov">BBuchanan@FDIC.gov</a>	In person
Kirk	Clinkenberd	E-MON, LLC	<a href="mailto:clink@slbrown.com">clink@slbrown.com</a>	In person
Chris	Cockrill	GSA	<a href="mailto:Chris.Cockrill@gsa.gov">Chris.Cockrill@gsa.gov</a>	Call in
Andy	Crigler	DOD	<a href="mailto:Andy.crigler@osd.mil">Andy.crigler@osd.mil</a>	In person
Kasey	Curtis	IBM	<a href="mailto:Kasey.curtis@ee.doe.gov">Kasey.curtis@ee.doe.gov</a>	In person
Michael	Duff	ENthEnergy	<a href="mailto:mduff@enthenergy.com">mduff@enthenergy.com</a>	Call in
Patrick	Fee	GSA	<a href="mailto:patrick.fee@gsa.gov">patrick.fee@gsa.gov</a>	Call in
Arch	Galloway	E-MON, LLC	<a href="mailto:agalloway@potadv.com">agalloway@potadv.com</a>	In person
Mary	Heying	DOI	<a href="mailto:Mary_Heying@ios.doi.gov">Mary_Heying@ios.doi.gov</a>	In person
Sarah	Mabbitt	Energetics	<a href="mailto:smabbitt@energetics.com">smabbitt@energetics.com</a>	In person
Ken	Matushita	DOE	<a href="mailto:Kensaku.Matsushita@nnsa.doe.gov">Kensaku.Matsushita@nnsa.doe.gov</a>	Call in
Sandy	Morgan	USDA	<a href="mailto:sandy.morgan@ars.usda.gov">sandy.morgan@ars.usda.gov</a>	Call in
Leslie	Nicholls	Energetics	<a href="mailto:lnicholls@energetics.com">lnicholls@energetics.com</a>	In person
Ab	Ream	DOE	<a href="mailto:Ab.Ream@ee.doe.gov">Ab.Ream@ee.doe.gov</a>	In person
Christopher	Rennick	E-MON, LLC	<a href="mailto:crennick@emon.com">crennick@emon.com</a>	Call in
Bill	Sandusky	PNL	<a href="mailto:bill.sandusky@pnl.gov">bill.sandusky@pnl.gov</a>	In person
Skye	Schell	DOE FEMP	<a href="mailto:Schuyler.schell@ee.doe.gov">Schuyler.schell@ee.doe.gov</a>	In person
Beth	Shearer	Beth Shearer & Associates	<a href="mailto:Beth.shearer@comcast.net">Beth.shearer@comcast.net</a>	In person
Randy	Smidt	U.S. Army	<a href="mailto:SmidtRF@conus.army.mil">SmidtRF@conus.army.mil</a>	In person
Mitchell	Stein	Quadlogic Controls Corp.	<a href="mailto:MStein@quadlogic.com">MStein@quadlogic.com</a>	In person
Ed	St. Germain	EMR	<a href="mailto:egermain@emrinc.com">egermain@emrinc.com</a>	In person
Bill	Winslow	Army IMCOM	<a href="mailto:William.Winslow1@us.arm.mil">William.Winslow1@us.arm.mil</a>	In person