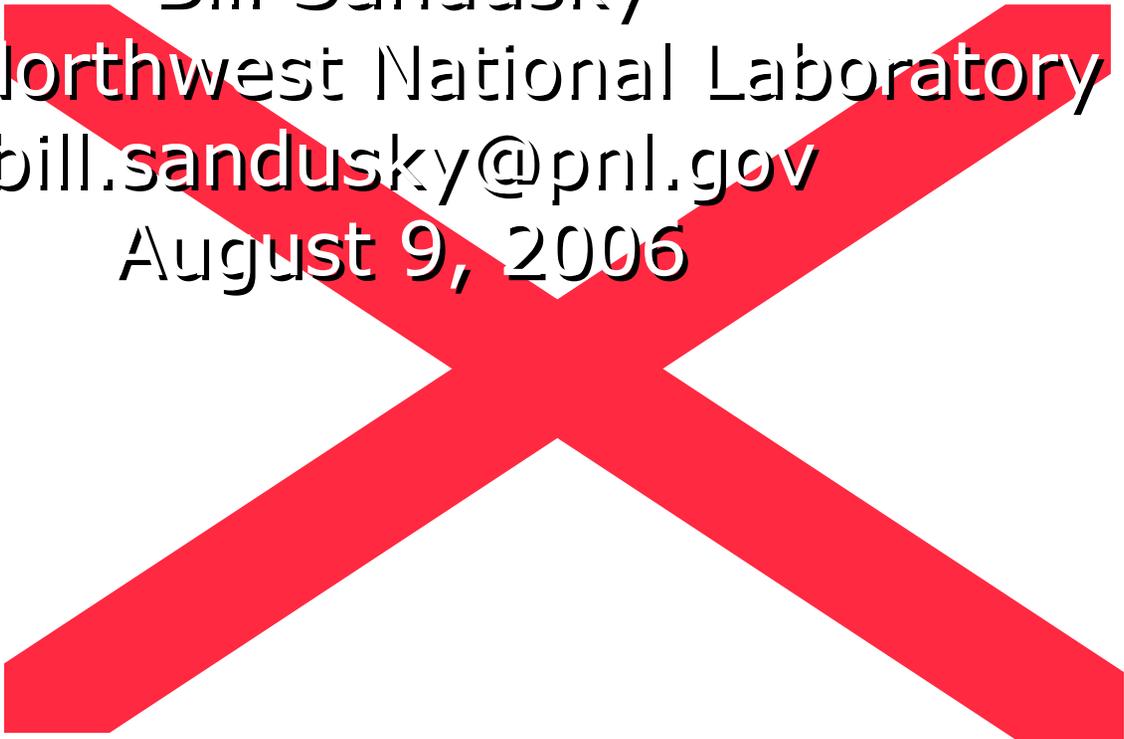

Resource Efficiency Managers in the Federal Sector: Moving into High Gear

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Under the
Hood:
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Maintenance

- Highlight the evolution of Resource Efficiency Management (REM) concept in the Federal sector
- Provide examples of performance results
- Identify challenges, opportunities, and future directions
- Answer any of your questions



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- Mid-90's agencies reduced level of energy management staff
- FEMP concerned about agencies meeting EPCRA 92 and Executive Order energy reduction requirements
- Introduced REM concept at Federal site
- Wanted to investigate ways to alternatively finance staff positions

What is a REM?



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- A trained full-time individual who is responsible for identifying and implementing energy efficiency, water conservation, and renewable actions and track resource use such as natural gas, electricity, fuel oil, water/wastewater and solid waste. The REM is expected to save several times more than he/she costs - thus it funds its position.



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- Evolved out of the **Resource Conservation Management (RCM)** model
- RCM model was developed in Oregon by a group of utilities that funded school districts to implement projects that reduced energy (and thus cost) in schools
- Seen as a way to continue to maintain schools under reduced operating budgets



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The Energy Management Continuum

Awareness
Load Management
Rate Analysis
Energy Audits
Meters
HVAC Tuneups
Recommissioning
Lighting Retrofits
Building Envelop
EMCS
Renewables
Replace Chillers

O&M Improvements

Equipment Replacement

No Cost

Low Cost

Expensive

Investment Requirements



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- Support direct deployment at Federal sites
- Documented value of deployment
- Developed outreach and communication materials
- Conducted training and prepared guidance documents
- Support and courage continued maturity of concept



FEMP Program built on the Concept that a REM Would



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- Focus on cost/low cost project opportunities
- Work closely with the Federal energy/water system service providers – utilities and ESCOs to implement capital projects
- Understand and help achieve mandated energy saving requirements
- Work in conjunction with Agency policies
- Develop a collaborative relationship with site staff – both facility and energy



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- Contracted on an annual renewable basis.
- Usually located on-site and functions as a part of both facility and energy teams.
- Can function on a regional/multi-site basis.
- Documents savings from project completions
- Assist in obtaining funding from all available sources to initiate actions



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- Develop and implement a comprehensive energy and resource management program
- Track usage and bills for all utilities to help identify billing problems, potential cost savings and additional efficiency opportunities
- Identify and implement energy awareness, energy efficiency, water conservation, and renewable energy projects
- Seek and acquire outside funding support for projects
- Make sure things happen!

Successful Characteristics:



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- Self-motivated
- Looks at the big picture both in time and space
- Has focus on practical, cost-effective, and self-sustaining measures
- Understands the customer and their mission
- Has excellent communication skills



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- Began in 1996 at Fort Lewis, Washington with support from FEMP
- Numbers have been growing at modest pace – 57 at last count!
- 85% renewal rates
- Benefit/cost ratio is typically 3 or 4:1
- DOD has implemented the most REMs
- Other agencies that use the REM concept
 - GSA, Coast Guard, DoC, USPS, DOE, and probably more



Current known REMs by Agency



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- Navy – 26
- Air Force – 15
- Army – 11
- Marines - 5
- Coast Guard – 1
- GSA – 1

Note: Some cover more than 1 site!



Typical Annual Reported Investment and Savings in DOD



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- **US Navy**
 - REM Cost=\$2,300,000
 - Project Cost=\$34,000,000
 - Savings=\$5,600,000
 - Grants and rebates=\$18,000,000
- **US Army**
 - REM Cost=\$530,000
 - Project Cost=\$12,200,000
 - Savings=\$6,809,000
 - Grants and rebates=None reported
- **US Marine Corps**
 - REM Cost=\$480,000
 - Project Cost=\$6,100,000
 - Savings=\$1,400,000
 - Grants and rebates=\$300,000
- **US Air Force:** Limited data to report



Example Successful Projects- \$165,000 savings per year



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Initial Funding Options used to Secure REM Position



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- Direct appropriations
- Cost savings from alternatively financed projects
- Alternative financing through servicing utility



Existing Resources



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- WSU Energy Program website –
 - www.energy.wsu.edu/projects/rem/rem.cfm
- Contracting for a Resource Efficiency Manager –
 - http://www.eere.energy.gov/femp/pdfs/rem_guidebook.pdf



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- Increased requirements set forth in EPOA 05
 - 2% energy savings/yr in buildings (Sec. 102)
 - Renewable energy purchase requirements (sec. 203)
 - Increased desire to reduce water consumption levels
- Continued desire to reduce Federal work force levels



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- Increased mandated savings goals – EPC Act 05
- Periodic turn over in site staff
- Staff lack of concern – Not my mission!
- Lack of budget support – do more with less
- Finding qualified personnel for REM positions
- Certification
- Price instability





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- Past activities considered a success
 - Increased number of REMs in Federal sector
 - Increased number of providers
 - Acknowledgement of value
 - GSA Federal Supply Service and Huntsville COE offer procurement vehicles
- Shift emphasis to include REM concept as an integrated deployment tool for other FEMP programs



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Questions?