



Implementing DOE Orders 450.1A and 430.2B

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Overview



- Striving for a “sustainable” and greener DOE
- New DOE O 430.2B
 - Purposes
 - Conservation and Efficiency Goals
- New Environmental Management System (EMS) Requirements in DOE O 450.1A
 - Audits
 - Environmental Compliance Management
 - Declaration of Full Implementation
- Integrating EMS and ISMS
- Next Steps



Coordinating Implementation of DOE “Greening” Goals



DOE O 450.1A *Environmental Protection Program* (issued June 4, 2008)

- establishes EMS requirements
- establishes goals and addresses specific sustainable environmental practices



Coordinating DOE “Greening” Goals (cont.)



DOE O 430.2B *Departmental Energy, Renewable Energy and Transportation Management* (issued February 29, 2008)

- addresses key elements of the Department’s TEAM Initiative
- establishes DOE energy and water conservation goals
- states that these programs are to implemented through the site EMS



Integrating Sustainable Practices into EMSs



Per these two Orders, DOE EMSs should reflect sustainable practices for:

- energy efficiency, greenhouse gas emissions avoidance or reduction, and petroleum products use reduction
- renewable energy, including bio-energy
- water conservation
- acquisition (environmentally preferable purchasing)

continued . . .



Integrating Sustainable Practices into EMSs (cont.)



- pollution and waste prevention, and recycling
- reduction or elimination of acquisition and use of toxic or hazardous chemicals
- high performance construction, lease, operation, and maintenance of buildings
- vehicle fleet management
- electronic equipment management



DOE O 430.2B: Purposes



1. To meet/exceed goals of all applicable laws, Executive Orders, and Federal regulations for
 - energy efficiency
 - water conservation,
 - increased use of on-site, distributed renewable and clean energy sources, and
 - expansion of an alternative fuels infrastructure.



DOE O 430.2B: Purposes (cont.)



2. To maximize site/facility use of private sector, third-party financing, particularly from Energy Savings Performance Contracts and Utility Energy Service Contracts, applied in a life-cycle cost effective manner to accomplish leadership goals



DOE O 430.2B: Purposes (cont.)



3. To develop and commit to an annually updated and maintained Executable Plan that communicates site/facility commitments toward meeting all the goals

Per Order requirements, *Site Executable Plans* must be in place by 12/31/2008.



DOE O 430.2B: Goals



- Reduce energy intensity by no less than 30 percent by FY 2015 on average
- Reduce potable water use by no less than 16 percent by FY 2015
- Install advanced electric metering systems and standard steam, natural gas, and water metering systems
- Install on-site renewable energy generation

continued . . .



DOE O 430.2B: Goals (cont.)



- Attain the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Gold certification for all capital asset new construction and major building renovations
- Incorporate sustainable building requirements in at least 15% of existing DOE facilities by 2015
- Ensure all alternative fuel vehicles operate on alternative fuels to greatest extent practicable



New EMS Requirements in DOE O 450.1A



- EMSs are to serve as the primary management approach for addressing the environmental aspects of internal agency operations and activities, including the environmental aspects of energy and transportation functions.
- EMS must “reflect the EMS elements and framework found in ISO 14001:2004.”



New Auditing Requirements in DOE O 450.1A



DOE O 450.1A has requirements for two kinds of audits (as specified by EO 13423):

- 1) An EMS audit must be conducted by a qualified outside auditor
 - before declaring the EMS to be “fully implemented,” and
 - at least every three years thereafter;
 - and
- 2) Sites must implement an environmental compliance audit and review program.



Required Audits of EMSs



- DOE O 450.1A requires an EMS audit every three years.
- EMS audits conducted within the past three years may be reviewed to determine if they meet the new requirement for a “formal audit by a qualified party outside the scope of the EMS.”
- A properly documented EMS audit conducted by a qualified auditor within the past three years (e.g., an ISO 14001 registration audit) may serve as the basis for declaration.
- DOE guidance is forthcoming.



Qualifications for External EMSs Audits



- EMS auditors should be competent, with relevant skills and a working knowledge and understanding of the ISO 14001:2004(e) EMS Standard and general management system auditing methodologies and techniques.
- Formal ISO 14001 Lead Auditor Training and/or general auditing skills training and experience is desirable.
- Auditors must be “outside the control or scope of the EMS,” not working in the facility being audited, developing the EMS, or having any responsibility with the EMS.



Environmental Compliance Audit and Review



- DOE O 450.1A requires DOE sites to incorporate compliance management elements in their EMS, including an environmental compliance audit and review program.
 - This program should identify compliance needs and possible root causes of non-compliance.



Environmental Compliance Audit and Review (cont.)



- A DOE workgroup is identifying compliance audit, assessment, and review programs, including contractor assurance systems and oversight programs under DOE Order 226.1A, *“Implementation of Department of Energy Oversight Policy.”*
- Guide on Integration of Compliance Self Evaluation (O 226.1A) and Compliance Audit (O 450.1A) under consideration by the workgroup.



EMS Declaration Process: New Dates and Deadlines



- DOE managers must declare their EMS in conformance with new requirements by June 30, 2009.
- This declaration must be supported by a “formal audit by a qualified party outside the scope of the EMS”
- The EMS audit must be completed in sufficient time to conduct a management review, complete any necessary corrective actions, and prepare and submit the declaration.
- The EMS declaration process should be integrated with the ISM declaration process to the greatest extent possible.



EMS Reporting



- Annual site EMS reporting process
 - Report by December for previous fiscal year
 - HS-20 submits Department's report to EPA
- Reporting includes
 - Expanded EMS metrics
 - Declaration status (EMS 'fully implemented')
- EMS status is a metric on the OMB Environmental Stewardship Scorecard
- OFEE has issued a separate data call for EMS status as of September 2008



Integration of EMS and ISM Required by DOE M 450.4



“In ISM, the term “safety” is used synonymously with environment, safety, and health (ES&H) to encompass protection of the public, the workers, and the environment.”



EMS and ISM Integration in DOE M 450.4 (cont.)



DOE M 450.4 *ISMS Manual* requires integration of EMS into ISMS:

- “Throughout this Manual, ISM is defined to include applicable integration with EMS...”
- The Department ... requires integration of ... Environmental Management System (EMS) into ISM systems, as delineated in ... DOE O 450.1, *Environmental Protection Program*.”



Some Steps for EMS/ISM Integration



- Integrate into ISM appropriate environmental performance objectives, measures and commitments for
 - environmental compliance management
 - DOE sustainable environmental stewardship, energy, and transportation goals
 - implementation of EMS
- Integrate oversight of contractor ISM/EMS
- Integrate annual management review of DOE ISM/EMS
- Integrate EMS audit into ISM validations



Support from the Office of Env't'l Policy and Assistance



- EMS Guidance: update, revise, consolidate
- Support to the Field
 - EMS Assistance Network
 - Environmental Sustainability Network
- Field and Program Assistance
 - EMS development
 - Environmental sustainable practices
 - Coordination with EERE and other TEAM elements



Guidance Under Development



- **Guide 450.1A- α** – *EMS Development, Validation, and Integration into ISMS*
 - Audience: EMS managers
 - Will update and replace current DOE G 450.1-1 and DOE G 450.1-2
 - Will discuss integration into ISM
- **Guide 450.1A- β** – *Integrating Sustainable Practices into the EMS*
 - Audience: staff in various functional activities
 - Will replace various existing guides
- **Guide 450.1A- γ** – *Compliance Management Program*



Summary



- Build on existing EMSs
- Build on and extend existing sustainable practices
- Integrate sustainable practices into EMS
- Continue to integrate EMS into ISM systems
- Our office will support and assist you



For More Information



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