

# The National Technology Transfer and Advancement Act of 1995

## 2009 Annual Report for The Department of Energy

1. Please describe the importance of standards in the achievement of your agency's mission, how your agency uses standards to deliver its primary services in support of its mission, and provide any examples or case studies of standards success. Please include relevant Internet links and links to your agency's standards website.

The Department of Energy (DOE) uses voluntary consensus standards (VCSs) extensively in managing, operating, and implementing requirements applicable to its diverse sites, laboratories, operations, and facilities. The VCSs are used to support a wide range of program areas, including those addressing nuclear weapons and materials production, energy research, energy efficiency, oil storage, hydroelectric power, accelerator operations, and nuclear facility decommissioning. VCSs are consulted, referenced and applied in mission-related design, procurement, construction, operations, maintenance, emergency operations, and decommissioning efforts; in environment, safety and health management; in DOE research and development activities; in security and safeguards programs; and in overall business operations and management.

Other areas where DOE and its contractors use VCSs include:

- a. Writing procedures;
- b. Establishing safety criteria (e.g., for worker job task analyses, fire protection, nuclear criticality safety, nuclear facility safety); and
- c. Supporting internal DOE Technical Standards.

DOE's Technical Standards Program website is located at [www.hss.energy.gov/NuclearSafety/ns/techstds/](http://www.hss.energy.gov/NuclearSafety/ns/techstds/).

Examples/Case Studies:

(1) DOE's Oak Ridge National Laboratory has successfully applied ANSI/HPS Standard N13.12. N13.12 is a standard providing consensus-based surface and volume radioactivity criteria for release of property in developing release limits under CERCLA for concrete slabs.

(2) DOE's Savannah River Site has implemented the transition from site standards to

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national codes and standards to be in compliance with Public Law 104-113 and OMB A-119. This transition resulted in the reduction of the over 700 site-specific standards and guides to the present day use of national codes and standards, supplemented by 12 site standards and 64 site guides.

(3) DOE's Y-12 Site has several employees involved with the American Glovebox Society (AGS), writing and publishing documents related to gloveboxes. Y-12 has found that by developing common requirements and expectations for gloveboxes and related equipment, vendors have been able to standardize their products so that features and components can be standardized for various customers. Gloveboxes used by the various DOE facilities, as well as industries such as pharmaceutical, biological, and other laboratories, all have unique requirements and are generally designed around a specific operation. However, by standardizing such features as glovebox windows and their attachment to gloveboxes, fabricators are able to standardize tooling and fabrication methods that reduce the cost for all customers. Another benefit to DOE is the use of proven, widely-applied standardized designs and practices. The Y-12 Site uses AGS standards to execute new designs. The Y-12 Site also specifies AGS standards in procurement subcontracts for the glovebox fabricators to follow. One example of where this has been beneficial is in the standardization of requirements for welding related to glovebox fabrication. Before using AGS standards, vendors had to carefully evaluate potentially unique Y-12 Site requirements and specifications related to glovebox fabrication. However, the Y-12 Site now specifies that welding shall be in accordance with AGS-G006-2005, "Standard of Practice for the Design and Fabrication of Nuclear-Application Gloveboxes." Vendors know exactly what they must do to meet the requirements of this standard.

(4) Los Alamos National Laboratory (LANL) has several new facility construction projects and hundreds of facility or system modification projects underway at any given time. Every one of these projects and modifications follows national codes and standards such as the National Electric Code, and the International Building Code. These codes reference hundreds of supporting national consensus standards which are integral to the work done at LANL.

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2. Please list the government-unique standards your agency used in lieu of voluntary consensus standards during FY 2009: 0

3. Please list the Voluntary Consensus Standards (VCS) your agency substituted for Government Unique Standards (GUS) in FY 2009 as a result of review under Section 15(b)(7) of OMB Circular A-119: 0

4. Please provide the total number of Voluntary Consensus Standards your agency BEGAN to use during FY 2009: Optional: If possible, also please provide the total number of Non-consensus Standards that are developed in the private sector your agency began to use during FY 2009. In addition, please provide your agency's rationale for using the Non-consensus Standards that are developed in the private sector counted in this question.

Voluntary Consensus Standards: 146

Other Technical Standards: 0

Rationale: N/A

5. Please enter the Voluntary Consensus Standards Bodies (VCSB) in which your agency participated in during FY 2009: 89

<u>Voluntary Consensus Standards Body</u>	<u>Acronym</u>
Air Movement and Control Association	AMCA
Air-Conditioning and Refrigeration Institute	ARI
American Architectural Manufacturers Association	AAMA
American Association of State Highway and Transportation Officials	AASHTO
American Chemical Society	ACS
American Chemistry Council	ACC
American Concrete Institute	ACI
American Industrial Hygiene Association	AIHA
American Institute of Chemical Engineers	AIChE

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American Institute of Steel Construction	AISC
American Iron and Steel Institute	AISI
American Medical Association	AMA
American National Standards Institute	ANSI
American Nuclear Society	ANS
American Petroleum Institute	API
American Public Health Association	APHA
American Railway Engineering & Maintenance-of-Way Association	AREMA
American Society for Nondestructive Testing	ASNT
American Society for Quality	ASQ
American Society of Civil Engineers	ASCE
American Society of Heating, Refrigerating, and Air-Conditioning Engineers	ASHRAE
American Society of Mechanical Engineers	ASME
American Trucking Associations	ATA
American Water Works Association	AWWA
American Welding Society	AWS
Asphalt Roofing Manufacturers Association	ARMA
Associated Air Balance Council	AABC
Association for Information and Image Management	AIIM
Association for the Advancement of Cost Engineering	AACEI
ASTM International	ASTM
Building Officials and Code Administrators International, Inc	BOCA
Ceilings and Interior Systems Construction Association	CISCA
Compressed Gas Association	CGA
Construction Safety Association of Ontario	CSAO
Cooling Technology Institute	CTI
Crane Manufacturing Association of America	CMAA

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Electronic Industries Alliance	EIA
Factory Mutual Research Corporation	FMRC
Glass Association of North America	GANA
Gypsum Association	GA
Illuminating Engineering Society of North America	IESNA
Institute of Electrical and Electronic Engineers	IEEE
Institute of Makers of Explosives	IME
Institute of Transportation Engineers	ITE
Instrumentation, Systems, and Automation Society	ISA
Insulated Steel Door Systems Institute	ISDSI
International Air Transport Association	IATA
International Association of Plumbing and Mechanical Officials	IAPMO
International Atomic Energy Agency	IAEA
International Civil Aviation Organization	ICAO
International Code Council	ICC
International Commission of Non-ionizing Radiation Protection and Measurements	ICNIRP
International Commission on Radiation Protection	ICRP
International Commission on Radiation Units and Measurements, Inc.	ICRU
International Conference of Building Officials	ICBO
International Organization for Standardization	ISO
International Organization for Standardization/International Electrotechnical Commission	ISO/IEC
Metal Building Manufacturers Association	MBMA
Metal Lath/Steel Framing Association, A Division of NAAMM	MLSFA
National Association of Architectural Metal Manufacturers	NAAMM
National Concrete Masonry Association	NCMA

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National Council on Radiation Protection and Measurements	NCRP
National Electrical Manufacturers Association	NEMA
National Fire Protection Association	NFPA
National Ground Water Association	NGWA
National Information Standards Organization	NISO
National Roofing Contractors Association	NRCA
National Safety Council	NSC
National Window and Door Association	NWDA
NCSL International	NCSLI
Painting and Decorating Contractors of America	PDCA
Plumbing-Heating-Cooling Contractors Association	PHCCA
Portland Cement Association	PCA
Post-Tensioning Institute	PTI
Precast/Prestressed Concrete Institute	PCI
Resilient Floor Covering Institute	RFCI
Scaffolding, Shoring, and Forming Institute, Inc.	SSFI
Screen Manufacturers Association	SMA
Sheet Metal & Air Conditioning Contractors National Association	SMACNA
Single Ply Roofing Institute	SPRI
Society of American Value Engineers	SAVE
Society of Automotive Engineers	SAE
Society of Fire Protection Engineers	SFPE
Steel Deck Institute	SDI
Steel Door Institute	SDI
Steel Joist Institute	SJI
Steel Window Institute	SWI
Underwriters Laboratories	UL
Water Environment Federation	WEF

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6. Please provide the total number of your agency's representatives who participated in voluntary consensus standards activities during FY 2009 and the total number of activities these agency representatives participated in:

Agency Representatives: **449**

Activities: **1162**

7. Please provide any conformity assessment activities (as described in "Guidance on Federal Conformity Assessment Activities" found in the Federal Register, Volume 65, Number 155, dated August 10, 2000) in which your agency was involved in FY 2009.

The Department of Energy does not track conformity assessment activities.

8. Please provide an evaluation of the effectiveness of Circular A-119 policy and recommendations for any changes:

OMB A-119 continues to effectively provide the framework of requirements for DOE's involvement in national VCS standards-setting initiatives, and requirements for consideration of VCSs applicable to DOE needs prior to our development of agency-specific standards.

9. Please provide any other comments you would like to share on behalf of your agency.

The Department of Energy and its Standards Executive recognize the valuable role that VCSs play in facilitating the implementation of DOE requirements, and in supporting the Department's mission, strategic themes, and diverse program areas. DOE will continue to participate in and sponsor, as appropriate, VCS initiatives to ensure that the Department's needs and interests are represented in national and international VCS initiatives important to the success of DOE's mission, programs and operations.

10. Please use this box to provide any additional comments on how your agency currently reports its use of voluntary consensus standards:

10-1. Removed [This question was deprecated in 2005]

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10-2. Removed [This question was deprecated in 2005]

10-3. Removed [This question was deprecated in 2005]

10-4. Does your agency report standards that it uses for guidance purposes (as opposed to compliance purposes)? (a) Yes; (b) No; (c) Not applicable; Yes

10-5. Does your agency report use of standards from non-ANSI accredited standards developers, industry consortia groups, or both? (a) non-ANSI Accredited; (b) Consortia; (c) Both; (d) Neither; or (e) Not applicable; C

10-6. Does your agency have a schedule for periodically reviewing its use of standards for purposes of updating such use? (a) Yes; (b) No; Yes

10-7. How often does your agency review its standards for purposes of updating such use? [enter the number of years]: 5