Workshop on Sustainability in Construction

24-25 April 2013

Sponsored by ASTM International & GCC Standards Organization
Government & Sustainable Construction: Brief Overview

MARY C. MCKIEL, PH.D.
STANDARDS EXECUTIVE,
ENVIRONMENTAL PROTECTION AGENCY
CHAIR, ASTM BOARD OF DIRECTORS
Overview Summary

• Legislative and Policy Framework
• Standards as Fundamental Tool
• Benefits to Government
• Sustainability Elements in Construction
• Government Use of Standards for Sustainable Construction
• Program Examples
Legislative and Policy Framework

• **Incumbent on Government Agencies:**
  – Laws
  – Executive Orders from the President
  – Regulations

• **Government Activities:**
  – Laws & Regulations
  – Guidance
  – Education
  – Voluntary and Incentive Programs
Government Reliance on Voluntary Consensus Standards

- **National Technology Transfer and Advancement Act of 1995 (NTTAA)**
  - Requires federal government agencies to use standards developed by voluntary consensus standards organization when possible
  - Encourages federal government agencies to participate in standards development organizations

- **Office of Management & Budget (OMB) Circular No. A-119**
  - Guide on Implementing the NTTAA in Government activities
  - Discourages federal agencies from using government-unique standards
  - Requires annual reporting to Congress
Benefits to Government

• Eliminate/reduce costs of developing and maintaining standards
• Use as technical underpinning to projects
• Increase confidence, reliability, consistency in construction, mobility from project to project
• Facilitate implementation and measurement of safety, health and environmental elements
• Promote efficiency and economic competition
• Maximize expertise of the private sector as well as government
• Helps drive markets
SUSTAINABILITY IN CONSTRUCTION

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Element: Location

• ASTM Committee E50 on Environmental Assessment
  – fills the gaps left by agency regulations
  – bridges industry needs while regulation is being developed.

• ASTM E1527, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

• ASTM E2247, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property
Element: Solar, Geothermal and Other Alternative Energy Sources

- ASTM and IAPMO partnership with the heat metering standard framework – recognized by EPA
- **ASTM Committee E44** is currently developing **WK37952, New Specification for equipment and instrumentation of heat metering technologies**, which will lead to enhanced energy, financial and environmental benefits generated from thermal energy sources and technologies.
- “The U.S. Environmental Protection Agency supports the development of a U.S. heat meter standard as a means to both credibly and accurately measure the environmental, energy and financial benefits generated by distributed clean heating and cooling technologies nationwide.”
  - James Critchfield, director of EPA’s Renewable Energy Technology Market Development
Element: Materials & Safety

• Adherence to Required Codes
  – Plumbing
  – Electrical
  – Fire

• Use of recycled and recyclable materials

• Ease of recycling and reuse

• Use of Safety-related Standards From:
  – IAPMO
  – Underwriters Laboratories
  – ASTM International
  – National Fire Protection Association
Sustainable Construction In Government Operations and Programs

• Procurement of Green and Sustainable Goods and Services
  – Federal-wide programs for Greening Government acquisitions and services
  – EPA guides for environmentally preferable products based on open, consensus standards such as ASTM standards that incorporate environmental and sustainable elements
  – Green meetings – developing new standard in ASTM International

• Federal Building Contracts
  – Environmentally preferable standards incorporated in whole or in part to meet the technical specifications of federal building management and construction
  – Adoption of ASTM International and other standards for building performance indicators both inside and out that go beyond regulatory requirements
  – Service contracts for low VOC cleaners and degreasers used in buildings
  – Contracts awarded for building construction and maintenance that meet ASTM, LEED and other relevant standards

• Incentive Programs and Partnerships
  – Energy Star – based in part on ASTM standards
  – Waster Sense
  – Work with Academic institutions: engineering and architectural schools
Summary - Government Encouragement Through:

– Participation in the development of and use of private sector standards that support environmental, economic and social sustainability
– Regulations and voluntary partnership programs
– Contracts and services that help drive competition and markets for sustainable construction
– Grants programs to help educate engineers and architecture students