

2.2 EESCC Scope

In Phase One, the EESCC will focus on five areas related to the built environment, with each to be addressed by a dedicated working group (WG):

WG1: Building energy and water assessment and performance standards

(including diagnostic test procedures and health and safety testing)

WG2: Systems integration and systems communications

(encompasses communications between building automation/operation systems and equipment/appliances, both within single buildings and across facilities. As applicable, WG2 addresses communications between the building and the grid.)

WG3: Building energy modeling, rating, and labeling

(encompasses whole building modeling, and rating and labeling of energy performance)

WG4: Evaluation, measurement, and verification

(encompassing EM&V, energy performance metrics, and standardized and portable data collection and reporting)

WG5: Workforce credentialing

(including standards for workforce training and certification programs, and workforce skills standards)

Within these five areas, the EESCC will:

1. identify existing and forthcoming standards, codes, and conformance programs;
2. identify gaps, potential conflicts, overlaps, and barriers to innovation;
3. establish priorities for identified standardization needs; and
4. communicate findings to all stakeholders in a manner that articulates the value and benefit of these standardization activities to policymakers and the market.

Additionally, the EESCC will facilitate harmonization of standardization activities at the regional and international levels, as deemed appropriate by the EESCC.

2.2.1 Scope: Guidance to Working Groups

The EESCC working groups, supported by the steering committee, should aspire to attain a degree of consistency in their scope and deliverables, while recognizing that each of the five topic areas address specialized segments. Accordingly, the EESCC working groups have the latitude to adjust their scope to fit their needs.

Building Categories

Each working group will examine their relevant area across the building categories outlined below, as applicable. *Note:* the EESCC steering committee may add other building types if deemed necessary based on the input from the working groups.

Building categories to be considered include: a) residential buildings; b) commercial buildings; c) institutional buildings (municipal, university, hospital, etc.); d) industrial/manufacturing facilities; e) data and telecom centers; and f) water and wastewater treatment facilities.

Additional EESCC scope guidance includes:

Within the EESCC's Scope:

- The focus is on all types of energy consumption from the service entry throughout the building, “from the meter to the plug.”
 - However, some working groups may choose to include plug and process loads.
- Standards to enable “smart” operations and communications between individual devices or appliances are in scope. Beyond these parameters, the EESCC will consider special needs, though it will primarily point to the work being done by the Smart Grid Interoperability Panel (SGIP).
- Energy distribution within the building is in scope.
- Thermal heating and cooling building technologies (excluding specific appliances) that offset on-site energy consumption are within scope.
- Standards for on-site combined heat and power are within scope (given that thermal heat recovery is a type of energy efficiency).

Out of Scope:

- Individual product and appliance standards are out of scope
- Source energy, energy generation and transmission is out of scope
- Distributed energy generation is out of scope
 - This includes, for example, solar PV, small wind, methane capture and combustion, and fuel cells

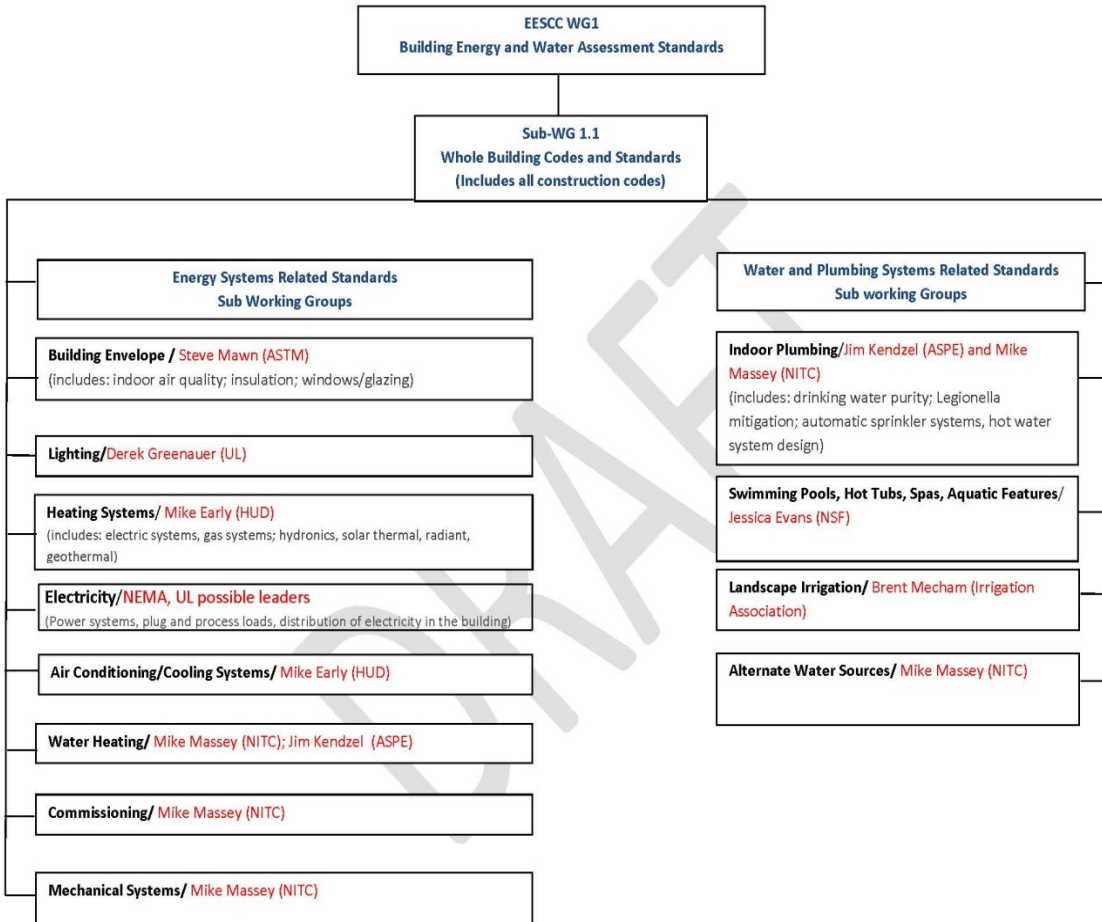
2.2.2 EESCC Working Group Scopes

Note: The following scopes for each working group are current as of February 25, 2013. EESCC working groups reserve the right to adjust their scope as necessary based on identified needs.

WG1: Building energy and water assessment and performance standards

(including diagnostic test procedures and health and safety testing)

As indicated in the organizational chart below, WG1 will address twelve identified issue areas related to Energy Systems and Water and Plumbing Systems:



In Scope:

- WG1 will address power systems, plug and process loads, and distribution of electricity in a building
- WG1 has decided to cover all building types

- WG1 decided that standards related to water and plumbing systems must address energy efficiency, but may also address other issues such as purity and safety. Standards that only address these issues are out of scope
- WG 1 decided that standards that do not relate directly to energy efficiency but that address peripheral health, safety, and other relevant issues will be addressed in a separate section of the roadmap

Out of Scope:

- Issues outside the meter (i.e., outside the service entry)
- Renewable energy

WG2: Systems communications and systems integration

(encompasses communications between building automation/operation systems and equipment/appliances, both within single buildings and across facilities.)

In Scope:

- Machine-to-machine communications can be included
- A standard is in scope if looks at the integration of products and/or appliances. For example, if a building has monitoring systems that use plug-and-play devices for notification, standards for particular products wouldn't be included in the inventory, but standards covering systems and connectivity between these devices would be.
- WG2 will consider standards that impact the design, operation, or energy management of the building
- In terms of telecommunications, wiring infrastructure affects how much energy a system consumes and are therefore in scope
- Telecommunications standards for connectivity of networks are in scope

Out of Scope:

- Human-to-human communications
- Vehicle-to-Building-to-Grid: WG2 will point to work of the ANSI Electric Vehicles Standards Panel
- Appliance-specific standards and product standards
- Industrial floor automation

WG3: Building energy modeling, rating, and labeling

(encompasses whole building modeling, and rating and labeling for energy performance)

Modeling

WG3 will address whole-building modeling:

1. Modeling as it relates to rating and labeling systems

2. Modeling as it relates to compliance to energy codes
3. Modeling as it relates to post construction operations
4. Statistical models for estimating utility savings
 - i. Hybrid and regression modeling (consumption disaggregation)

Rating and Labeling

For rating and labeling, WG3 will address:

- Operational Rating
- Asset Rating
- Hybrid (Operational and asset rating)

Out of Scope:

- WG3 has excluded infrastructure and land use issues

WG4: Evaluation, measurement, and verification

(encompasses EM&V, energy performance metrics, and standardized and portable data collection and reporting)

WG4 is considering several areas for the roadmap:

WG4 is considering several issue areas to tackle as part of the roadmap:

**Indicates items included in WG4's original scope*

- Energy performance metrics*
- Standardized and portable data collection*
- Reporting*
- Need to incorporate emerging availability of advanced metering and data
- Evaluating emerging EE technologies
- Technical Resource Manuals (TRMs): gaps, life of measure, time of use, transparency, baselines, and coincidence, etc.
- Accreditation (as related to systems)
- Certification (as related to systems)
- Code and compliance activities
- Tracking Systems Guidance
- Methodological approaches (to be refined and assigned)
 - Statistical methodologies
 - Top-down vs. Bottom-up approaches
 - Behavior programs
 - Determination of useful lives of equipment or activities producing energy
 - Other evaluation methods: baselines

Out of Scope:

- WG4 will NOT include any non-generation or supply, even if the generation or supply was on-site or integral to the premise or building. Generally those can be separately metered (i.e. PV or methane at sewage treatment plants) and accounted for in some clear fashion using that metered data.
- WG4 scope will NOT include policy or issues around generation, but will provide guidance to the proper documentation.

WG5: Workforce Credentialing

(includes standards for workforce training and certification programs, and workforce skills standards)

- Preliminary WG5 guidelines for identifying workforce credentials include certificate programs in education and training sectors, certification (personnel), accreditation activities, and existing standards
- WG5 may consider, but not necessarily include in its inventory, technical standards that deal with assessment procedures, licensing, company training on specific products, and higher education/academic programs

WG5 Guidelines for Identifying Workforce Credentials

- Personnel certifications that are accredited by a third party
- Personnel certifications that are not accredited by a third party, but have an assessment that is valid and renewal requirements
- Certificate programs accredited by a third party
- Certificate programs with a job task analysis, skill or competency standard, learning objectives, assessment and evaluation
- Professional degree program resulting in a license (e.g. engineer or architect)
- Certificates or qualifications of inspectors

Out of Scope

- Continuing education