



## Professional Testing Meeting Summary

<b>Client</b>	U.S. Department of Energy (DoE) National Institute of Building Sciences (NIBS)
<b>Date</b>	August 19 - 20, 2014
<b>Location</b>	Professional Testing Denver Office
<b>Objective</b>	Determine Scheme Committee Requirements for Energy Auditor
<b>Participants</b>	Song Deng John Dunlap David Eldridge H. Jay Enck (absent) Casey Martin Rick Meinking (absent) Khalis Nagidi Shiva Subramanya Scott Gordon Richard Vaillencourt
<b>NIBS Project Manager</b>	Deke Smith, Executive Director, building <b>SMART</b> alliance and Program Director, Commercial Workforce Credentialing Council
<b>Professional Testing Facilitator</b>	Dr. Christine Niero, Facilitator Vice President, Professional Testing, Inc.
<b>Observer</b>	Leen Zaballero, Penn State University
<b>Purpose</b>	To determine scheme requirements for the Energy Auditor in conformity with ISO/IEC 17024:2012 Accreditation Requirements

### Summary of Discussion

Dr. Niero of Professional Testing, Inc. began the meeting with welcoming address and introductions. Dr. Niero explained the purpose of the meeting and provided an overview of the certification program activities that had occurred thus far in the development of a certification examination for the Energy Auditor.

#### Overview of ISO/IEC 17024 and Certification

Dr. Niero then gave a brief overview of scheme requirements of ISO/IEC 17024:2012 *Conformity assessment—general requirements for bodies operating certification of persons* as administered by the American National Standards Institute (ANSI), noting that the certification programs sponsored by DoE and NIBS were to conform to these accreditation standards.

## Report of the Energy Auditor Validation Survey

Dr. Niero provided an overview of the Job Task Analysis process for the Energy Auditor conducted February 3 – 5, 2014 and reported the demographic findings of the validation survey, including: states in which energy auditors work; sector (public/private); highest level of education; years of experience in energy; and years of experience as an energy auditor. The demographic data was presented to provide a profile of job incumbents in energy auditing. Dr. Niero then provided an overview of the Examination Blueprint and the DACUM chart of duties and tasks; knowledge, skills, abilities and attributes; tools, equipment and resources to orient the task force participants about the job energy auditors perform, and the foundation for the certification examination.

## Work of the Scheme Committee

Task force participants were provided a copy of the JTA Report and the DACUM chart for review and reference. As a group of the whole, task force participants began to discuss the requirements for certification, including eligibility to qualify for the exam, at a high level, answering the question “What does the energy auditor” look like in terms of experience, education, and other work-related experiences. Once the group identified broad parameters for certification and eligibility, they broke into three work groups to accomplish the following:

1. Draft requirements for certification based on the competencies, identifying tasks that can be assessed on a written exam, and those that can't be tested but candidates need to present with in order to earn the certification
2. Draft eligibility requirements for their respective work group category
3. Determine equivalencies where possible for degree and work-related experiences, including military experience
4. Provide definitions and parameters for each requirement so the applicant can easily understand the requirement
5. Determine how information can be documented on an application
6. List supporting documentation provided with submission of the application.

Participants were instructed to:

1. Ask “why” have the requirement(s)
2. Ask “what” assurances the requirement(s) provides for establishing eligibility, and to consider aspects of “fairness” to applicants
3. Ask “what” assurances the requirement(s) provides to matters such as safety, ethics, etc.
4. Ask “what” documentation would be required to demonstrate an applicant meets the requirement(s)
5. Ask what level of “trust” and degree of “confidence” the requirement provides that supports the ability of the energy auditor to perform their job

6. Ask “what” the eligibility requirement or certification requirement assures that the exam cannot test.

Once participants completed the group activities, the groups reported their recommendations for eligibility and the rationale to support specific requirements. Once all presentations were made, the full group discussed each requirement and arrived at the final set of eligibility requirements.

**The following requirements were agreed upon by the group:**

Eligibility Requirements to qualify for the Energy Auditor certification examination

Completion of five commercial (non-residential) audits, with a minimum of two building use types, completed within three years of applying for the exam. Verification of completion of audit will need to be included on the application for certification.

Two (2) hours of CE in safety training. Safety courses taken to maintain licensing requirements, certification requirements in a related field, employer sponsored/required, or to meet state requirements will be accepted.

AND One of the following options:

1. Licensed engineer or architect plus a minimum of two years’ experience in energy auditing.\*

OR

2. Degree in engineering or five or six year architecture degree and a minimum of three years’ experience in energy auditing.

OR

3. Four year science, technology, math degree or four year architecture degree with four years’ experience in energy auditing.

OR

4. Two year technical degree or vocational training certificate in mechanical/electrical engineering technology and a minimum of four years’ experience in energy auditing. Military would qualify under this option.

OR

5. Four year non-STEM degree and a minimum of five years’ experience in energy auditing.

OR

6. Completion of high school diploma or GED and a minimum of seven years' experience in energy auditing.

\*Energy auditing experience is defined as successfully completing or participating in activities, at a minimum:

- a. Visit job sites to collect data for energy conservation analyses.
- b. Evaluate construction design information like drawings, design calculations, system layouts, and sketches.
- c. Evaluate energy systems including heating, ventilation, and air conditioning (HVAC), lighting and other building/industrial mechanical systems.
- d. Monitor and analyze energy consumption patterns and provide benchmarking analysis.
- e. Identify potential energy saving measures along with constructability requirements.
- f. Perform energy modeling or other energy calculation.
- g. Verify energy bills and meter readings.
- h. Prepare a report of the findings.

#### Recertification Requirements for Energy Auditor

Dr. Niero provided an overview of the purposes of recertification, and a summary of the competency requirements for certified energy auditors. The Scheme Committee discussed the recertification period and reviewed the considerations as outlined in ISO/IEC 17024 9.6.3. to determine a three year recertification cycle. Factors such as the level of professionalism required of certified persons, the risks associated with incompetent performance, and the maturity of the field support the three year certification cycle.

The Scheme Committee reviewed the options for recertification as listed in ISO/IEC 9.6.5. In selecting the recertification options, the following factors were considered:

- The cost and practicality of setting up onsite assessments and structured interviews, which would require scoring rubrics, examiners, and studies of inter-rater reliability for the examiners
- The vast location and variety of work environments
- The confidential nature of terms of employment preventing the review of work and work experience records
- The logistics associated with surveillance activities (surveillance is not required by the scheme)
- Changes to regulatory requirements and ongoing technology would be captured in the revalidation of the scheme
- Changes to normative documents and relevant scheme requirements would be captured in revisions to the scheme and during the associated revision of recertification requirements.

Fifty (50) points are required for recertification utilizing the formula of 1 point = 1 hour of activity, unless stated otherwise. The following requirements for recertification were determined. Alignment with competency requirements was determined. Individuals applying for recertification must meet the current requirements and agree to abide by all policies.

\*Note: Certification bodies per the requirements of ISO/IEC 17024 are required to confirm certified persons maintain any required physical capabilities in relation to the competency requirements.

The following requirements were determined, which must align with the competency requirements of the certification (exam blueprint).

Mandatory Audits: Lead, supervise or participate in five commercial (non-residential) audits during the certification cycle. No points awarded.

2 hours of CE in safety training (see CE below). Safety courses taken to maintain licensing requirements, certification requirements in a related field, employer sponsored/required, or to meet state requirements will be accepted. 1 hour of training in safety = 1 CE.

PLUS

Recertification Options: 50 points must be earned from the following options, or combination of options.

1. Audits: Up to five additional audits at five points per audit (maximum 25 points). Must lead, supervise, or participate in these audits.
2. Continuing Education (CE): CE is a process used by certified persons to maintain and advance their competency. CE includes education/training received and education/training given and may be obtained from several sources, including:
  - In-service training—up to 3 points
  - Webinars—1 point per hour of attendance; 2 points per hour as presenter
  - Conference Presentation—1 point per hour of attendance; 2 points per hour as presenter
  - Workshops—1 point per hour of attendance; 2 points per hour as presenter
  - College Credit (traditional or online)—10 points per college credit
  - Self-directed Learning—up to 3 points
3. Regulatory work: Participation in development or maintenance of a state or ANSI standard related to energy auditing. Participation includes attending meetings, official review, appointment as a committee member. Includes regulatory compliance analysis (i.e., energy modeling for 90.1 Title 24 or 189.1) and support lent to legislation/regulation for support of energy auditing (not lobbying)—up to 20 points
4. Retesting: Meet the current qualify for and pass the certification exam: 50 points

5. Contributing to the Energy Auditor Certification: Includes participation in Job Task Analysis (JTA) study, item writing, item review, and passing score study)—up to 25 points

Participation in JTA—8 CEs per day

Item Writing—8 CEs per day; 1 CE for every hour of webinar or remote writing

Item Review—8 CEs per day; 1 CE for every hour of webinar or remote review

Passing Score Study—8 CEs per day; 1 CE for every hour of webinar or remote participation

6. Publications: Must be related to the industry, which is defined as MEP systems, lighting, renewable energy, and other building services and systems as they pertain to efficient use of energy and water: Up to 20 points—points are awarded per publication as follows:

Published conference or technical paper; must be peer reviewed and published—10 points

Providing a review of conference or technical paper; electronic or written confirmation of completed review—1 point

Author a book, manual or guideline that is published; applies to describing energy efficiency or calculation methods. Credit is awarded at the time of publication—20 points

Journal, bulletin, or magazine article—10 points for peer reviewed; 5 points for non-peer reviewed

Whitepaper or position paper; may be digitally published and distributed. Provide documentation of delivery method—5 points

User's Manual for industry standards; contributing to User's Manual as author or peer reviewer—5 points

Author or co-author for chapter of technical handbook; credit is awarded when published—2 points

Review of a technical handbook chapter; credit is awarded when review is completed—1 point.

### Code of Ethics

Dr. Niero provided an overview of the purposes of the Code of Ethics and the disciplinary program for certified individuals. The following Code of Ethics was reviewed and approved (see attached) and will be adopted pending revisions provided by other scheme committees. It was recommended that one Code of Ethics be adopted and used by all four scheme committees. The following types of sanctions were

approved. Sanctions shall be based on the severity of the violation, and shall include, but not be limited to:

- Cease and Desist
- Written reprimand
- Written reprimand with remediation
- Censure
- Suspension
- Revocation
- Permanent revocation

In addition to imposing sanctions, certification bodies shall have the authority to report sanctions to legal and regulatory authorities, and other credentialing organizations as appropriate.

#### Alignment of scheme requirements with assessment methodology

Dr. Niero provided an overview of the reviewing the scheme requirements with the assessment methodology to identify any competency requirements not being assessed, and for determining alternative methods of assessment, if appropriate and necessary. The Scheme Committee determined that all competency requirements could be assessed in the multiple-choice exam.

#### Follow-up:

1. Review any changes to the Code of Ethics other scheme committees may make, and approve one Code of Ethics for all four certifications.
2. Vote to adopt the scheme.
3. Present scheme to the CWCC Board of Advisors and the Board of Direction.