NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Home Energy Professional Energy Auditor and Quality Control Inspector Certification Schemes

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National Renewable Energy Laboratory (NREL)
ANAB Scheme Owners Meeting, Nov. 22, 2024

Learning Objectives

- ✓ Discuss NREL's experience as scheme owner in support of the U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) workforce credentials.
- ✓ Review major scheme maintenance cycle steps.
- ✓ Discuss experiences and share best practices and lessons learned on how certification schemes can best support industry stakeholders.

NREL Weatherization Support

- NREL provides technical assistance and research to support high-quality work and highly qualified workers in the weatherization and home performance industry.

Technical

- Standard Work Specifications
- ***Energy auditor (EA) and quality control inspector (QCI) credentials***
- Visualization tools
- Research and analysis
- Impact assessment.

Programmatic

- Continuous Improvement Workshops
- Online programmatic trainings
- Workforce development
- Technical assistance.

Scope/Job Description

An EA is an experienced professional who **evaluates the potential health and safety issues, durability, comfort, and energy use** of a residential building. An EA conducts advanced diagnostic tests, gathers and analyzes data, and creates energy models to draw conclusions and make recommendations for improvements.

A QCI is a residential energy efficiency expert who **reviews, inspects, and verifies the appropriateness, quality, and completion of energy retrofit work** by conducting site visits, performing diagnostic testing, and evaluating work practices and documentation to improve the indoor environment, safety, durability, comfort, and energy efficiency of the building for the client.

Maintenance Cycle Overview

- Maintained on a five- to seven-year cycle
- Volunteer expert committees play a vital role.
- Major steps:
  1. Review and update job task analyses (JTAs), prerequisites, conflicts of interest, recertification requirements, etc.
  2. Industry validation of JTAs.
  3. ANSI National Accreditation Board approval of EA scheme.
  4. Certification body updates exams and implements pilots.
  5. National rollout of new exams.

Acknowledgments

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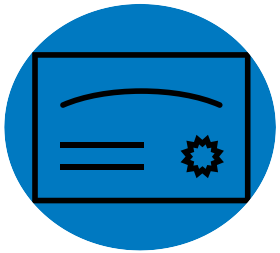
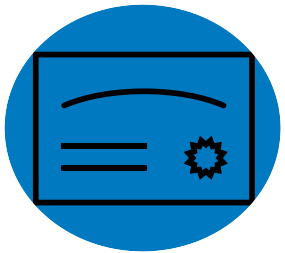
EA-QCI Scheme Committee Members (2022–2026):

- Amy Vieira
- Thomas McIvor
- Peter Martin
- Fain Perrin
- Pamela Palmer
- Lance Gast
- Aubrey Myers
- Michael Swafford
- Chris Clay
- Kevin Grothe
- Charles Childers
- Andrew Woodruff
- Lara O'Brady
- Matt Turner
- Robert Parkhurst
- Bill Nickerson.

Source: NREL's EA JTA and QCI JTA.

Current Maintenance Cycle Major Milestones





2022

Subject matter experts reviewed and updated EA/QCI schemes

(complete)

2023

EA scheme compliant with the ANSI National Accreditation Board and EA and QCI JTAs published online

(complete)

2024

Certification bodies planning for exam updates (Building Performance Institute) and exam development (Association of Energy Engineers)

(in progress)

2025

Building Performance Institute national rollout goal

2026

Association of Energy Engineers national rollout goal

Recent EA/QCI Resources

- 2023 EA and QCI JTAs
  - EA JTA Report
  - QCI JTA Report.
- 2018/2023 EA and QCI redline changes
  - View the EA JTA redline document
  - View the QCI JTA redline document.
- Weatherization Memorandum 126 (EA/QCI certification scheme updates)
  - Read Weatherization Memorandum 126.
- Weatherization Memorandum 133 (certification body update).
  - Read Weatherization Memorandum 133.

Access the JTAs and redline changes on the Standard Work Specifications website (under news and updates):

Resource Overview: JTA Report

- Available at no cost and used by a variety of audiences:
  - Program implementers
  - Training organizations
  - Certification bodies
  - Field staff.
- Contents:
  - Job scope and description
  - Domain, task, abilities, and knowledge areas
  - Exam blueprint.

5.1 DOMAIN I: Collection of Visual, Material, Dimensional, and Appliance Information About the Building for an Energy Audit

5.1.1 D1-Task 1: Document energy consumption

Ability to:

- Obtain 12 months of metered building utility bills
- Obtain unmetered annual fuel use information (e.g., oil, propane, solid fuel, etc.).

Knowledge of:

- How to access utility information
- Utility bill and client-stated usage.

Domain and Tasks	Final Percentages (Written)	Field
DOMAIN 1: Collection of Visual, Material, Dimensional, and Appliance Information About the Building for an Energy Audit	**44%**	
Task 1: Document energy consumption	2%	N/A

Source: Desai, Jal and Cory Chovanec. 2023. *Energy Auditor Job Task Analysis.* Golden, CO: National Renewable Energy Laboratory. NREL/TP-7A40-85300. https://www.nrel.gov/docs/fy23osti/85300.pdf.

Resource Overview: 2018/2023 JTA Redline Documents

5.1.1 D1-Task 1: Document energy consumption~~.~~

Ability to:

- Obtain 12 months of ~~client~~metered building utility bills
- Obtain unmetered annual fuel ~~delivery~~use information (e.g., oil, propane, solid fuel, etc.).

Knowledge of:

- How to access utility information
- Utility bill ~~components~~and client-stated usage.

Source: EA JTA redline document, NREL

Illustrates changes between the 2018 and 2023 EA and QCI JTAs.

- Black strikethrough = deleted text
- Black underlined text = added text.

Developed to support training organizations or active certification holders interested in changes.

Summary/Lessons Learned

- Involve appropriate experts throughout the process.
- Clearly communicate expectations and updates.
- Foster continuous improvement of schemes/certification programs.

Thank You!

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