



# Connecticut Weatherization Assistance Program (CT WAP) QUALITY WORK PLAN - 2024

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Updated 3/7/2024

Effective 7/1/2024

## Introduction and Purpose

This Quality Work Plan (QWP) Update (Weatherization Program Notice 22-4, dated December 13, 2021) describes mandatory requirements to support and verify quality work in the US Department of Energy's (DOE) Weatherization Assistance Program (WAP). It defines what constitutes a quality installation of weatherization measures, outlines how those measures are inspected and validated, and prescribes acceptable training and credentialing of workers.

The requirements outlined in the five sections of the Quality Work Plan (QWP) listed below reflect aspects included in the 2024 CT DOE Weatherization Assistance Plan application submission process.

### ***Section 1: Standard Work Specifications***

### ***Section 2: Inspections***

- Final Inspections
- Quality Control Inspections
- QCI Mentorship Option
- Grantee Monitoring

### ***Section 3: Workforce Training***

### ***Section 4: Exemptions***

### ***Section 5: Additional Resources***



## Section 1: Standard Work Specifications (SWS)

The CT WAP State Plan Application identifies the Type of Work to be done. This includes “Technical Guides and Materials” – and items such as standards documents, program updates, procedures manuals, field guides and other materials used to direct work in the field.

The Standard Work Specifications (SWS) define the minimum acceptable outcomes for home energy upgrades installed on single-family, multifamily, and manufactured housing. These specifications provide objective based outcome requirements for energy efficiency measures installed by the home performance industry.

The SWS is maintained by the National Renewable Energy Laboratory (NREL) on a five-year cycle and since 2014 has provided the WAP with a consistent definition of work quality to assist in meeting the goal of increased WAP effectiveness by increasing standardization of installations and technical monitoring outcomes.

### SWS-Aligned Field Guides

- Field Guides will provide Grantee-specific comprehensive field standards outlining expectations of work quality and the installation of WAP measures.
- Field Guides will be maintained by the Grantee and approved by DOE prior to implementation
- Grantees must update Field Guides on a five-year cycle
- Grantees must provide Subgrantees and/or contractors with all technical requirements for field work.
- Grantees must confirm receipt of all technical requirements and provide follow-up and clarification upon request.
- A signature on a service agreement contract shall serve as proof of receipt of technical documents.
- All crew and contractor work orders are to demonstrate performance requirements as specified in the energy audit (e.g., R-value, U-value, Efficiency values etc.)

**Note:** The CT Weatherization SWS Aligned Field Guide is available in electronic and printed formats for distribution to Subgrantees and Subcontracted resources.

The State of Connecticut Weatherization Assistance Program Operations and Training Manual has also



been updated to reflect QWP requirements and other programmatic changes effective beginning in DOE

WAP Program year 2024

**Note:** The State of Connecticut Weatherization Assistance Program Operations Manual is available in electronic and printed formats for distribution to Subgrantees and subcontracted resources.

Beginning of Grantee's Program Year 2024 (July 1, 2024– June 30, 2025)

## Section 2: Inspections

A component of the Weatherization Assistance Program Grantee Plan must include Grantee procedures for "Final Inspection" as directed in the annual DOE application instructions. All final inspections must be led by a certified Quality Control Inspector (QCI).

### Final Inspection

- All units are to be inspected using criteria that aligns with requirements outlined in Section 1 of this Guidance.
- Every client file must have a form that certifies that it had a Final Inspection and that all work met the required standards.
- Inspection documents must contain the QCI's name, signature, certification number and date of inspection or inspections
- If a unit has received both a Final Inspection and has also been monitored by the Grantee, the client file must include both the certified QCI's (Subgrantee and Grantee) printed name, signature and certification numbers and dates of each inspection.
- The Final Inspection must include an assessment of the energy audit that confirms the accuracy of the field site data collection, energy audit software inputs, and that measures called for are appropriate and in accordance with Grantee policy and protocols and DOE approved.
- Grantee technical monitoring of Subgrantees dwelling units shall not be completed by the same QCI certified individual that had completed the Subgrantee's energy audit or Final Inspection of the same dwelling unit.
- The Grantee shall specify Final Inspection policy in Section V.8.3 of the DOE Application.

### Quality Control Inspectors



Quality Control Inspectors (QCI) working for, or contracted by, the WAP must possess the knowledge, skills and abilities outlined in the National Renewable Energy Laboratory (NREL) Job Task Analysis (JTA) for Quality Control Inspectors.

A QCI is a residential energy-efficiency expert who ensures the completion, appropriateness and quality of energy upgrade work by conducting a methodical inspection of the building including performing safety and diagnostic testing. This applies to all individuals who perform an evaluation and sign off on work performed in homes, including final inspectors and Grantee monitoring staff.

### Single Family

QCI competency is demonstrated by current certification as a HEP Energy Auditor, with the HEP Quality Control Inspector certification as offered by BPI and supported by DOE NREL.

- The Grantee must follow written policy/procedure for verifying final inspectors approving completed units are certified QCIs.
- The Grantee must have written policies and procedures to address situations where a QCI approves work which is not consistent with the standards adopted by the Grantee and the DOE approved Field Guide. The policy must include increased monitoring when any subgrantee disciplinary action is taken or Grantee program protocols are not followed.

### Multifamily (Large)

CT WAP does not plan to engage in Weatherization of large multifamily buildings using formula funds during DOE Program Year 2024.

### QCI Mentorship Option

To support recruitment, efficient onboarding, and career advancement at the Grantee and Subgrantee levels, CT WAP may elect to develop and allow a mentorship model during DOE Program Year 2024.

Individuals working toward QCI certification (mentee) under the mentorship of a certified QCI may perform work aligned with the QCI Job Task Analysis, including Final Inspections, monitoring, and the collection of field site data and/or conducting reviews of energy models, but all work must be reviewed and approved by a certified QCI.

- If CT WAP chooses to develop a mentorship program, the policy must be submitted to the respective DOE Project Officer for approval and contain the following elements: The mentee is a Subgrantee/Grantee employee or contractor pursuing QCI certification.
- A timeline and the number of dwelling units for the mentees to complete training and obtain



QCI certification.

- At least one designated mentor, agreed upon by the Grantee and Subgrantee, who can review field inspections, provide on-the-job training and coaching. The use of video or virtual technology is encouraged.
- All work performed by the mentee is reviewed and attested by a certified QCI which includes the printed names, signatures, certification number (for the mentor) and dated by both the mentor and mentee.

**Note:** Any CT WAP developed Quality Control Inspection process will provide for increased flexibility and effectiveness in conducting all QCI and monitoring activities as follows:

- Each QCI Inspection will document the relationship between the individual performing the quality control inspection to the work to include independent status, role in audit process and role in any measures installations.
- Each QCI inspection will contain documentation and verification that each quality control inspection is performed in an impartial and complete manner.
- Each QCI inspection is subject to Grantee level assessment of effectiveness and compliance with program inspection policies and contain documentation of any findings related to the quality of the inspection and impartiality of the inspection process.

The Grantee will maintain tracking of all Grantee QCI activities to include all aspects of the Grantee developed QCI process, subsequent corrective actions, and final outcomes.

**Note:** CT WAP will conduct ongoing assessments of effectiveness to ensure that any individual who is acting as an auditor and QCI is able to consistently perform both tasks. If this capacity is found to be compromised, CT WAP will direct corrective actions and supplemental resources.

### **Section 3: Workforce Training**

Pursuant to the annual Grantee Application Package submission, Grantees must submit a proposed training plan with milestones to ensure the training plan is on pace to be accomplished. The Grantee Application submission instructions provide elements that should be addressed as part of the submission.

**Definitions and Training Guidelines Comprehensive Training:** Occupation-specific training which is part of an overall curriculum aligned with the topics within the given JTA being trained. Comprehensive



training must be administered by, or in cooperation with, a training program that is accredited by a DOE-accepted credentialing body for the JTA being taught.

**Specific Training:** Single-issue, short-term training to address technical skills or knowledge gaps. Conference trainings and any training not aligned with a Home Energy Professional JTA are included in this category.

**Home Energy Professionals:** An umbrella term for those working in the residential retrofit industry with a focus on energy efficiency improvements.

**Job Task Analyses (JTAs):** JTAs define and catalogue the knowledge, skills, and abilities a practitioner needs to perform a given job effectively and safely. JTAs are used by training providers to develop coursework that can be verified and accredited by a third-party organization.

**Retrofit Installer/Technician (RIT):** A residential energy efficiency professional who installs energy efficiency upgrades in dwelling units.

**Crew Leader:** A Crew Leader is responsible for supervising and assisting in the retrofitting activities specified in the scope of work. The Crew Leader is responsible for quality control, interacting with the client, managing personnel and materials, and ensuring a safe and efficient job site.

**Energy Auditor:** An experienced professional who evaluates the health and safety issues, durability, comfort, and energy use of a residential building. The Energy Auditor (EA) conducts advanced diagnostic tests, gathers, and analyzes data, and creates energy models to draw conclusions and make recommendations to the client for improvements.

**Quality Control Inspector (QCI):** A certified residential energy-efficiency expert who ensures the completion, appropriateness, and quality of energy upgrade work by conducting a methodical inspection of the building and performing safety and diagnostic tests.

**Installer Badges Toolkit:** The Installer Badges Toolkit provides a flexible, customizable, and voluntary approach to training and skills recognition for WAP RITs and Crew Leaders.

**Training and Technical Assistance (T&TA) Planning Requirements:** CT WAP T&TA plans will ensure that WAP field workers receive comprehensive training on a regular basis, as defined by the Grantee, for the position in which the worker is employed. DOE encourages flexibility in designing comprehensive and specific curricula to ensure trainings are customized to meet the needs of the weatherization workforce and unique energy efficiency programs.



CT WAP will decide on the schedule and type of trainings for each profession based on workforce needs and availability of funds.

CT WAP shall develop methods to complete a formal Training Needs Assessments (TNA) to identify and assess training needs and plan for meeting those needs over a defined period, which can span multiple Program Years. The TNA shall be based on the weatherization analysis of effectiveness (Master File V.6), DOE and Grantee monitoring recommendations, Subgrantee input, and other available performance data.

#### **Section 4: Exemptions**

(None / Not Applicable)

#### **Section 5: Additional Resources**

Further information to carry out the requirements set forth above can be found in the following links or by contacting:

##### *U.S. Department of Energy Weatherization Assistance Program*

- [wapinfo@nrel.gov](mailto:wapinfo@nrel.gov) (Please use the subject line: Quality Work Plan)

##### *The Standard Work Specifications for Home Energy Upgrades for Single Family, Manufactured Housing, and Multifamily Homes*

- <http://sws.nrel.gov>

##### *The IREC ISO 17024 Accreditation Program for Energy Efficiency Training Programs*

- <http://www.irecusa.org/credentialing>

##### *The NREL Job Task Analysis for Quality Control Inspector*

- <http://www1.eere.energy.gov/wip/pdfs/51670.pdf>

##### *Home Energy Professional Quality Control Inspector Certification*

- <http://www.bpi.org>



*The NREL Job Task Analysis for Multifamily Quality Control Inspector*

- <http://www.nrel.gov/docs/fy14osti/60537.pdf>

*A list of accredited training providers, including the JTAs for which they are accredited*

- [http://www2.eere.energy.gov/wip/guidelines\\_accruited\\_training.html](http://www2.eere.energy.gov/wip/guidelines_accruited_training.html)

*The WAP Training and Technical Assistance Clearinghouse will provide a central location to access materials and resources related to the Quality Work Plan*

- [http://www.eere.energy.gov/wip/guidelines\\_quality\\_work\\_plan.html](http://www.eere.energy.gov/wip/guidelines_quality_work_plan.html)