

Performance Tested Comfort Systems - Existing Duct Systems:

Proposed Requirements for Utility QA Exemption

Introduction

In order to claim credit under the Conservation and Renewables Discount (C&RD) Program for residential air duct sealing, utilities must ensure each system is certified as a PTCS duct system. Currently, in order to get a system certified as PTCS, the duct-sealing contractor must obtain certification from a third-party organization (currently, Climate Crafters region wide and Ecos Consulting locally in Idaho). The third party organization is responsible for the quality control (QC) and quality assurance (QA) of certified duct sealing work as well as maintaining a registry of certified systems.

The RTF is proposing an exemption to the third party quality assurance requirement for qualified utilities. The requirements for the utility and its quality control program under this exemption are described in this paper.

Process

Utilities may request quality assurance exemption from the RTF. The RTF will make a recommendation to BPA as to whether the utility should be granted exemption.

Requirements for Exemption

To be exempt from the third party QA requirements of PTCS duct sealing measures under the C&RD, a utility shall have (1) qualified inspection staff, (2) a quality control program, (3) a duct system certification program, and (4) a qualified registry system.

1. *Qualified Inspection Staff shall have the following qualifications:*
 - a. Knowledge of residential heat transfer and air and moisture movement.
 - b. Training in and experience with residential air distribution system diagnostics. This includes successful completion of an RTF approved PTCS training class for residential retrofit duct sealing.
 - c. Up-to date knowledge of the Specifications. The **Specifications** are the latest version of the RTF's Performance Tested Comfort Systems[®] Duct System Diagnostic Field Guide, Program Standards, Testing Procedures and Reporting Forms.
 - d. Training on using the Utility's duct testing equipment (i.e. Blower Door, Duct Blaster, and Digital Manometer regularly calibrated per manufacturer's instructions)
2. *The utility Quality Control Program shall include the following components:*
 - a. Use of Certified Contractors
 - Utilities shall certify that contractors passed an RTF approved PTCS training class for residential retrofit duct sealing.
 - b. A Review of Incoming Data
 - The utility shall review all incoming contractor data for reasonableness and completeness.
 - c. Utility Inspections
 - The **Inspection** involves a complete verification of compliance with the Specifications and a leakage-to-outside test performed after duct sealing work.

Utility inspection staff shall perform inspections. 100% of all Certified Jobs shall be inspected within 30 business days* of completion of the job.

*The first three installations for each new technician (new to the utility's program) shall be inspected within 10 business days of completion of the job.

d. Remediation of Contractor Errors

A **Contractor Error** is any deviation from the Specifications and/or QA test that fails to meet specification and the utility inspection finds more than the greater of 40 CFM₅₀ or 10 percent difference in contractor reported duct leakage to outside. Contractor Errors shall be remedied and re-inspected for compliance with the Specifications.

3. *The utility's Duct System Certification Program shall meet the following requirement:*

- a. If ALL of the following are true, the Utility may submit the duct system for **Performance Tested Comfort Systems (PTCS)** certification and duct sealing credit:
 - The duct system originally has greater than the lesser of [0.10 x Floor Area (square feet)] CFM₅₀ or 250 CFM₅₀ leakage to Outside;
 - The duct system's leakage to outside, in CFM₅₀, is reduced by 50%* or more.
 - In cases where a 50% leakage reduction is not met, the sliding scale calculator for manufactured homes may be used to determine savings and claim credit (as deemed calculated) for the C&RD Program;
 - The Specifications were followed;
 - The RTF has recommended the utility be granted exemption from third party QA requirements.
- b. The utility may certify the duct system as meeting **Performance Tested Comfort Systems (PTCS)** specifications if the system meets both material and performance requirements without regard to its original condition. The utility may not claim duct-sealing credit for such systems.

4. *The utility's registry reporting system shall:*

1. Include the following information on each house:
 - a. House characteristics (age, foundation type, square footage)
 - b. Heating system type (electric FAF or heat pump, duct work location)
 - c. Pre-duct sealing leakage to outside (including fan pressure reading and ring number)
 - d. Post-duct sealing leakage to outside (including fan pressure reading and ring number)
 - e. Inspection results (pass or error 1st inspection or error 2nd inspection..., and type of error (misrepresentation of leakage number, didn't use mastic properly, etc.))
2. Be in a user-friendly Excel format.
3. Be made available electronically to the Regional Technical Forum within ten business days of request.

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