

Best Practice – Target CFM Drops

Date: September 2018

Subject: Achieving Target CFM Drops

Problem or Question: Target infiltration CFMs are not being reached by contractors completing work orders they were issued.

Discussion: Keep in mind it is always our goal to ventilate right (ASHRAE) and then tighten a house as tight as possible using the infiltration funds that have been justified for the house, and not to just stop infiltration reduction work once the minimum target has been reached. We need to maximize effective air sealing efforts at each and every house weatherized. **The true ideal final CFM reading target is 0cfms** so work to get as close as possible to that. It is important to achieve as much CFM reduction within the scope of the program; this ultimately benefits the clients with lower energy burdens, which is the goal of the program, and what you, the Subrecipient staff, are paid to do.

- For your after weatherization CFM target, TDHCA Blower Door form (January 2017) auto-calculates a CFM target; this new target is slightly tighter than previous target of BTL/MRV. The determination of a realistic and achievable target, while maximizing the air sealing measure, is going to be the first step in achieving the CFM target. Despite the target provided, Subrecipients should attempt to seal the house as much as possible, get as tight as you can (within reason according to DOE energy audit or LIHEAP Priority List guidance). If the automated target from the form is too tight given the state of that current unit, then the target to use needs to be adjusted manually based on previous experience and your best professional judgment. If the automated target is always too tight, then maybe additional techniques and training might be necessary for your staff/contractor to help you be more effective at air sealing with your typical housing stock.
- “Principles of CFM Reduction” Best Practice should be read and followed as much as possible, by both Subrecipient assessors/inspectors, as well as weatherization contractors. After the work on the work-order is done, the contractor should run a blower-door test to see if target CFMs are reached or exceeded. If the specific goals of reductions are not met, the Subrecipient should consider authorizing additional weatherization measures to reach that goal.
 - Note that the different blower door systems provide slightly different readings depending on their calibration and origin of manufacturer.
- It is important to target as tight of a house as possible and not just the target CFM generated on the blower door form. This will enable the weatherization team to obtain a final CFM reading that is as tight as possible and will stand up to subsequent scrutiny from the client, DOE, TDHCA, and other stakeholders in the program.
 - Do NOT be satisfied by reaching the absolute minimum CFM reductions. Perform as much infiltration reduction measures as possible while staying within program guidelines. The tighter the house, the more effective/efficient all the other measures installed in the house will be, which ultimately benefits the clients with lower energy burdens.
- General rule of thumb: If one person, with a blower-door, working to reduce CFMs, cannot reduce more than 100 CFMs per hour, then you are likely past the point of diminishing returns and it is no longer cost-effective to hunt down and eliminate CFMs. In other words, the time and cost of hunting

down and sealing air leaks when you cannot achieve a 100 CFM reduction per hour is too great and it is no longer worth the effort to hunt down and eliminate more CFMs. NOTE: Intermediate blower-door readings must be taken to achieve reduction goals. CFMs cannot be hunted down and eliminated without a blower door. Because once you cover one significant leak, another leak (previously undetectable) may emerge, but only if you are running a blower door.

Recommendation Summary: Recommend weatherization contractors run a blower-door test to assist them in their weatherization efforts and before they depart the worksite to ensure the CFM reductions are met.

