

Best Practice – NEAT: After Weatherization Target

Date: Revised January 5, 2017

Subject: Energy Audit: “After Weatherization Target”

Problem or Question: We have been entering the BTL as the target CFM number in the NEAT/MHEA software, but that is almost never achieved. Also entering the BTL as the target number seems to be affecting other measures in the audit such as the insulation and the mechanical systems (AC, furnace). We fear that these BTL-entered audits are not resulting in the best energy savings for the client. What should the target amount be for infiltration in the NEAT program, and how do we optimize the measures that are recommended?

Discussion: The **Target CFM** number is a very significant data-entry factor in the energy audit. This value *does* effect the amount of insulation that ranks and the size and/or possibility of mechanical (HVAC) being recommended. This target number is entered in the “Ducts and Infiltration” field, in the “After Weatherization Target” box. Use the optimal number in this field in order to maximize benefit to the client. Important considerations: Use an achievable target given the state of the individual house, the level of air sealing details gathered by staff during the initial assessment, plus the actual effectiveness of the contractor’s air sealing ability. Entering the calculated BTL, which is typically unrealistically low, in the energy audit will prompt the software to “think” this CFM level is attained during weatherization, and potentially reduce the SIR ranking level of other factors; such as, solar screens, storm windows, or AC replacements. Entering an auto-calculated number according to 15 air changes per hour (ACH) as the target number may result in insufficient air infiltration funds. This “higher” target choice could result in a lack of effective infiltration measures and failure to maximum CFM reduction. The goal is to reduce air infiltration as much as possible with the funds the energy audit justifies. Remember effective air sealing helps to define the thermal boundary and keeps conditioned air within the home (refer to other CFM reduction Best Practices for additional guidance).

Recommended Action:

What number should we use?

- You should use the lowest realistic and achievable number. The TDHCA Blower Door Data Sheet does an auto calculation based on acceptable levels of ACH, ranging from 10-14 ACHs. The Blower Door sheet provides suggested maximum ACH options based on the initial blower reading. Subrecipients are highly encouraged to use the lowest ACH option that is a realistic target. With ASHRAE included in the scope of weatherization, remember the goal is to air seal as tight as possible and then to ventilate right!
- When using the Blower Door Data Sheet, if the initial blower door reading is already lower than the auto-calculation for 9 ACHs, use professional judgment to determine a realistic number, given the scope of work to be done. In these situations, the energy audit most likely will not justify much for air sealing measures.

The energy audit justifies a certain dollar amount for counter-infiltration based upon the data entered from the initial assessment. Maximize CFM reduction measures within an SIR of 1.0 or greater. However, be sure that the home needs the dollar amount entered to achieve the air-sealing work

<http://www.tdhca.state.tx.us/ea/wap.htm>

required. Otherwise, the audit may not consider for other needed measures due to the funds being dedicated for infiltration reduction. It is best to estimate the true dollar amount needed to achieve the most CFM reduction and use that in the “Infiltration Reduction (\$)” field. Keep in mind it is always our goal to tighten the home as much as possible with the allotted funds and then ventilate right (ASHRAE). We need to maximize effective air sealing efforts at each and every house weatherized; not simply stop when a “number” is reached.

Recommendation Summary: Using the Blower Door sheet, use the lowest realistic and achievable target number to get the optimal CFM reduction value to enter into the energy audit “After Weatherization (Target or Actual)” box/field.