

## **Weatherization Assistance Program Energy Audit**

- 1) Introduction to Weatherization and Client Education on energy efficiency in their home.
  - a. We discuss what the Weatherization Program is, how it's funded, its goals, and what measures we may provide to reach those goals.
  - b. Basic ways to save energy in the home and we create an action plan with the client, so they can execute it after weatherization is completed.
  - c. Basic health and safety concerns within a home are addressed
  - d. A brief discussion on the process of the Energy Audit
  - e. We try to answer any client questions or concerns about the process.
  
- 2) A Basic Health and Safety inspection of the home
  - a. Monitoring carbon monoxide levels in the home throughout the Audit
  - b. Inspection of the attic, foundation, and living space for moisture and air quality issues
  - c. Testing of all accessible gas pipe, valves, and fittings for leaks
  - d. Identification of any ventilation issues in the home
  - e. Ensure the clothes dryer is properly vented to the outdoors
  - f. Identify any other possible health and safety concerns in the home
  
- 3) Testing of combustion appliance for efficiency and safety when applicable
  - a. Furnace
  - b. Water heater
  - c. Cooktop and oven
  
- 4) Testing of CAZ (Combustion Appliance Zone) for safety (when applicable)
  - a. Ensures all appliances are able to vent properly by putting the home in worst case depressurization. (all ventilation fans, furnace fans, and clothes dryer are operating at the same to simulate worst case negative pressure)
  
- 5) An Inspection of the exterior of the home
  - a. Identification of roofing, siding, windows and doors
  - b. Complete measurements of the home for energy modeling purposes
  - c. Documentation of any deficiencies on the exterior of home
  - d. Identification of possible air sealing opportunities
  - e. Preliminary identification of the home's thermal and pressure boundaries

- 6) An inspection of the interior of the home
  - a. Assessment of all windows and doors for condition and function
  - b. Identify construction type of the home, wall depth, insulation value, structural integrity and general condition of the shell of the home.
  - c. Inspection of the attic area to determine insulation levels, ventilation needs, and general condition of the space.
  - d. Inspection of the crawlspace/basement/foundation of the home to determine insulation values and general condition of the space.
  - e. Identify possible energy savings measures to be installed for the home.
  - f. Testing of any ventilation equipment for performance and condition.
  
- 7) Conduct a blower door test of the home
  - a. This test will determine how much air leaks into the home by depressurizing the space. We measure the flow of air through the home by cubic feet per minute and use that number to calculate how many air changes occur in the home in an hour. This can guide our implementation of energy saving measures, such as air sealing and determine the effectiveness of the measures installed.
  - b. Conduct infrared scans of the home during the blower door test to identify where the air is leaking into the home. This allows the program to target certain areas within the home to maximize the benefits of air sealing.
  - c. Evaluation of the pressure boundary by conducting zone pressure diagnostics of the shell. This testing allows us to pinpoint our air sealing efforts to particular connections points throughout the home.