



Standards for Jackson EMC's Right Choice Program

Revised: 05/10/06

All homes in the program must meet the requirements of the Georgia Energy Code, which is the International Energy Conservation Code (IECC) 2000 with Georgia Supplements and Amendments. A copy of the supplements and amendments may be downloaded from www.dca.state.ga.us.

Program prerequisites are-

- Homes must be served by Jackson EMC
- Homes must have heat pumps and electric water heaters
- No unvented gas fireplaces allowed

CERTIFICATION PROCESS

Enrollment Meeting

After a builder has chosen to build Right Choice homes, the Enrollment Meeting starts your success. All stakeholders in the certification process are required to attend an Enrollment Meeting. The purpose of the meeting is to communicate the process and the value of Right Choice to the builder, HVAC and air sealer/insulation contractors, review the Certification and Warranty Management Processes, and openly discuss questions about the program standards and HVAC load calculations.

Plan Analysis

Builder must submit house plans to Right Choice for each plan to be built. HESM&A, a state certified mechanical engineer with Errors and Omissions insurance, will calculate the heating and cooling load based on ASHRAE Fundamentals and also prepare the ResCheck, Georgia Energy Code Compliance Certificate for each plan. This service is an added benefit from Jackson EMC.

Model Walk-Through

When the first home for each floor plan reaches the dry-in phase and before the rough-in phase, Right Choice will meet on-site with the builder, HVAC and air sealer/insulation contractors, and conduct a walk-through to discuss how each trade intends to install their product. The discussion will include proposed duct design and layout, HVAC unit sizing, air sealing requirements, and suggestions for a successful Pre-Insulation Inspection.

Pre-Insulation Inspection

This inspection must occur before wall insulation is installed. At the Pre-Insulation Inspection, the HVAC contractor should have duct system fully assembled and sealed with mastic. The air sealer contractor must have completed all blocking and air sealing. A Right Choice technician will visually inspect for proper air sealing, duct installation, and will pressure test the duct system for tightness with the Duct Blaster.

Final Inspection

This inspection must occur after house has permanent power meter and after HVAC system start-up, preferably before closing. A Right Choice technician will perform a blower door test to check the home's air tightness, perform an e-Scan test to check for proper air distribution from the HVAC system, check the thermostat for proper function, and will visually verify appropriate air sealing, insulation, equipment size, and moisture control.

Warranty

Once the home passes its Final Inspection, the builder is approved for the rebate and the home receives Jackson EMC's Energy Advantage Rate. Right Choice warranties begin when the home closes. Our Right Choice Customer Relationship Manager is your homebuyer's single point of contact for warranty delivery, review and claims process. The energy warranty states that the annual energy used to heat and cool the house will be below a certain kWh amount, and is valid for 3 years. The comfort warranty states that the temperature in the middle of every room must stay within 3 degrees of the temperature setting at the thermostat location for that zone, and is valid for 1 year. The comfort performance is based on average annual weather data. Warranties and Jackson EMC's EMC's Energy Advantage Rate are transferable.

RIGHT CHOICE STANDARDS

1. AIR SEALING

(Air sealing is required by IECC 2000 section 502.1.4 Numbers in parentheses below refer to the air sealing diagrams on pages B-24 and B-25 of the Georgia Supplements and Amendments to the IECC 2000)

Blocking and Sheathing

- A. Chases must be capped. (11 & 15)
- B. Solid sheet must be installed behind tubs and showers on insulated walls. (2 & 10)
- C. **Attic kneewalls must be sheathed.**
- D. Stud cavities must be blocked from attic. Blocking or top plate will be needed at change in ceiling height and attic kneewalls. (18)
- E. Joist cavities under attic kneewalls must be blocked. (17)

Pre-Insulation Air Sealing

- F. Top and bottom plate penetrations must be sealed. (1)
- G. Bottom plate must be sealed to poured wall, slab, or subfloor. (7)
- H. **Penetrations in exterior wall sheathing must be sealed.**
- I. Window and door rough openings must be sealed (not chinked with insulation). (3)
- J. Gaps greater than 1/8" between pieces of exterior sheathing must be sealed. (8 & 9)
- K. Exhaust fan penetrations must be sealed at band joist. (5)
- L. Exterior walls of fireplace chase must be sealed (including at combustion air inlet).
- M. **Penetrations through insulated subfloor must be sealed.**
- N. Shower and tub drains must be sealed (rock wool / fiberglass not acceptable) (14)
- O. HVAC boots in insulated floors must be sealed to subfloor. (13)
- P. **Soffits must be sealed at cantilevered floors.**
- Q. Gaps in chase caps and blocking must be sealed. (11 & 15)
- R. Recessed can lights in insulated ceilings must be air-tight. (4)

Post-Drywall Air Sealing

- S. Ceiling mounted electrical fixtures, including lights, ceiling fans, and speakers in insulated ceilings must be sealed to drywall. (6 & 12)
- T. HVAC boots in insulated ceilings must be sealed to drywall. (13)
- U. Attic kneewall doors must seal tight – this requires weatherstripping and a latch. (16)
- V. Attic scuttle holes must seal tight – this requires weatherstripping. (19)
- W. **Attic pulldown stairs located in conditioned space must seal tight. A sealed cover box with weatherstripping is recommended. The preferred location is in an unheated space such as a garage.**
- X. **Exterior doors must have weatherstripping and thresholds. This includes all doors that penetrate the building envelope, which may include the door between the house and the basement.**

Testing

- Y. **All homes must pass a blower door test with a result of 0.50 ACH or less.**

2. INSULATION & WINDOWS

(Parentheses indicate IECC 2000 code reference)

- A. Home must meet the overall U-value requirement and SHGC requirement of the Georgia Energy Code based on specifications provided by the builder. Right Choice will determine if the provided values meet energy code as part of the plan analysis. (502.1.5 & 502.2.2)
- B. Insulation must be installed against a solid air barrier (OSB, drywall, concrete, or solid sheet good). As an example, floor insulation must be installed in contact with the subfloor. (101.4.1)
- C. Wall insulation must fill cavities completely.
- D. All areas of the attic must have vent openings. If there is a bonus room over the garage, the attic over the garage must be vented in addition to the main attic.
- E. Blown attic insulation may not block soffit vents – baffles must be used to prevent blocking attic ventilation
- F. Blown attic insulation must have rulers (one per 300 square feet) and have an attic card in each accessible attic space. Installed insulation must have a depth throughout the attic that meets or surpasses the depth indicated on the card. (102.5.1.1)
- G. Limit the number of 4x8 sheets of subfloor installed in the attic. This application reduces the effectiveness of the ceiling insulation located under the subfloor. If more than two sheets of subfloor is desired, it is recommended that they must be raised up to provide room for the full attic height of insulation underneath.
- H. Attic kneewalls must be insulated to a minimum of an R-19 value. (502.2.1)
- I. Basement foundation walls must be insulated to a minimum of R-5 if they are part of the building envelope. (502.2.1)
- J. Concrete foundation walls may not be insulated with kraft-paper faced fiberglass batts. Unfaced batts, blown in fiberglass, or perforated vinyl encapsulated batts are permitted. Floors over an unconditioned basement can be insulated instead of foundation walls.

3. HEATING AND COOLING SYSTEMS

(Parentheses indicate IECC2000 code reference)

Equipment

- A. Heat pump must be sized to Right Choice specifications as determined by ASHRAE Fundamentals. (503.3.1)
- B. Indoor and outdoor units must be matched and ARI rated.
- C. Electric strip heat may only engage when heat pump is unable to meet or maintain the thermostat setting. (503.3.2.3)

Ductwork

- D. Duct joints and seams must be sealed with mastic or mastic tape, including the plenum seams and the duct liner to duct collar connection. (503.3.3.4.3) Flex duct joints must also have straps securing the flex joint in addition to the mastic sealant.
- E. Dampers are necessary to allow easy alteration of flow to each room. Each room must have one damper that will control air to the supply ducts serving that room. It may be necessary to back up to the branch to install the damper to allow it to be accessible in the future.
- F. Ducts must be sized and designed according to the principles outlined in ACCA Manual D.
- G. The return side of the duct system must be sized to carry at least as much air as the supply side of the duct system.
- H. Stud cavities, joist cavities, and cabinets may not be used as ducts. If air must run through these spaces, ducts designed to fit inside those spaces must be used.
- I. No ducts may be run through roof-ceiling combos, exterior wall cavities, or wall cavities between the garage and house.

Zoned Systems

- J. Must be designed and installed according to HVAC equipment manufacturer specifications. Every brand is expected to have its own set of installation and design instructions.

Testing

- K. Total Supply and Return air flow must be 400 cfm/ton +/- 10%.
- L. Duct leakage must be less than 20 cfm per ton operating at 1/3 pressure utilizing the duct blaster.

4. MOISTURE AND INDOOR AIR QUALITY

(Parentheses indicate IRC 2000 code reference)

- A. All fireplaces and other combustion equipment must be equipped with a flue and an outside combustion air supply. No ventless fireplaces are allowed.
- B. Grade must slope away from house a minimum of 5% (6" over 10 feet). (R401.3)
- C. Exhaust fans must be vented to the outside and are required in every room with a shower stall or bathtub. Exhaust ducts vented through soffits must penetrate soffit and end with a termination cap.
- D. Gutters must be present on the house and downspouts must direct water away from the foundation.
- E. No polyethylene is allowed in above or below grade wall assemblies.
- F. Crawlspace floors must have 100% coverage with polyethylene sheeting or have a concrete dust cover.