



Georgia Energy Code Compliance (IECC) (Residential)

The State of Georgia Energy Code for Buildings, herein referred to as the (IECC), requires all construction to comply with energy savings requirements adopted by the State of Georgia. The 2009 IECC establishes MINIMUM standards for energy conservation in construction. Compliance with this energy code by designers and builders is MANDATORY.

Areas of existing dwellings are exempt from these requirements where the finish wall coverings are not removed or removed but existing insulation is present during renovation.

The IECC requires all replacement windows, skylights, and doors to meet IECC requirements.

Example: If a permit is issued to build a new house, the whole house shall comply with IECC requirements.

If a permit is issued to finish a basement, only the basement shall comply with the requirements.

Georgia amendments are available online at: www.dca.state.ga.us

The City of Stonecrest Building Department requires every building permit applicant to submit an IECC Compliance Affidavit or a city approved software report showing compliance with all applications for building permits. Only "RESCHECK", a prescriptive report or "REMRATE" or "ENERGY GAUGE", both performance reports, software programs are approved for construction of 1&2 family dwellings and townhouses in the City of Stonecrest.

When using REScheck, all minimums must at least meet the minimums in table 402.1.4.

When using REMrate, or ENERGY GAUGE programs, all data must comply with IECC section 404.

Compliance to IECC requirements addressing (3) separate areas of compliance, Building thermal envelope, Mechanicals and air sealing.

A homes building thermal envelope consists of walls, floors and ceilings separating conditioned space from unconditioned. See table 402.1.4.

A Homes mechanical system consists of a water heating system and heating and air conditioning system which now be designed using the ACCA Manual J and duct design, per the ACCA Manual D with R-8 insulated ducts in attics and crawl spaces.

Homes Air Sealing system consists of closing all outside air entry points through the building thermal envelope and conditioned area.

One of the following compliance paths shall be chosen from the list below and indicated on the State of Georgia Compliance Affidavit:

1. The “component approach”.
2. The “RECA” approach.
3. The REScheck software approach.
4. The “REMrate” or “Energy Gauge” software approach.

NOTE: If choosing a software approach, a completed software compliance report shall be submitted to the Building Official.

When a compliance path has been chosen:

1. Insulators will provide the R-values to be used at all building thermal envelope locations.
2. Plumbers will provide water heating sizing, Per Georgia amended IPC table 506, type (gas or electric), and energy efficiency factor specifications from the manufacturer.
3. HVAC contractors or mechanical engineers will design a heating and cooling system by using ACCA Manual J and ductwork by using ACCA Manual D and list all equipment / duct specifications and load calculations on the affidavit and on the IECC Compliance Certificate, which must be on site at final inspection.
4. Windows and doors are required to meet minimum U-factors and SHGC’s (solar heat gain coefficients). The labels are required to be affixed on these components at time of inspection from the NFRC labels and this information shall also be indicated on the affidavit or in the software system selected.

Sloped or Vaulted Ceilings:

IECC requires sloped or vaulted ceilings to be insulated to R-30 value. R-19 value is no longer acceptable, unless proven by one of the three software programs listed above.

IECC Compliance Inspection:

Exterior Insulation Inspection:

If a combination of wood wall cavity insulation and exterior insulation (R-11 in the stud cavity plus R-2 at the exterior side of the framed wall) to meet the IECC required R-13 value for exterior walls, then the exterior insulation on the exterior side of the exterior wall shall be inspected before the house wrap air barrier is installed.

This inspection, if required must take place after the exterior structural sheathing inspection and before the rough & frame inspection. If the combination of exterior wall insulation is not chosen and uses only stud cavity insulation then the exterior insulation inspection is not required.

Rough & Framing Inspection:

Inspection for IECC compliance during rough & framing inspection for IECC compliance factors as follows:

1. Exterior wall air barriers (House wraps) are mandatory.

2. Inspection of air sealing at sill plates, top plates between floors and wall to foundation locations and around all windows and doors.

3. IECC requires all wall insulation behind tubs, showers (adjacent to exterior walls) and fireplaces to be restrained in place. Restraints may be as simple as installing industry standard wire restraints in stud cavities, not to exceed 16" inches on center spacing from bottom to top of wall, may be a minimum 16 gauge wire stapled to the inside edge of stud with the same spacing as standard wire constraint (for stud spacing less than 12" inches on center) or may be restrained with wall covers.

4. If restraining with wall covers, arrangements must be made to inspect the placement of insulation in these concealed wall cavities, prior to covering these wall cavities.

5. All window and exterior doors with 50% or more glazing are required to have NFRC rating labels attached by the manufacturer, showing the U-factor and SHGC rating of the window or door to be verified at time of inspection.

Insulation Inspection:

1. All wall cavity, band board insulation and insulation in ceiling and floor areas verified at the time of inspection.

2. Exposed basement insulation must be restrained in place.

3. A State of Georgia Energy Code compliance certificate shall be posted next to the electrical panel or air handler.

4. Insulators shall permanent insulation depth markers in attic spaces.

Additional Insulation Notes:

If opting to insulate the underside of a floor above an unfinished basement, basement walls do not have to be insulated, but all exposed water piping and HVAC ductwork in the unfinished basement must be insulated to IECC standards.

When this condition occurs, doors connecting the heated first floor to the unheated basement must meet IECC requirements for an exterior door, including thresholds and door perimeter seals.

Thresholds at stairwell tops and bottoms are trip hazards. To avoid these hazards, stairwells must be designed to include a (3'0) foot minimum depth landing between the door threshold and the first stair riser. All stair well landings must be the same level as the floor on the opposite side of the door.

In addition, when choosing these option stairs well ceilings must be insulated to R-19 and stairwell walls, from the stairwell ceiling to a point below the bottom of the first-floor framing, must be insulated to exterior wall requirements for the option chosen.

Basement mass walls (concrete CMU) must be insulated to a minimum of an R-5 value and basement exterior wood walls and first floor band boards must be insulated to a minimum R-13 value when the basement is finished, regardless to whether the floor above the basement is insulated or not.

REScheck Compliance:

REScheck is a US DOE software program that may be downloaded free from www.energycodes.gov for determining IECC compliance options. If using REScheck, you must use the Georgia version. Unless you are familiar with using REScheck software, download the REScheck Software User's guide while at the DOE website.

After download and to establish to correct minimum compliance values for use in Alpharetta, select the City of Duluth as your destination location. REScheck will automatically preset all climatic defaults specifically for IECC codes compliance in Duluth Georgia.

Other REScheck Versions and other City/County selections are invalid for the City of Stonecrest compliance.

A signed copies of the REScheck printed report for the work to be permitted must be submitted with each building permit application form at the time of submission. Both copies will be stamped for approval after reviewed, and one copy returned to the applicant at the time of permit issuance.

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