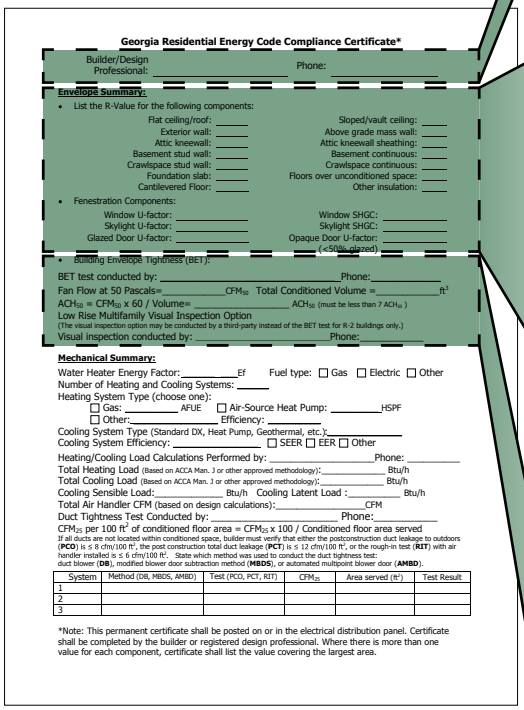
Compliance Certificate Fact Sheet

for the Georgia Building Energy Code



Georgia Residential Energy Code Compliance Certificate*

Builder/Design Professional: _____ Phone: _____

Envelope Summary:

- List the R-Value for the following components:

Flat ceiling/roof:		Sloped/vault ceiling:	
Exterior wall:		Above grade mass wall:	
Attic kneewall:		Attic kneewall sheathing:	
Basement stud wall:		Basement continuous:	
Crawlspace stud wall:		Crawlspace continuous:	
Foundation slab:		Floors over unconditioned space:	
Cantilevered Floor:		Other insulation:	

- Fenestration Components:

Window U-factor:		Window SHGC:	
Skylight U-factor:		Skylight SHGC:	
Glazed Door U-factor:		Opaque Door U-factor: (<50% glazed)	

- Building Envelope Tightness (BET):

BET test conducted by: _____ Phone: _____
Fan Flow at 50 Pascals=_____ CFM_{50} Total Conditioned Volume =_____ ft^3
ACH_{50} = CFM_{50} x 60 / Volume= _____ ACH_{50} (must be less than 7 ACH_{50})
Low Rise Multifamily Visual Inspection Option
(The visual inspection option may be conducted by a third-party instead of the BET test for R-2 buildings only.)
Visual inspection conducted by: _____ Phone: _____

Mechanical Summary:

Water Heater Energy Factor:_____ Ef Fuel type: ☐ Gas ☐ Electric ☐ Other
Number of Heating and Cooling Systems: _____
Heating System Type (choose one):
☐ Gas: _____ AFUE ☐ Air-Source Heat Pump: _____ HSPF
☐ Other: _____ Efficiency: _____
Cooling System Type (Standard DX, Heat Pump, Geothermal, etc.):_____
Cooling System Efficiency: _____ ☐ SEER ☐ EER ☐ Other
Heating/Cooling Load Calculations Performed by: _____ Phone: _____
Total Heating Load (Based on ACCA Man. J or other approved methodology):_____ Btu/h
Total Cooling Load (Based on ACCA Man. J or other approved methodology):_____ Btu/h
Cooling Sensible Load:_____ Btu/h Cooling Latent Load :_____ Btu/h
Total Air Handler CFM (based on design calculations):_____CFM
Duct Tightness Test Conducted by: _____ Phone: _____
CFM_{25} per 100 ft^2 of conditioned floor area = CFM_{25} x 100 / Conditioned floor area served
If all ducts are not located within conditioned space, builder must verify that either the postconstruction duct leakage to outdoors (**PCO**) is ≤ 8 cfm/100 ft^2, the post construction total duct leakage (**PCT**) is ≤ 12 cfm/100 ft^2, or the rough-in test (**RIT**) with air handler installed is ≤ 6 cfm/100 ft^2. State which method was used to conduct the duct tightness test: duct blower (**DB**), modified blower door subtraction method (**MBDS**), or automated multipoint blower door (**AMBD**).

System	Method (DB, MBDS, AMBD)	Test (PCO, PCT, RIT)	CFM_{25}	Area served (ft^2)	Test Result
1					
2					
3					

*Note: This permanent certificate shall be posted on or in the electrical distribution panel. Certificate shall be completed by the builder or registered design professional. Where there is more than one value for each component, certificate shall list the value covering the largest area.

Your builder/designer's name (just in case you forget) **1**

Builder/Design Professional: _____ Phone: _____

...and his/her contact information
(in case you need to call about an issue with your home)

2 The primary components of your home's exterior shell, or 'building envelope,' and their insulation values, known as R-values and U-factors (typical values* in red).

Envelope Summary:

- List the R-Value for the following components:

Flat ceiling/roof:	R-30	Sloped/vault ceiling:	R-19
Exterior wall:	R-13	Above grade mass wall:	R-4
Attic kneewall:	R-13	Attic kneewall sheathing:	R-5
Basement stud wall:	R-13	Basement continuous:	R-5
Crawlspace stud wall:	R-13	Crawlspace continuous:	R-5
Foundation slab:	R-0	Floors over unconditioned space:	R-19
Cantilevered Floor:	R-30	Other insulation:	N/A

- Fenestration Components:

Window U-factor:	U-0.35	Window SHGC:	0.30 SHGC
Skylight U-factor:	U-0.65	Skylight SHGC:	0.30 SHGC
Glazed Door U-factor:	U-0.50	Opaque Door U-factor: (<50% glazed)	U-0.50

'Fenestration' is another word for openings in a building (i.e., windows and doors).

R-value vs. U-factor

Both of these numbers relate to resistance to thermal conduction, or insulation value. In a nutshell, higher R-values and lower U-factors equate to better insulation, which in turn leads to more comfort in your home and less wasted energy.

Hungry for a formula? Here you go: $R = \frac{1}{U}$

- Building Envelope Tightness (BET):

BET test conducted by: _____ Phone: _____
Fan Flow at 50 Pascals=_____ CFM_{50} Total Conditioned Volume =_____ ft^3
ACH_{50} = CFM_{50} x 60 / Volume= _____ ACH_{50} (must be less than 7 ACH_{50})
Low Rise Multifamily Visual Inspection Option
(The visual inspection option may be conducted by a third-party instead of the BET test for R-2 buildings only.)
Visual inspection conducted by: _____ Phone: _____

3 The Building Envelope Tightness (BET) section contains the results of the BET test conducted on your home. This test helps to determine how leaky the house is by depressurizing or pressurizing a home with a device called a blower door.

Essentially a large, calibrated fan, the blower door helps to measure all of the leaks through the gaps and seams in a house. The energy code requires houses to achieve a value less than **7 ACH_{50}** (see box to left for more on what this means).

Why is a tight building envelope so important? A home without air sealing does a poor job of keeping conditioned air in and unconditioned air out. In the summer, this means hot and muggy air infiltrating and giving your HVAC equipment the workout of its life. Wintertime brings cold drafts and more energy wasted trying to keep a leaky house warm.

BET Breakdown

Struggling to make sense of the mysterious acronyms that dominate the Building Envelope Tightness section? Hopefully this will help a little.

CFM_{50}

(Cubic Feet per Minute at 50 pascals*)

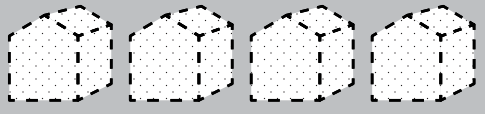
CFM_{50} is the measure of a flow rate—in this case, the volume of air that moves out of your house in a minute under simulated testing pressure.

7.5 ≈ 1 Cubic Foot

ACH_{50}

(Air Changes per Hour at 50 pascals*)

ACH_{50} measures the number of times the air in your house changes out in an hour under simulated testing pressure.



4 housefuls of air in (1 hour) = 4 ACH

*50 pascals is a simulated testing pressure

*The values listed may not necessarily coincide on the same compliance certificate. For example, a house with a crawlspace likely will not have a basement, in which case basement insulation values would not be listed.

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4 The Mechanical Summary outlines the types and efficiencies of your heating and cooling equipment. It also provides details on your home's load calculations and who performed them.

Mechanical Summary:

Water Heater Energy Factor:_____Ef Fuel type: ☐Gas ☐Electric ☐Other
Number of Heating and Cooling Systems: _____
Heating System Type (choose one):
☐ Gas: _____ AFUE ☐ Air-Source Heat Pump: _____HSPF
☐ Other:_____ Efficiency: _____
Cooling System Type (Standard DX, Heat Pump, Geothermal, etc.):_____
Cooling System Efficiency: _____ ☐ SEER ☐ EER ☐ Other
Heating/Cooling Load Calculations Performed by: _____Phone: _____
Total Heating Load (Based on ACCA Man. J or other approved methodology):_____ Btu/h
Total Cooling Load (Based on ACCA Man. J or other approved methodology):_____ Btu/h
Cooling Sensible Load:_____ Btu/h Cooling Latent Load :_____ Btu/h
Total Air Handler CFM (based on design calculations):_____CFM

Load Calculations

Installing high-efficiency mechanical equipment is important for energy savings, yet properly sizing this equipment through accurate load calulations is often just as significant. Some HVAC contractors habitually disregard this critical step, so be your own advocate and scrutinize this section.

Thinking about changing out your old HVAC equipment? Opting for a high-efficiency model (look for models with a high SEER or EER) could save you hundreds of dollars on energy costs.

5 Similar to the BET test, the Duct Tightness Test measures the air tightness of the ductwork that circulates conditioned air throughout your house. Leaky ducts can actually be one of the biggest energy drains in a house.

Duct Tightness Test Conducted by: _____ Phone:_____
CFM_{25} per 100 ft^2 of conditioned floor area = CFM_{25} x 100 / Conditioned floor area served
If all ducts are not located within conditioned space, builder must verify that either the postconstruction duct leakage to outdoors(**PCO**) is ≤ 8 cfm/100 ft^2, the post construction total duct leakage (**PCT**) is ≤ 12 cfm/100 ft^2, or the rough-in test (**RIT**) with air handler installed is ≤ 6 cfm/100 ft^2. State which method was used to conduct the duct tightness test: duct blower (**DB**), modified blower door subtraction method (**MBDS**), or automated multipoint blower door (**AMBD**).

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Test those Ducts

Testing ductwork for tightness is valuable not only for new homes, but also existing abodes. Finding a certified professional to test your existing home is as easy as visiting georgiapower.com/homeimprovements.

Duct testing involves the use of a duct blaster (a calibrated fan) and lots of tape. A certified tester will tape all of the supply and return grills in a home, pressurize the ductwork with the fan, and record and analyze the resulting flow of the fan.

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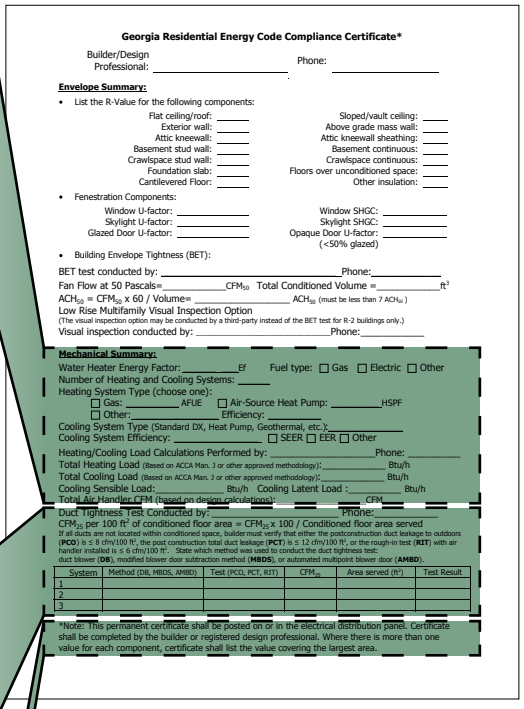
6 *Duct Tightness You Can See!* // Check for mastic, a heavy-duty sealant, applied around the air handler and the joints and seams of ductwork. It's required by the energy code and makes your ducts super tight.



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Foundation slab: ____ Floors over unconditioned space: ____
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- Fenestration Components:

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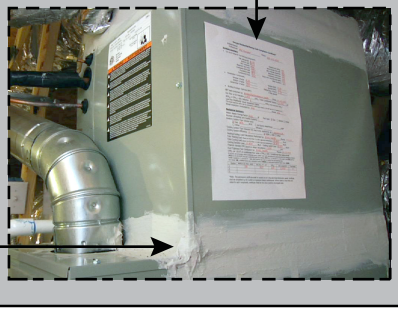
Compliance Certificate Location

If you live in a house built to the 2009 IECC (the current energy code), you should be able to make your way to your air handler (probably in your attic or basement) or electrical distribution panel to locate the compliance certificate.

Once you find it, check the values and visit southface.org/energy-codes for terms you don't know. This certificate is the starting point for understanding energy efficiency in your home and empowering you as a homeowner.



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