PIMA
POLYISOCYANURATE INSULATION MANUFACTURERS ASSOCIATION

1220 North Fillmore Street / Suite 400 / Arlington, Virginia 22201 / p: **703.258.0093** / www.polyiso.org

January 31, 2018

Ted Miltiades, Director
Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs

Re: Proposed 2019 Georgia Building Energy Code

Dear Mr. Miltiades and Members of the State Code Advisory Committee:

I am writing to urge the Department of Community Affairs and the State Code Advisory Committee (SCAC) to move forward with adoption of the draft 2019 Georgia Energy Code that the Energy Task Force approved unanimously last year. The Energy Task Force, led by Joel Rodriguez, did an excellent job in reviewing the 2015 IECC and addressing everyone's legitimate concerns. Ample opportunity was provided to present code change proposals and counter proposals and to comment and offer information on those proposals. The Task Force members and outside interest groups devoted a great deal of time and effort in developing the final draft document, which is a fair compromise and enjoys broad support.

The Polyisocyanurate Insulation Manufacturers Association (PIMA) believes this compromise represents the best chance for advancing a cost-effective code that will result in important improvements to building energy efficiency and construction practices, especially in the area of commercial construction. After all of this work, it would be unfortunate if the SCAC and Department do not continue to move forward with the Task Force's work product within the current code cycle.

PIMA represents the North American rigid polyiso foam insulation board industry. Polyiso insulation products and the raw materials used to manufacture the products are produced in over 40 facilities across the United States and Canada, including Georgia.

Thank you for this opportunity to offer these comments.

Sincerely,

Justin Koscher
President

Yielding Wakeford & McGee Architects, P.C.

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February 1, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: Georgia Energy Code
Comments on 2018 Energy Code Adoption

Dear Mr. Miltiades:

Over the past several years in years a Georgia Energy Task Force meet on numerous occasions consisting of Architects, Code Officials, Home Builders, Academics, and other related Stake Holders to work in a bipartition manner holding the interests of Georgia above all else. The Georgia Energy Code Task Force met for eleven months beginning in 2016 and concluded with a recommendation to the State Codes Advisory Committee (SCAC) in late 2017. The members of our task force and interested parties participated in the longest code development adoption process as far as I know. The length of this process and the substantial number of meetings gave all parties appropriate opportunities to contribute to the development of the code.

In its last meeting in 2017, the SCAC voted to table the recommendation of the Georgia Energy Code Task Force until the next SCAC meeting on February 28, 2018. It also has voted to receive comments from folks at this February SCAC Meeting, a process which appears highly unusual having not seen this in at least the last ten years. In response AIA Southwest Georgia is pleased to have an opportunity to provide the following comments.

I'm writing on behalf of AIA Southwest Georgia Architects practicing across Southwest Georgia in support of language unanimously recommended by the Georgia Energy Code Task Force previously. That proposed language, particularly in the residential provisions, is based upon progressive steps toward a more healthy, comfortable, and energy efficient buildings constructed in the state of Georgia. Tight houses save energy, control humidity, and block pollutants from unhealthy locations like unconditioned attics, crawlspaces, and garages.

Tight houses with fresh air ventilation offer significant energy savings along with improved health and comfort. For this reason, 21st century homes following a building science based approach will comply with 2012 and beyond IECC and IRC codes. Our current (2009 based IECC) energy code requires a blower door test result of < 7 Air Changes per Hour (ACH_{50}).

The code complies with industry standard insulation values of R-13 walls and R-30/38 ceilings. Georgia's current 2012 based version of the IRC requires whole house mechanical ventilation in homes that test < 5 ACH_{50}.

The Georgia Energy Task Force was charged with reviewing the 2015 IECC. The 2015 IECC requires substantial improvements in insulation and air tightness for Georgia's climate zones (CZ) 2, 3 and 4. As written, the 2015 IECC pushes energy performance with:

1. Increased wall insulation from R-13 to R-20 in CZ 3 & 4
2. Increased ceiling R-values from 30 to 38 in CZ 2 & 3 and increased ceiling insulation of R-49 in CZ 4
3. Better window performance with a more stringent U-factor of 0.40 in CZ 2 and 0.35 in CZ 3 & 4
4. Better window summer performance with a more stringent SHGC of 0.25 in CZ 2 & 3 and 0.40 in CZ 4
5. Mass wall continuous insulation increase from R-5 to R-8 for exterior insulation for CZ 3 & 4
6. Tighter envelope ACH50 of < 5 ACH_{50} for CZ 2 and < 3 ACH_{50} for CZ 3 & 4 (current is < 7 ACH_{50})

For comparison, the following tables represent GA's current prescriptive code and the 2015 prescriptive code values.

Current GA 2011 Prescriptive R-values

Climate Zone	Fenestration Ufactor	Skylight Ufactor	Glazing SHGC	Ceiling	Wood Walls	Attic Kneewall	Mass Wall	Floor*	Basement Wall	Slab	Crawl Wall	ACH_{50}
2	0.5	0.75	0.30	30	13	18	4/6	13	0	0	0	< 7
3	0.5	0.65	0.30	30	13	18	5/8	19	5/13	0	5/13	< 7
4	0.35	0.60	NR	38	13	18	5/10	19	10/13	0	10/13	< 7

*Cantilevered floors over outside air, R-30

2015 Prescriptive R-values

Climate Zone	Fenestration Ufactor	Skylight Ufactor	Glazing SHGC	Ceiling	Wood Walls	Attic Kneewall	Mass Wall	Floor	Basement Wall	Slab	Crawl Wall	ACH_{50}
2	0.40	0.65	0.25	38	13	13	4/6	13	0	0	0	< 5
3	0.35	0.55	0.25	38	20 or 13+5	20 or 13+5	8/13	19	5/13	0	5/13	< 3
4	0.35	0.55	0.40	49	20 or 13+5	20 or 13+5	8/13	19	10/13	10, 2ft	10/13	< 3

In an effort to ease the burden of change to all builders, a number of code values were eased as part of a ***unanimously agreed upon compromise***.

- Window U-factor and SHGC improved modestly from the current code but are weaker than the 2015 IECC.
- Ceiling insulation increased modestly for CZ 2 & 3 but is weaker than the 2015 IECC for CZ 4.
- Wall insulation remained at R-13. This is weaker than the 2015 IECC for CZ 3 & 4.
- Envelope tightness improved for CZ's 2-4 but at a statewide 5 ACH_{50} is still substantially weaker than the IECC 2015 for CZ 3 & 4
- an additional year of delayed implementation of the code from Jan 1, 2018 to Jan 1, 2019 was implemented.

Proposed Compromise Prescriptive R-values (Red indicates changes from current GA code)

Climate Zone	Fenestration Ufactor	Skylight Ufactor	Glazing SHGC	Ceiling	Wood Walls	Attic Kneewall	Mass Wall	Floor	Basement Wall	Slab	Crawl Wall	ACH_{50}
2	0.35	0.65	0.27	38	13	18	4/6	13	0	0	0	< 5
3	0.35	0.55	0.27	38	13	18	8/13	19	5/13	0	5/13	< 5
4	0.35	0.55	0.27	38	13	18	8/13	19	10/13	0	10/13	< 5

In conclusion Energy advocates have already compromised substantially and see no need to budge any farther. Numerous data demonstrates that many builders already meet or exceed the proposed compromise prescriptive values. Now is the time to raise the minimum standard for building homes in Georgia and follow science-based principles of modern 21st century construction. As all parties know Georgia has always been pro-business, pro-smart in energy leadership, and an example for other states to follow. We thank you for allowing our comments to be put forth for review and look forward to in assisting the Department of Community Affairs.

Please feel free contact me for any questions you may have.

Sincerely,

AIA Southwest Georgia, a section of AIA Georgia
American Institute of Architects

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Sent via email to ted.miltiades@dca.ga.gov with hard copy to follow via U.S.P.S.

February 1, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: Georgia Energy Code

Dear Mr. Miltiades:

The Board and membership of AIA Georgia have followed the development of our next Georgia Energy Code with great interest. We appreciate your leadership in the process.

The Georgia Energy Code Task Force met for eleven months, beginning in 2016 and concluded with a recommendation to our State Codes Advisory Committee in late 2017. The members of our task force and interested parties participated in the longest code development adoption process in recent memory. The length of this process and the substantial number of meetings gave any interested parties many opportunities to contribute to the development of the code.

In its last meeting of 2017, the SCAC voted to table the recommendation of the Georgia Energy Code Task Force until the next SCAC meeting on February 28, 2018. It also voted to accept and review comments from interested parties at the February SCAC meeting – a precedent we don't recall seeing in at least the last ten years.

In response to this opportunity to comment, I'm writing on behalf of the thousands of AIA Georgia members across the state in support of the language unanimously recommended by the Georgia Energy Code Task Force. That proposed language, particularly in the residential provisions, is an important yet measured step toward more healthy, comfortable and efficient buildings in Georgia.

The current proposed language for the residential provisions contains a significant compromise on both maximum air leakage and minimum insulation values when compared to the 2015 IECC. In the proposed language, the maximum air leakage is set at less than five air changes per hour (>5 ACH50) rather than three in the model code. The insulation values in the proposed language remain almost identical to Georgia's current energy code rather than being increased to the levels in the model code.

Setting a maximum leakage rate of less than five air changes per hour in the energy code triggers a requirement in the residential code for mechanical ventilation. The cost of mechanical ventilation is offset by leaving the building enclosure values almost unchanged. (This avoids the cost of additional insulation and thicker-framed walls or continuous insulation.) Thus, we can build healthier and more comfortable houses in Georgia without raising prices and excluding people from the housing market.

Some have spoken against requiring less than five air changes per hour and the need for mechanical ventilation, but it's crucial that we implement current practices to gain

control over our indoor environments so we can improve air quality and reduce the energy needed to heat and cool those spaces. This can only be done through air sealing.

Once a house is constructed, the opportunities to properly air seal obscured joints like those at sill plates and top plates are gone – it would be impractical to remove building components to air seal what could have easily been air sealed at low cost during construction. The bargain recommended by those who advocate for higher leakage rates and no ventilation is to save a few dollars during construction yet home owners must pay many dollars and live in a polluted indoor environment throughout the life of the house. That's clearly not in the interest of Georgians and there are too many precedents for how to do this work in our own state to delay these requirements any longer.

Any delay in adopting these technologies and methods for building more healthy, comfortable and efficient houses only postpones the inevitable. Further delay will only make it more difficult to adopt our next energy code. It's important that we take this step now since the energy code task force worked so hard to listen to interested parties and incorporate their comments. The result is an energy code for Georgia today that will also serve as a bridge to our next energy code so that residences in Georgia stay current with proven technology and practices.

Finally, during the eleven months of public work by the Georgia Energy Code Task Force and interested parties, substantial compromise was reached. We believe that other parties acted in good faith as we did during that time. It would be inappropriate for a professional association or interested party to agree to a compromise on an issue like air leakage in the task force discussions and then use this period of consideration by the SCAC to back out of that compromise and try to interject a different requirement.

To do so would take away the voice of those subject matter experts appointed to the task force and the interested parties to who attended the many meetings with the expectation of discussing the requirements of the energy code as needed. Additional meetings were added to the energy code task force to review language though the SCAC doesn't have regular meetings set-up for review and discussion.

Time is of the essence if the SCAC is to pass a recommendation on the energy code to the DCA Board before its next meeting. We need time for the training we have discussed throughout this process. We hope that all parties will continue to work in good faith so we may deliver the best energy code for Georgia.

We will continue to study the new energy code language and invite any interested parties to contact us to share resources and insight. We would look forward to the opportunity of assisting the DCA and its training provider in the implementation of the code. Please contact David Southerland, AIA Georgia's Executive Director, to let us know how we may be involved.

Please let me know if you have any questions. Thank you for your time and attention.

Sincerely,

Kathryn Bedette AIA, President of the Board
American Institute of Architects, Georgia Association

Cc: David Southerland, Executive Director of AIA Georgia

AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

we make life better®

February 1, 2018

Attn: Ted Miltiades
Director, Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs

RE: Public Comment for the Proposed 2019 Georgia Energy Code

To Members of the State Code Advisory Committee (SCAC):

On behalf of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), I would like to express our gratitude for the work completed to date by the State Code Advisory Committee (SCAC) on the draft 2019 Georgia Energy Code. AHRI supports this draft Code, and respectfully requests your support for its adoption. This important code update is the culmination of substantial work by the SCAC and various stakeholders, including energy efficiency advocates, homebuilders, homebuyers, code officials, and construction industry representatives.

AHRI is the trade association representing manufacturers of HVACR and water heating equipment within the global industry. AHRI's 315 member companies manufacture quality, efficient, and innovative residential and commercial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and around the world.

AHRI especially supports provisions in the draft 2019 Energy Code that reference up-to-date industry standards such as ASHRAE 90.1 and the accompanying AHRI test procedures. AHRI members spend a significant amount of time and resources helping to develop ASHRAE model codes and industry consensus test procedures to ensure that these accurately reflect the latest technology improvements to improve air quality and energy efficiency. In addition, we support the introduction of a HERS-based compliance pathway in the draft Code would allow high efficiency HVAC equipment to count toward code compliance in residential settings.

Regular code updates are an important tool for promoting continuous improvement in our building stock; reducing energy waste; keeping families healthy, safe and comfortable; creating jobs; and growing our economy. Thank you for your consideration of our views. If you have any questions, please do not hesitate to contact me.

Best regards,

Garrett McGuire
Director, Government Relations

HOWARD
KATZMAN
Building Performance Consulting
404 - 558 – 1197
howard@howardkatzman.com

February 1, 2018

Kadedra Caldwell
Ga Department of Community Affairs
Community Development Division

RE: Draft of 2019 IECC Proposed Amendments 9/21/2017

Ms Caldwell:

Please consider the following comments in support of the Proposed Amendments.

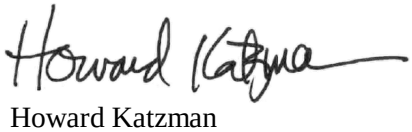
I have been involved in construction for 40 years both as a contractor (over 20 years) and now as a building performance consultant (17 years). My work currently focuses on new and existing single-family homes. Existing homeowners hire me to diagnose the air quality, comfort and high energy consumption issues in their homes. Builders hire me to conduct Energy Code compliance testing (DET) and to certify their projects in the EarthCraft House program.

I see firsthand how homes affect occupants' health and their pocketbook, even in newer homes. In existing homes, leaky and poorly insulated envelopes and leaky ducts can cause poor air quality, result in poor humidity control and cause mold and dust mites.

I am new homes regularly. My testing of new homes demonstrates that achieving lower house leakage levels (3-5 ACH50) is relatively easy for builders while not costing them any more than achieving 7 ACH50. Air sealing done correctly easily achieves 3-5 ACH50. The cost to increase attic insulation levels to R-38 (CZ3) and R-49 (CZ4) is very modest. All the builders I work with are already installing windows that meet the Proposed Energy Code U-value and SHGC; these windows are stocked locally and are therefore affordable.

In the new homes I work in heating and cooling contractors have adapted and are easily able to install mechanical ventilation systems. This is helping to improve indoor air quality in these homes.

In conclusion, I endorse all the recommendations of the Energy Code Task Force and find that the compromises to be reasonable in order to gain endorsements from all parties concerned. Further, the improvements in building efficiency and air quality will help to improve the health of new homebuyers and their families, while saving them in operational costs that should match or easily exceed any increase in purchase cost.



Howard Katzman

To the Chairman of the State Codes Advisory Committee and Director of the Office of Construction Codes and Industrialized Buildings:

I am writing on behalf of the local ASHRAE Atlanta Chapter to register our support for the adoption of the 2015 International Energy Conservation Code (IECC) with the Georgia State Supplements and Amendments as presented to the State Codes Advisory Committee (SCAC) on November 16, 2017.

ASHRAE, founded in 1894, is a global society advancing human well-being through sustainable technology for the built environment. The Society and its 56,000 members worldwide, including over 1,200 members in Georgia, focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

One of those standards, ANSI/ASHRAE/IES 90.1, first published in 1975, is the basis for energy codes for many US commercial buildings and is an IECC compliance option by reference. For over 40 years, this Standard has served as the leading resource for state and local jurisdictions that wish to promote energy efficiency, engaging interests across the building and construction sector, and yielding increased levels of efficiency in a balanced manner with input from all affected parties. Like all ASHRAE Standards, Standard 90.1 is developed and improved through the private-sector in accordance with American National Standards Institute's (ANSI) consensus-driven process.

Here in Georgia, a local consensus-driven process has been underway to make recommendations regarding the adoption of the 2015 IECC. For over a year, a task force of industry experts, representing all aspects of the built environment, worked to create an energy code that was amenable to everyone. A number of compromises were made, and agreed upon by all parties, to strike a balance between the burden of change on builders and the costs of energy and indoor environmental quality for building owners and occupants. On September 21, 2017, the 2015 IECC Task Force motioned **unanimously** to recommend to the SCAC to adopt the IECC 2015 Edition with the approved 67 amendments.

Georgia should continue to be a leader in the application of strong building codes and standards to protect the families and businesses of our state. ASHRAE considers energy codes to be part of that strong package of codes. Georgia was the first state to require blower door testing for homes. A Department of Energy analysis estimated 15% savings in residential energy costs for Georgia homeowners from the upgrade to 2009 IECC compared to the previous version, and up to 3.8% savings in commercial energy cost for Georgia building owners from the upgrade to ASHRAE 90.1-2007 compared to the previous version. But without continued improvement and advancement in code requirements, we cannot guarantee continued improvement in energy savings across Georgia.

Further delay of the adoption by the SCAC prevents the people of Georgia from seeing the benefits of improved minimum standards for buildings. ASHRAE supports the adoption of the 2015 IECC Task Force's recommendations as presented, as soon as possible.

Sincerely,

Meghan McNulty, PE

ASHRAE Atlanta Chapter, Grassroots Government Advocacy Chair

USGBC
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February 1, 2018

ATTN: Mr. Ted Miltiades
Director, Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs

RE: Public Comment for the Proposed 2019 Georgia Energy Codes

To Members of the State Code Advisory Committee (SCAC):

On behalf of the US Green Building Council (USGBC), a non-profit organization with over 12,000 member companies nation-wide and a strong Georgia-based community, I am writing in support of the draft 2019 Georgia Energy Code, and to respectfully request that you vote in favor of adoption. The draft Georgia Energy Code is the culmination of a years' worth of work from various stakeholders, including energy advocates, homebuilders, homebuyers, code officials and construction industry representatives.

USGBC is perhaps best known as the developer of the Leadership in Energy and Environmental Design (LEED) green building rating system. LEED is the industry standard in green building and is demonstrated to reduce energy consumption and related costs for business owners and operators. Georgia is home to more than 830 LEED-certified projects, representing more than 147 million square feet of real estate. Georgians know that an investment in the energy efficiency of their buildings, whether with LEED or otherwise, can contribute to significant savings in the long term.

While there is much work still to be done to incorporate greater efficiency measures in the Georgia Energy Code, we are pleased to see new efficiency measures incorporated into the draft regulations. The Georgia Department of Community Affairs convened the 2015 IECC Task Force and hosted a total of 13 public meetings over a year-long period, during which the public provided extensive written and verbal comments. During a long, tenuous process, the 2015 IECC Task Force was successfully able to come to a unanimous compromise that eased the burden of change to homebuilders, while still updating key energy efficiency requirements.

Regular code updates are an important tool for promoting continuous improvement in our building stock; cutting energy waste; keeping families healthy, safe and comfortable; creating jobs, and growing our economy. USGBC respectfully requests that you vote in favor of adopting the 2019 Georgia Energy Code.

Sincerely,

Shelby Busó
Director, Georgia Community
U.S. Green Building Council

Jennifer Gunby
State & Local Advocacy Manager
U.S. Green Building Council

CITY OF ATLANTA

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DAN GORDON
COO

January 31, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
ted.miltiades@dca.ga.gov

Dear Mr. Miltiades:

I am writing to express the City of Atlanta's support for the adoption of the 2015 IECC Energy Code for the State of Georgia at the meeting of the State Codes Advisory Committee later this month. Energy code modernization is a cost-effective way to reduce energy consumption in buildings and to save building owners and occupants money on their energy bills. The City is proud of the work of the Department of Community Affairs (DCA) Energy Code Task Force over the past two years and is supportive of the compromise code amendments that were reached in 2017. We strongly advise against any decision that would postpone the adoption of more efficient building codes. Waiting until the 2018 IECC energy code is available, will effectively delay the code modernization process in Georgia for three years. The State of Alabama has already voted to adopt the 2015 IECC code. If Alabama can adopt this code, surely the State of Georgia can do so.

Our building code enforcement officials have assured us that adopting this new code will require staff training, but that they see no enforcement issues or difficulties in conducting the proper training and properly enforcing the new energy code once it comes into effect.

Energy efficient buildings are also healthier, more comfortable buildings for occupants. Requiring greater energy efficiency in new construction provides a tremendous opportunity for Georgia to develop in ways that are more equitable, resilient, sustainable, healthy, and profitable. Energy affects every part of the economy and has pronounced social impacts, from the hyper-local to the global scale. More efficient buildings in the state can serve as a stimulus to advance equity, create jobs, improve public health, and slash Georgia's contribution to climate change.

Sincerely,

E. Stephanie Stuckey

Stephanie Stuckey
Chief Resilience Officer, City of Atlanta

Georgia's Energy Code Task Force Recommendations: A Summary

Submitted by GEFA, Southface, and SEEA

Georgia's Current Code

Georgia's current (2009-based IECC) energy code requires a blower door test result of < 7 Air Changes per Hour (ACH_{50}). The code complies with industry standard insulation values of R-13 walls and R-30/38 ceilings. Additionally, Georgia's current 2012-based version of the International Residential Building Code (IRC) requires whole house mechanical ventilation in homes that test < 5 ACH_{50}.

The table below represents Georgia's current prescriptive code values.

Current GA 2011 Prescriptive R-values												
Climate Zone	Fenestration Ufactor	Skylight Ufactor	Glazing SHGC	Ceiling	Wood Walls	Attic Kneewall	Mass Wall	Floor*	Basement Wall	Slab	Crawl Wall	ACH50
2	0.5	0.75	0.3	30	13	18	4/6	13	0	0	0	< 7
3	0.5	0.65	0.3	30	13	18	5/8	19	5/13	0	5/13	< 7
4	0.35	0.6	NR	38	13	18	5/10	19	10/13	0	10/13	< 7
								*cantilevered floors over outside air, R-30				

2015 Code

The Energy Code Task Force was charged with reviewing the 2015 IECC, which requires substantial improvements in insulation and air tightness for Georgia's climate zones (CZ) 2, 3 and 4. As written, the 2015 IECC advances energy performance with:

- Better window performance with a more stringent U-factor of 0.40 in CZ 2 and 0.35 in CZ 3 and 4.
- Better window summer performance with a more stringent Solar Heat Gain Coefficient (SHGC) of 0.25 in CZ 2 and 3 and 0.40 in CZ 4.
- Increased ceiling R-values from 30 to 38 in CZ 2 and 3 and increased ceiling insulation of R-49 in CZ 4.
- Increased wall insulation from R-13 to R-20 in CZ 3 and 4.
- Mass wall continuous insulation increase from R-5 to R-8 for exterior insulation in CZ 3 and 4.
- Tighter envelope ACH_{50} of < 5 ACH_{50} for CZ 2 and < 3 ACH_{50} for CZ 3 and 4 (current is < 7 ACH_{50}).

The table below represents the 2015 IECC prescriptive code values for Georgia's three climate zones (changes from the 2011 prescriptive code are highlighted).

2015 Prescriptive R-values												
Climate Zone	Fenestration Ufactor	Skylight Ufactor	Glazing SHGC	Ceiling	Wood Walls	Attic Kneewall	Mass Wall	Floor*	Basement Wall	Slab	Crawl Wall	ACH50
2	0.4	0.65	0.25	38	13	13	4/6	13	0	0	0	< 5
3	0.35	0.55	0.25	38	20 or 13+5	20 or 13+5	8/13	19	5/13	0	5/13	< 3
4	0.35	0.55	0.4	49	20 or 13+5	20 or 13+5	8/13	19	10/13	10, 2ft	10/13	< 3

The Task Force's Proposed Compromise

In an effort to take into consideration the comments and concerns of all interested parties, a number of code values were eased as part of a unanimously agreed upon compromise including:

- Window U-factor and SHGC improved modestly from the current code but are weaker than the 2015 IECC.

- Ceiling insulation increased modestly for CZ 2 and 3 but is weaker than the 2015 IECC for CZ 4.
- Wall insulation remained at R-13 which is weaker than the 2015 IECC for CZ 3 and 4.
- Envelope tightness improved for CZ's 2-4 but at a statewide 5 ACH_{50} is still substantially weaker than the IECC 2015 for CZ 3 and 4.
- An additional year of delayed implementation of the code from Jan 1, 2018 to Jan 1, 2019 was agreed to in order to allow sufficient time for training and education.

The table below represents the Task Force's recommended compromise prescriptive code values.

Proposed Compromise Prescriptive R-values							(RED indicates changes from the current GA code)					
Climate Zone	**Fenestration Ufactor**	**Skylight Ufactor**	**Glazing SHGC**	**Ceiling**	**Wood Walls**	**Attic Kneewall**	**Mass Wall**	**Floor***	**Basement Wall**	**Slab**	**Crawl Wall**	**ACH50**
2	0.35	0.65	0.27	38	13	18	4/6	13	0	0	0	< 5
3	0.35	0.55	0.27	38	13	18	8/13	19	5/13	0	5/13	< 5
4	0.35	0.55	0.27	38	13	18	8/13	19	10/13	0	10/13	< 5

Conclusion

The 2015 International Energy Conservation Code (IECC) Task Force achieved its charge of assessing the differences between the 2009 IECC with Georgia Supplements and Amendments (existing code) and the 2015 IECC, and making recommendations regarding its adoption and any necessary supplements and amendments to the State Codes Advisory Committee (SCAC). The compromise language in the proposed energy code, unanimously agreed upon by the Task Force, came from listening carefully to industry partners and interested parties. Builders, industry stakeholders, code officials and efficiency advocates all significantly compromised to arrive at the proposed energy code.

February 1, 2018

Ted Miltiades
Director, Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South, N.E.
Atlanta, Georgia 30329-2231

RE: ACC Comments Supporting the Adoption of the 2015 IECC for Residential and Commercial Construction in Georgia with no change

Dear Mr. Miltiades,

I am writing on behalf of the American Chemistry Council (ACC) to support the IECC Task Force's proposed adoption of the 2015 IECC for commercial and residential buildings in Georgia. Georgia is an important state for the business of chemistry with an annual product value of nearly $16 billion and over 20,000 direct employees. Many of those employees manufacture a variety of products that are critical to the safe and efficient construction of residential and commercial structures.

We understand that the State Codes Advisory Council may entertain new amendments at its upcoming meeting on February 28, 2018. We write to reiterate our support for the compromise proposal put forward by the IECC Task Force without further change. We hope the Council will consider the many months of good faith negotiation, hard work, and thorough analysis completed by stakeholders in this process.

This package of improvements to the current Georgia energy code is a broad compromise achieved by the Task Force and interested stakeholders after many months of work. Strong thermal envelope requirements enhance energy efficiency, drive materials and product innovation, and support continued economic and job growth. We request that you support adoption of the IECC Task Force Compromise of the 2015 IECC without modification and finalize the proposal.

Please contact me at (404) 242-5016 if we can be of any further assistance.

Regards,
Michael Power
Senior Director, Southern Region
American Chemistry Council

February 1, 2018

TO: Ted Miltiades, Director, Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs

FROM: Eric Lacey, Chairman, Responsible Energy Codes Alliance

RE: **Support for 2015 IECC and Task Force Compromise**

Dear Mr. Miltiades,

I am writing on behalf of the Responsible Energy Codes Alliance (RECA)[1] to support the IECC Task Force's proposed adoption of the 2015 IECC for commercial and residential buildings in Georgia. This package of improvements to the current Georgia energy code is a broad compromise achieved by the Task Force and interested stakeholders after many months of work. This is a critical update to the standards that help ensure more comfortable, more affordable, and more durable homes and commercial buildings.

RECA's primary mission is to promote the adoption of the latest model energy codes in every state, and we obviously would have preferred that Georgia adopt the 2015 IECC with no weakening amendments. Indeed, RECA submitted several proposals intended to improve Georgia's energy code and several RECA members participated directly in the Task Group process over the last 12 months to support RECA proposals and comment on many others. Although we were disappointed that the final version of the code did not include all of the improvements of the 2015 IECC, we found the process to be open and inclusive, and the final compromise achieved will clearly improve energy efficiency and building quality in Georgia. We commend Chairman Rodriguez and DCA Staff for their professionalism and their persistence in this process.

We are concerned about the prospect of any last-minute weakening amendments to that compromise, particularly by participants or stakeholders in the Task Group process. To

[1] The Responsible Energy Codes Alliance is a broad coalition of energy efficiency professionals, regional organizations, product and equipment manufacturers, trade associations, and environmental organizations that promote the adoption and implementation of improved building energy codes and, in particular, the most recent version of the *IECC* nationwide without weakening amendments. RECA members have been involved in the development of the *IRC* and *IECC*, and the implementation of these codes in jurisdictions across the country for two decades.

single out individual parts of that compromise for further weakening at this point in the process would upset the spirit of compromise and negate many hours and days of hard work. Moreover, any additional amendments that reduce the efficiency of the IECC would further cut into the cost-effective energy efficiency improvements so vitally needed in Georgia.

We support the adoption of the 2015 IECC compromise for residential and commercial buildings approved by the IECC Task Force and as presented to the State Codes Advisory Council, and we urge the Council to finalize it in time to maintain the proposed January 1, 2019 timeline.

Sincerely,

Eric Lacey
RECA Chairman

February 1, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes and Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: Adoption of Energy Code

Dear Mr. Miltiades:

I am writing on behalf of the American Institute of Architects, Atlanta Chapter, to voice our support of the amended version of the 2015 Energy Code.

Over the past year, the Georgia Energy Code Task Force engaged in a rigorous process of discussion and debate, and consensually developed the new proposal. This compromise balances low first costs, with enhanced energy performance that will stabilize the cost of ownership in the long-term. While there is still work to do before our state is comparable to other high profile cities in terms of environmentally sensitive design policy, it is progress such as this that will allow not just Atlanta, but all of Georgia, to grow sustainably and maintain its reputation as a great place to live and work.

In summary, we the architects of AIA Atlanta support this proposed amended 2015 Energy Code, as we see its benefit for the larger community. We hope that a few members of the Task Force attempting to delay approval until the 2020 code cycle will not halt the progress that Georgia deserves.

Sincerely,

Krista Dumkrieger, Advocacy Director
American Institute of Architects, Atlanta Chapter

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February 15, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: Georgia Energy Code

We are writing to voice our support for the draft 2019 Georgia Energy Code and encourage you to vote in favor of adoption. There was a lot of compromise to the 2015 IECC from many sides, but after it was all said and done, what was recommended by the Task Force is far less of an improvement than what we've seen from neighboring states and from the majority of the country. Now we have the possibility for even this watered down update to the code not to be instituted, and this would set Georgia back for another decade.

We attended and even participated in several of the many Task Force meetings and were able to hear from many industry professionals, many of which only had their own interests at heart. We have been in the land development and construction industry for 12 years, and most recently for the last 7 years, building custom homes in Georgia, in addition to providing third party inspections for many programs and the code itself. Needless to say, we have a vast amount of real world experience with construction costs and building performance. We heard many misnomers regarding infiltration and other aspects of an acceptable international code that has been successfully adopted elsewhere only to be not considered by some for our great state.

Many, if not most of the homes in Georgia, are currently testing at less than 5 ACH50, and while the current code states that you need to install mechanical ventilation at levels lower than 5 ACH50, this is not being enforced at the local level. Including this level of infiltration that is already being met by the majority of new homes is essential for the safety of new home buyers by including controlled ventilation in all homes. Other aspects of the code need to be updated for the safety of future new home buyers in our state, not the opposite as what was portrayed by some opponents in the task force meetings. Leaving the current code in place for another 5 years along with greatly improved construction techniques for air sealing will endanger new home buyers and cause durability issues with structures.

In order for us to ensure home buyers and families have an energy-efficient, healthy, safe, comfortable and durable home, the recommendation of the 2019 new Georgia Energy Code must be accepted. Please play you're part in voting for approval of adoption.

Sincerely,

Luis Imery
Owner/Principal

Jeremy Field
Building Science Manager

March 12, 2018

Mr. Ted Miltiades
Director, Office of Construction Codes & Research
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, GA 30329

Dear Ted,

As a longstanding participant in the State Codes Advisory Committee (SCAC) the Home Builders Association of Georgia (HBAG) has a great appreciation for the commitment of its members to serve the interests of the citizens of this state. We would like to make you aware of concerns we have relating to comments made recently about our position on the issue of the ACH rate with the Energy Code Task force.

HBAG has always participated in the SCAC with honesty, integrity and a commitment to fair play in our shared interest of the wellbeing of the general public. We also maintain a belief that all SCAC members are entitled to respect and the opportunity for their convictions to be considered. As President of the HBAG, I was surprised, disappointed and frankly, insulted by the letters and the testimony presented at the February 28th, 2018 SCAC meeting.

HBAG had planned to bring our concerns with the ACH rate to the SCAC in November. However, all entities were instructed to review the report of the Energy Code Task Force and to present any amendments to SCAC by February 1, 2018. HBAG followed the protocol as did others who submitted amendments. The proposed amendment by HBAG was singled out. Certain members accused HBAG members of cheating on ACH tests with no evidence presented whatsoever. It is obvious that at least one member, in advance of the meeting, represented to the stakeholders and other SCAC members that HBAG had somehow manipulated the protocol and was now attempting to undo the hard work of the sub-committee. HBAG submitted its amendment under the long established protocol and that amendment had the right to be heard and considered without being attacked with hearsay and false accusations. It is obvious that honesty and fair play were not observed during this debate.

HBAG represents over 3000 builder companies around the state of Georgia; most of them are small business owners. Residential construction is a major economic driver for the state and local governments despite the increasing regulatory burdens. Most importantly, we provide homes for all Georgians. Affordable homeownership options are a major component of this economic driver are currently at a critically deficient level in most areas of the state. The affordable, first-time and even some move up markets are disappearing from our communities at alarming rates.

Building code and regulatory costs have risen 29.8% since 2011 while disposable income has only risen 14.4%. In other words, the costs of regulation are rising more than twice as fast as America's ability to pay. There is a common misconception that the builder bears this cost when in fact it is the consumer who not only has to pay the initial cost but also the expense of additional interest over the life of their mortgage. HBAG is a steadfast advocate for the home buying public. Our advocacy helps consumers move from sometimes unbearable conditions to safe, modern and energy efficient homes that are being constructed today under current codes. The addition of new codes bears costs and benefits. These costs and benefits must be debated to protect the consumer. Sometimes we question the judgment of those who would limit the free market and mandate thousands of dollars in cost only to see a miniscule improvement in energy efficiency.

The 2015 International Energy Conservation Code (IECC) as written was very costly. HBAG commends the work of the Energy Code Task Force to identify common sense, effective energy efficient changes to the Code.

Each amendment was considered individually and carefully. The question of where to set the bar for the air exchange rate and how to handle mechanical ventilation was discussed in great detail. HBAG does not, nor have we ever believed the <5 ACH was "in exchange" for other concessions of the IECC. We believe, and the minutes reflect, that the sub-committee took action on each amendment on its own merit.

The air exchange rate was initially approved at 6 ACH for the first year that the new Energy code was in effect and then it would be reduced to 5 ACH. Because of the amount of time that the Energy Task Code was taking to complete its task, in June 2017 the SCAC moved to delay the adoption date until January 1, 2019. The SCAC voted to approve a recommendation from Ryan Taylor to remove the air exchange rate of 6ACH for the first year with little or no discussion. There was no further discussion in the Task Force despite concerns raised by HBAG.

The state of Alabama had been championed by Southface as one of the first states in our area to adopt 5 ACH. Alabama has similar amendments as Georgia in their amended 2015 IECC. The mandate of 5ACH has generated concerns and challenges. Shon Richey, a member of the Alabama Residential and Energy Board, reported (day of SCAC) that Alabama has had so many issues with the lower ACH levels that Alabama is no longer enforcing the 5ACH and is reviewing other options. Florida and North Carolina are reporting concerns with lower ACH levels.

HBAG has heard from builders and code officials around the State that they were not reaching the <5 ACH as reported in the SEEA Compliance Study. HBAG is not convinced that the results of the study are accurate. Among our concerns, only 216 single family homes out of the 36,223 permitted in Georgia in 2016 were surveyed. Additionally, the majority of these samples were taken in the metro Atlanta area.

There were statements made about the costs of saving energy but NO correlation has been established between an Air Exchange Rate of 6 ACH and 5 ACH. In fact, modeling done in the HBAG office by Southface found the rate of actual energy savings to be fractional.

This leads me to the conclusion that a more stringent ACH number have cost and practical implementation questions that must be answered. Healthy ACH levels are currently being debated across the country and especially here in the South. Until that debate is complete, HBAG expects a fair playing field where all concerns can be treated equally and with respect.

Sincerely,

Robert J. Cleveland, Jr.
President
Home Builders Association of Georgia (HBAG)

Cc: State Codes Advisory Committee

Mr. David Gibson, Director of Energy Resources

March 26, 2018

Mr. Ted Miltiades
Director, Office of Construction Codes & Research
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, GA 30329

Dear Ted,

It has come to my attention that the Home Builders Association of Georgia (HBAG) failed to verify remarks attributed to Shon Richey of the Alabama Residential and Energy Board in my recent letter. Mr. Richey has stated that it is the policy of the Alabama Residential and Energy Board to enforce the 5 ACH criteria. Please retract my statement that Alabama is not enforcing the 5 ACH criteria and I apologize to Mr. Richey for my mistake.

Although proper ACH levels are still widely debated as President of HBAG, I believe our first priority should be what is occurring in our home state. Georgia is a very diverse state and HBAG represents the interests of builders here from large national operations to small custom builders. Our goal is to provide safe and energy efficient homes for all Georgians. Yes, HBAG does have as a guiding principle to make these homes safe and affordable for consumers. That is why we must always balance the costs against the benefits of proposed changes.

As a third-generation builder following in the steps of my father and grandfather, I take a lot of pride in the residential building industry and its contributions to the economy of the state. I am still dismayed to read or hear the remarks that were made at the recent SCAC meeting. HBAGs stance has not changed, we still support the hard work of the Energy Code Task Force but proper ACH levels are highly questionable. Until these

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questions are answered, we believe it is better not to risk the safety and health of the citizens of Georgia to achieve minute savings in energy efficiency.

We may disagree on the best approach to addressing energy efficiency but I want to assure you that HBAG and its representatives are also searching for the proper solutions.

Working within established protocols and partnering with other stakeholders, HBAG will continue to strive to find the best approach to improve energy efficiency and address ACH levels. I trust that our concerns and representatives will be treated with respect.

Sincerely,

R.J. Cleveland, Jr.

President

Cc: Shon Richey

State Codes Advisory Committee

AIA Georgia

AIA Georgia

50 Hurt Plaza
Suite 109
Atlanta GA 30303
P: 678-553-0500

Sent via email to ted.miltiades@dca.ga.gov with hard copy to follow via U.S.P.S.

March 27, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: 2018 IRC R303.4 Mechanical ventilation.

Dear Mr. Miltiades:

On February 28, 2018, the State Codes Advisory Committee voted to adopt a new energy code for Georgia. The language in the residential provisions of our energy code requires an air leakage rate of less than 5 ACH50.

The 2018 International Residential Code contains language in "R303.4 Mechanical ventilation" requiring whole-house mechanical ventilation when the air leakage rate of a dwelling unit is 5 ACH50 or less. The language in R303.4 should not be altered.

Lowering the air leakage rate in R303.4 at which whole-house mechanical ventilation is required would subject occupants to tighter homes with less ventilation. That would produce worse indoor air quality through the accumulation of contaminants such as smoke from cooking, formaldehyde, volatile organic compounds, fine particulate matter, radon, etc.

AIA Georgia is greatly concerned about the consequences of lowering the ventilation threshold in R303.4. We are particularly concerned that those who battle allergies and asthma will be subjected to tighter homes with less ventilation. These Georgians face significant cost and disruption to themselves and their families that would likely be increased by altering the language in R303.4.

We will continue to study the energy code language and invite any interested parties to contact us to share resources and insight. We wish to work with the DCA and its training provider to assist in the implementation of the code and ask that you please contact David Southerland, AIA Georgia's Executive Director, to let us know how we may be involved.

Sincerely,

Kathryn Bedette AIA, President of the Board
American Institute of Architects, Georgia Association

cc: David Southerland, Executive Director of AIA Georgia

Southface

Sent via email to ted.miltiades@dca.ga.gov with hard copy hand delivered on June 14, 2018.

June 13, 2018

Mr. Ted Miltiades, Director
Office of Construction Codes & Industrialized Buildings
Georgia Department of Community Affairs
60 Executive Park South NE
Atlanta, Georgia 30329

Re: 2018 IRC R303.4 Mechanical ventilation.

Dear Mr. Miltiades:

As you are aware, throughout 2017, Southeast Energy Efficiency Alliance (SEEA), Southface, and a diverse group of stakeholders participated in the Georgia Department of Community Affairs (DCA) Energy Code Task Force, convened to update the State's energy code. This process and the hard work of all involved resulted in unanimous approval of state-specific amendments to the 2015 International Energy Conservation Code including a requirement that single family homes have an envelope tightness of less than 5 ACH50.

These amendments represented compromises that were made by DCA's Energy Code Task Force, a group comprised of industry representatives, codes officials, and energy advocates, amongst others. On February 28, 2018, the State Codes Advisory Committee voted to adopt a new energy code for Georgia, which includes this "compromise package of amendments."

It has come to our attention that some voices in Georgia have advocated for changes in the 2018 International Residential Code (IRC), which contains language in "R303.4 Mechanical ventilation" requiring whole-house mechanical ventilation when the air leakage rate of a dwelling unit is 5 ACH50 or less. The changes proposed would trigger the whole-house mechanical ventilation requirement when the air leakage rate is 3 ACH50 or less.

We strongly believe that the language in R303.4 should not be altered. We recognize the concerns regarding the installation of certain mechanical ventilation types, but believe this blanket amendment of essentially removing the mechanical ventilation requirement is the wrong approach to address the issue. It was always the intention and understanding of the Energy Code Task Force that mandatory mechanical ventilation for homes in the IRC would remain at 5 ACH50 or less.

For mechanical ventilation to become mandatory, the constraint ranges currently in effect in Georgia are between the < 7 ACH50 energy code requirement and the < 5 ACH50 IRC requirement. Amongst other important considerations including improved indoor air quality, aligning the ACH50 requirement in the energy code with that in the IRC eliminates the incentive to cheat on blower door results. However, lowering the air leakage rate in R303.4 simply shifts the constraint ranges for mechanical ventilation to become mandatory to between the < 5 ACH50 energy code requirement agreed upon within the "compromise package of amendments" and the < 3 ACH50 IRC requirement currently proposed.

Such a move would further the incentive to improperly report blower door results. Moreover, lowering the air leakage rate in R303.4 at which whole-house mechanical ventilation is required could subject occupants to tighter homes with insufficient ventilation. Combined these impacts of the < 3 ACH50 IRC requirement currently proposed relative to the < 5 ACH50 agreed upon by the Energy Code Task Force could result in worse indoor air quality through the accumulation of contaminants such as cooking fumes, volatile organic compounds, radon, and other harmful particulate matter.

SEEA and Southface appreciate this opportunity to share our concerns about the potential adverse consequences of lowering the ventilation threshold in R303.4 within the IRC. We continue to study both the energy code and the IRC, and invite any interested parties to contact us to share their resources and insights. We look forward to continued collaboration with all stakeholders to address these important concerns.

Kind regards,

Lisa Bianchi-Fossati	Andrea Pinabell	Lauren Westmoreland
Policy Director, Southface	President, Southface	Director of Built Environment, SEEA