Minutes for Energy Code Stakeholder Meeting
November 4, 2019 9:00 a.m. to 11:00 a.m.
Energy & Environment Commission Room, 5301 Northshore Drive, North Little Rock, AR

Attendees:

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allin Crawford</td>
<td>Natural State Retrofoam</td>
</tr>
<tr>
<td>Andy Wilson</td>
<td>City of Sherwood</td>
</tr>
<tr>
<td>Angela Kuli</td>
<td>AR Association of Energy Engineers</td>
</tr>
<tr>
<td>Chris Ahne</td>
<td>Airetech Corporation, ASHRAE</td>
</tr>
<tr>
<td>Chris Kell</td>
<td>Home Energy RX</td>
</tr>
<tr>
<td>Eric Lacey</td>
<td>Responsible Energy Codes Alliance</td>
</tr>
<tr>
<td>Heather Hendrickson</td>
<td>Entergy Arkansas</td>
</tr>
<tr>
<td>Jeffrey Craig</td>
<td>Natural State Retrofoam</td>
</tr>
<tr>
<td>Kirk Pierce</td>
<td>Centerpoint Energy</td>
</tr>
<tr>
<td>Lindsay Moore</td>
<td>AR Dept of Labor &amp; Licensing-HVAC</td>
</tr>
<tr>
<td>Madison Pitts</td>
<td>AR Dept of Energy &amp; Environment</td>
</tr>
<tr>
<td>Mark Allison</td>
<td>Dover Dixon Horne</td>
</tr>
<tr>
<td>Meredith Townsend</td>
<td>Home Builders Association of Greater Little Rock</td>
</tr>
<tr>
<td>Mitch Ross</td>
<td>Arkansas Electric Cooperative Corporation</td>
</tr>
<tr>
<td>Mitchell Simpson</td>
<td>AEO</td>
</tr>
<tr>
<td>Nick Goforth</td>
<td>Southern Pipe &amp; Supply</td>
</tr>
<tr>
<td>Ric Mayhan</td>
<td>AR Dept of Health</td>
</tr>
<tr>
<td>Ron Hughes</td>
<td>HERS, Inc.</td>
</tr>
<tr>
<td>Ryan Burris</td>
<td>AEO</td>
</tr>
<tr>
<td>Stephen Sherwood</td>
<td>Smart Energy Management</td>
</tr>
<tr>
<td>Terry Kessinger</td>
<td>ICF</td>
</tr>
<tr>
<td>Tim Quetsch</td>
<td>AEO</td>
</tr>
<tr>
<td>Tony Woodard</td>
<td>AR Dept of Labor &amp; Licensing-HVAC</td>
</tr>
<tr>
<td>Trent Carter</td>
<td>City of Maumelle</td>
</tr>
<tr>
<td>Via Webinar</td>
<td></td>
</tr>
<tr>
<td>Amanda Swope</td>
<td>Black Hills Energy</td>
</tr>
<tr>
<td>Chad Smith</td>
<td>ASHRAE</td>
</tr>
<tr>
<td>Chris Hugh</td>
<td>Home Energy RX</td>
</tr>
<tr>
<td>Jacob Nielson</td>
<td>ClearResult</td>
</tr>
<tr>
<td>Jeff Dangeau</td>
<td>Black Hills Energy</td>
</tr>
<tr>
<td>John Ware</td>
<td>Arkansas Oklahoma Gas</td>
</tr>
<tr>
<td>Kent Tomlinson</td>
<td>SWEPCO</td>
</tr>
<tr>
<td>Linda Smith</td>
<td>US Green Building Council</td>
</tr>
<tr>
<td>Nancy Geisinger</td>
<td>SWEPCO</td>
</tr>
</tbody>
</table>

Attachments:
1. Meeting presentation
2. Proposed Amendments #001 through #011
Topics covered in presentation (attached):

1. Website Updates [https://www.adec.state.ar.us/energy/incentives/building.aspx](https://www.adec.state.ar.us/energy/incentives/building.aspx)
   a. Amendment Proposal form
   b. Subscribe to Energy Code Stakeholder email list
   c. Meeting minutes from past Stakeholder Meetings
   d. 2020 Energy Code Stakeholder Meeting Schedule
   e. Links to free code texts
      i. 2014 Arkansas Energy Code
      ii. 2009 International Energy Conservation Code
      iii. 2018 International Energy Conservation Code
      iv. ASHRAE 90.1

2. Compliance Resources
   a. Field Guide examples from Georgia
      iii. [https://www.southface.org/resources/georgia-energy-code-resources/](https://www.southface.org/resources/georgia-energy-code-resources/)
   c. Advisory Panel-future creation of an informal body of industry professionals to assist Energy Code implementation and compliance
   d. Permanent Certificate-options for publishing an updated Certificate template

3. Process and schedule
   a. Stakeholder Meetings and Subcommittee Meetings: Subcommittees are a smaller group of stakeholders who are also participating in the larger Stakeholder Meeting. Subcommittee participation will allow parties interested in a particular topic to spend additional time discussing in depth and generate the details and expert recommendations for incorporating amendments into a completed Energy Code draft. Outcomes from the subcommittees will be shared at each Stakeholder Meeting.
      i. Next Stakeholder Meeting April 2. Subcommittees will be organized and meet between now and April 2. Outcomes from the subcommittee meetings will be presented at April 2 meeting. Repeat the subcommittee amendment review process until the June 24 Stakeholder Meeting. A first draft of the Arkansas Amendments and Supplements should be ready at the end of June.
      iii. Three unique subcommittees were established today:
          1. Mechanical Systems
          2. Building Envelope, Insulation and Fenestration
          3. Performance Testing
   b. Amendment Form: A document template from the Arkansas Energy Office to standardize submissions of proposed amendments. Note, all submissions are proposed and reviewed in front of the stakeholder group before any decision is made to finalize the amendent. When amending the language from the 2018 IECC standard, use underline for additions and strikethrough for deletions. Submit Amendment
c. Hot topics: These are topics of discussion reflecting major changes or points of concern when comparing the 2018 IECC relative to the existing Arkansas Energy Code. However, amendments have not yet been proposed to modify any of these future code requirements. This list is provided to stimulate ideas and will be the basis of discussion for the subcommittee meetings.
   i. Wall insulation
   ii. Blower door testing
   iii. Duct leakage testing
   iv. Mechanical ventilation
   v. Energy Rating Index compliance pathway
   vi. Above-code energy efficiency programs in Arkansas
   vii. High-efficacy lighting
   viii. Below-grade insulation & termites
   ix. Windows U-factor, SHGC
   x. Ceiling insulation
   xi. Programmable thermostat
   xii. HVAC equipment sizing
   xiii. Subfloor insulation
   xiv. Crawlspace encapsulation
   xv. Attic encapsulation and roof insulation
   xvi. Duct insulation
   xvii. Advanced Framing
   xviii. Cohesion with other Arkansas building codes

4. Reviewed proposed amendments submitted prior to meeting (attached):
   a. 001 Title: Subcommittee will consider alternative title to clarify applicability to existing buildings
   b. 002 Adoption: Subcommittee will consider definition of “new building”. Clarify effective date later in the update process.
   c. 003 Climate Zones: Approved for draft.
   d. 004 International Climate Zones: Approved for draft.
   e. 005 Tropical Climate Zone: Approved for draft.
   f. 006 Tropical Zone: Approved for draft.
   g. 007 Certificate: Subcommittee will consider cost of utilities, mechanical ventilation, location, additional information, compliance paths, label maintenance.
   h. 008 Programmable Thermostat: Subcommittee will consider thermostat requirements appropriate for Arkansas.
   i. 009 Equipment Sizing and Efficiency Rating: Send to subcommittee for technical consideration.
   j. 010 Maximum Energy Rating Index: Subcommittee will consider application of ERI, and refine specific numbers to include in table.
   k. 011 2009 Insulation and Fenestration Table: Subcommittee will consider additional applications for an “energy backstop”. Include equivalent table of U-values.

5. Schedule subcommittee meetings (10 min). If you did not write your name on one of the following groups but would like to participate, email tim.quetsch@adeq.state.ar.us.
   a. Mechanical Systems (9 participants)
      i. Mechanical ventilation
      ii. High-efficacy lighting
iii. HVAC equipment sizing
iv. Duct insulation
v. **008 Programmable Thermostat**
vi. **009 Equipment Sizing and Efficiency Rating**
b. Building Envelope, Insulation and Fenestration (8 participants)
   i. Wall insulation
   ii. Below-grade insulation & termites
   iii. Windows U-factor, SHGC
   iv. Ceiling insulation
   v. Subfloor insulation
   vi. Crawlspace encapsulation
   vii. Attic encapsulation and roof insulation
   viii. Duct insulation
   ix. Advanced Framing
   x. **011 2009 Insulation and Fenestration Table**
c. Performance Path and Testing (7 participants)
   i. Blower door testing
   ii. Duct leakage testing
   iii. Energy Rating Index compliance pathway
   iv. Above-code energy efficiency programs in Arkansas
   v. Cohesion with other Arkansas building codes
   vi. **001 Title**
   vii. **002 Adoption**
   viii. **007 Certificate**
   ix. **010 Maximum Energy Rating Index**
   x. **011 2009 Insulation and Fenestration Table**
d. Electrical and Lighting systems - (not enough interest)
Updates to the Arkansas Energy Code
Based on the 2018 International Energy Conservation Code
January 29, 2020

Arkansas Energy Office
Arkansas Energy Office
Contacts

- energyinfo@adeq.state.ar.us
- Tim Quetsch, Engineer
  - 501-548-4651
  - Tim.Quetsch@adeq.state.ar.us
- Ryan Burris, Training Project Manager
  - 501-682-0976
  - Ryan.burris@adeq.state.ar.us
- Tim Scott, Financial Projects Manager
  - 501-682-2433
  - Scott@adeq.state.ar.us
- Bourke Reeve, Facilitator
  - bourke.reeve@threepointsplanning.com
Topics Covered

1. Energy Code Landing Page
2. Listserv
3. Resources
   1. Cheat Sheet
   2. Labels
   3. Handbook
4. Supplements and Amendments
   1. Process and Timeline
   2. Amendment Form
5. Amendment Review, subcommittees
6. Additional Resources
Energy Code Landing Page

- [https://www.adeq.state.ar.us/energy/incentives/building.aspx](https://www.adeq.state.ar.us/energy/incentives/building.aspx)
- Or Google keywords "Arkansas Energy Code"
- You will find:
  - 2014 Arkansas Energy Code
  - Link to 2009 IECC (free online version)
  - Link to 2018 IECC (free online version)
  - Link to ASHRAE Standards (free online versions)
  - Energy Code Amendment Form
  - 2020 Meeting Schedule
  - Past meeting minutes
  - Subscribe to LISTSERV
The Arkansas Energy Code is a combination of the International Energy Conservation Code and Arkansas Supplements and Amendments. Enforcement in jurisdictions that have adopted the code is done by the local government through the municipality's established inspection process. Mar 1, 2019

Building Energy Code | ADEQ - Arkansas Department of...
https://www.aedq.state.ar.us > energy > incentives > building

Building Energy Code | ADEQ - Arkansas Department of...
https://www.aedq.state.ar.us > energy > incentives > building
Mar 1, 2019 - The Arkansas Energy Code is a combination of the International Energy Conservation Code and Arkansas Supplements and Amendments. Enforcement in jurisdictions that have adopted the code is done by the local government through the municipality's established inspection process.
You visited this page on 11/25/19.

[PDF] 2014 Arkansas Energy Code
https://www.aedq.state.ar.us > energy > resources > pdfs > 2014-ar-energy-...
You visited this page on 11/25/19.
Building Energy Codes Programs

NOTICE (12/01/2019): The Arkansas Energy Office is working to draft an updated state energy code. We are currently engaged in a public process to determine the new code, relying on stakeholder advocates to suggest amendments to the 2018 International Energy Conservation Code.

You can participate in the process by following EnergyCodeStakeholders—emaillist and checking back on this webpage for information. To recommend amendments to the 2018 International Energy Code, please download and submit the amendment form found below.

Arkansas Amendment Form.doc

Stakeholder Public Meeting Schedule 2020.pdf

Minutes Stakeholder meeting Nov 4, 2019.pdf


Residential Energy Resources

Home energy codes not only save money on an occupant’s utility bills, but also contribute to a healthier environment. By using energy codes, Arkansas is helping to reduce the demand for energy, which in turn reduces the need for new power plants and associated greenhouse gas emissions. This not only helps in reducing the impact on the environment but also reduces the cost of energy for residences.
Email Listserv

- Manually enter your email address
- Must also click the CONFIRMATION EMAIL (check spam)
Compliance Resources
Field Handbook

- 70+ pages
- 1 residential
- 1 commercial

- Single-page pocket reference
Arkansas Energy Code Cheat Sheet: Zone 3 Residential

Disclaimer: This document does not supersede the requirements of the Arkansas Energy Code.
Zone 3 Counties: All counties in Arkansas except the following: Baxter, Benton, Boone, Carroll, Fulton, Izard, Madison, Marion, Newton, Searcy, Stone, and Washington.

INSTALL THESE SPECIFICATIONS FOR A NEW HOME:
1. Permanent Certificate
2. Blower Door: 3 ACH50
3. Programmable Thermostat
4. Sealed Ducts
5. Mechanical Ventilation
6. LED or CFL light bulbs

AND FOLLOW ONE OF THE THREE COMPLIANCE PATHS BELOW

<table>
<thead>
<tr>
<th>Prescriptive Path</th>
<th>Performance Path</th>
<th>Energy Rating Index Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Windows and Doors: U-factor 0.32 or less</td>
<td>7. Pass a simulated performance evaluation using an approved tool (RESnet software)</td>
<td>7. Obtain a HERS score of 57 or less</td>
</tr>
<tr>
<td>19. Windows: SHGC 0.25 or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Attic Insulation: R-38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Wood Frame Exterior walls: R-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Mass walls R-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Floor insulation: R-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Basement walls: R-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Slab edge insulation: 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Crawl space wall: R-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Ducts: R-8 in attics, R-6 elsewhere</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Duct leakage test: 4 cfm per 100 square feet of conditioned floor area</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

YOUR NEW HOME MEETS THE ENERGY CODE!
Advisory Panel

- Assistance understanding code
- Shape training opportunities
Certificate

- Download and electronic fillable
- Printable on 1/4 page standard stickers
- 2 or more formats?
Arkansas
Residential Energy Efficiency Certificate
Builder/Designer: AEO Zone 3 Homes LLC
License Number: 8888888888
This Certificate indicates that the home is in compliance with the 2021 Arkansas Energy Code.
Insulation
Wall: R13+5
Ceiling/Roof: R-38
Foundation: Floor R-19
Ducts: R-6
Windows
U-Factor: 0.35
SHGC: 0.25
Doors U-Factor: 0.35
Duct Leakage Rate: 4 cfm per 100 sq.ft.
Envelope Leakage Rate: 3ACH50
Heating: Electric Heat Pump Furnace
Cooling: 4 ton 14 SEER
Water Heater: Electric 50 gal 0.93 EF
Ventilation: 70 cfm Depressurizing
Other: Radiant Barrier Attic
Schedule and Timeline
Schedule

a) 1st Iteration January 29 (today)
b) Subcommittees February-March
c) 2nd Iteration April 2
d) Subcommittees April-June
e) June 24 First Draft complete
Timeline

- **Gather Stakeholder Groups (2019)**
- **Edits, feedback, and discussion**

- **Draft ready for Public Comment (2020)**
  - Edits, Feedback, and Discussion
  - Impact study

- **Legislative Committee Review (2020-2021)**
  - Official Review and Public Comment
  - Revisions

- **Code is Adopted (2021)**
  - Outreach and training

- **Code goes into Effect (2022)**
  - Implement

- **Code is Adopted (2021)**
  - Outreach and training

- **Code goes into Effect (2022)**
  - Implement
Please Propose Your Amendments

• Send Amendment Forms to energyinfo@adeq.state.ar.us
• Specific revision text to 2018 IECC Standard
• Describe intent or how the proposed Energy Code affects your sector in Arkansas
  – Positive or negative impacts, including best financial estimate
  – Suggestions for training/outreach/enforcement
ENERGY

NAME: ______________________

ORGANIZATION: ______________________

EMAIL: ______________________

ADDRESS: ______________________

CODE: 2013 Intern

CHECK ONE:

☐ Rochester

☐ Rolla

☐ Springfield

LINE THROUGH:

SECTION: ______________________

DESCRIPTION: ______________________

This is a TrueType font. This font will be used on both printer and screen.

Arkansas
Subcommittee Roles

• Review proposed amendments
• Recommendations, guidance, refine amendments
Hot Topics

1. Wall Insulation
   - Larger cavity framing, alternative materials or addition of continuous insulation

2. Blower Door and Duct Tests
   - Mechanical Ventilation

3. ERI Compliance Options*
Other Conversations

4. Above-code programs
5. High-efficiency Lights
6. Slab insulation (termites)
7. Windows U-factor, SHGC
8. Ceiling insulation
9. Programmable thermostat*
10. HVAC Equipment sizing*
11. Commercial energy code
45 minutes for Amendment Reviews
Amendments

• 001 Title
• 002 Adoption
• 003 Climate Zones
• 004 International Climate Zones
• 005 Tropical Climate Zone
• 006 Tropical Zone
• 007 Certificate
• 008 Programmable Thermostat
• 009 Equipment Sizing and Efficiency Rating
• 010 Maximum Energy Rating Index
• 011 2009 Insulation and Fenestration Table
Future Meetings

- Subcommittee 2-3 dates February-March
- Stakeholder Meeting April 2
- Subcommittee 2-3 dates April-June
- Stakeholder Meeting June 24
Thank You!
Additional Resources

- Free Public ACCESS to International Standards: https://codes.iccsafe.org/category/I-Codes?search=iecc&page=1
- SEEA Arkansas Field Study: https://www.energycodes.gov/sites/default/files/documents/Arkansas_Residential_Field_Study.pdf
- Building Codes Assistance Project: http://bcapcodes.org/
- Southeast Energy Efficiency Alliance: https://www.seealliance.org/
- Energy Efficiency Arkansas: http://energyefficiencyarkansas.org/
- Arkansas Energy Office: https://www.adeq.state.ar.us/energy/
Additional Resources

- **Comparison of IECC Commercial and ASHRAE 90.1:**
  - 2012: [https://iccsafe.org/gr/Documents/IECC-Toolkit/2012IECC_ASHRAE%2090%201-10ComparisonTable.pdf](https://iccsafe.org/gr/Documents/IECC-Toolkit/2012IECC_ASHRAE%2090%201-10ComparisonTable.pdf)

- **Arkansas Economic Impact of 2015 IECC Residential:**
  - [https://www.energycodes.gov/residential-energy-cost-savings-analysis](https://www.energycodes.gov/residential-energy-cost-savings-analysis)

- **Arkansas Commercial Energy and Cost Effectiveness Analysis 2015:**
  - [https://www.energycodes.gov/development/commercial/cost_effectiveness](https://www.energycodes.gov/development/commercial/cost_effectiveness)

- **Key changes in 2012 IECC:**

- **Key changes in 2015 IECC:**
  - [https://www.iccsafe.org/codes-tech-support/codes/2015-changes/key-changes-iecc/](https://www.iccsafe.org/codes-tech-support/codes/2015-changes/key-changes-iecc/)

- **Key changes in 2018 IECC:**
  - [http://energy.nv.gov/uploadedFiles/energynvgov/content/Programs/TaskForces/2017/2015%20v%202018%20IECC%20Summary%20-%20GOE%20Final%20w%20Sources.pdf](http://energy.nv.gov/uploadedFiles/energynvgov/content/Programs/TaskForces/2017/2015%20v%202018%20IECC%20Summary%20-%20GOE%20Final%20w%20Sources.pdf)
# ENERGY CODE AMENDMENT PROPOSAL FORM

Send completed forms to [energyinfo@adeq.state.ar.us](mailto:energyinfo@adeq.state.ar.us) or to ARKANSAS ENERGY OFFICE  
ATTN: Tim Quetsch  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

<table>
<thead>
<tr>
<th>NAME:</th>
<th>Tim Quetsch</th>
<th>DATE:</th>
<th>12/16/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORGANIZATION/POSITION:</td>
<td>AEO/Engineer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMAIL:</td>
<td><a href="mailto:Tim.quetsch@adeq.state.ar.us">Tim.quetsch@adeq.state.ar.us</a></td>
<td>TELEPHONE:</td>
<td>501-548-4651</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td>4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **CHECK ONE:**
  - [X] Revise section to read as follows:
  - [ ] Add new section to read as follows:
  - [ ] Delete section and substitute the following:
  - [ ] Delete without substitution:

**SECTION:** R101.1/C101.1

**DESCRIPTION:** [X] Additional Attached Pages  
R101.1 Title. This code shall be known as the Energy Conservation Code of [NAME OF JURISDICTION] Arkansas Energy Code for New Building Construction and shall be cited as such. It is referred to herein as "this Code" or "the Arkansas Energy Code."

**REASON/INTENT/REFERENCED STANDARDS:**  
Administrative edit to match the title referenced elsewhere in Arkansas state law.

**FINANCIAL IMPACT OF PROPOSED AMENDMENT:**  
None.
ENERGY CODE AMENDMENT PROPOSAL FORM

Send completed forms to energyinfo@adeq.state.ar.us or to ARKANSAS ENERGY OFFICE
ATTN: Tim Quetsch
5301 Northshore Drive
North Little Rock, AR 72118-5317

NAME: Tim Quetsch DATE: 12/16/19
ORGANIZATION/POSITION: AEO/Engineer
EMAIL: Tim.quetsch@adeq.state.ar.us TELEPHONE: 501-548-4651
ADDRESS: 4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704


CHECK ONE:
☐ Revise section to read as follows: ☒ Add new section to read as follows:
☐ Delete section and substitute the following: ☐ Delete without substitution:

SECTION: R101.6/C101.6

DESCRIPTION: ☐ Additional Attached Pages
R101.6 Adoption. All counties, cities or municipalities that issue building permits for new building construction are required to adopt this Code.

R101.6.1 Modification. A local jurisdiction may exercise other administrative and enforcement procedures that it deems necessary to affect the purposes of this Code. A local jurisdiction may promulgate or adopt rules or regulations that are more stringent than this Code, however the local jurisdiction shall not in any way reduce the energy conservation standards in this Code or promulgate or adopt rules or regulations that are less stringent than this Code.

R101.6.2 Effective Date. Buildings for which a permit is issued on or after the effective date of this Code shall be subject to the provisions of this Code. This code shall be effective on January 1, 2022.

REASON/INTENT/REFERENCED STANDARDS:
A similar clause was added in the amendments of the 2014 Arkansas Energy Code. The requirement for jurisdictions issuing building permits to adopt this Code is a state law. Placement of this clause in the SCOPE AND GENERAL REQUIREMENTS section makes most sense compared to other sections of the code (formerly Sections 111 and 112).

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None.

ITEM NUMBER _002_ (FOR OFFICE USE ONLY) pg. 1 OF 1
Send completed forms to energyinfo@adeq.state.ar.us or to
ARKANSAS ENERGY OFFICE
ATTN: Tim Quetsch
5301 Northshore Drive
North Little Rock, AR 72118-5317

NAME: Tim Quetsch
ORGANIZATION/POSITION: AEO/Engineer
EMAIL: Tim.quetsch@adeq.state.ar.us
ADDRESS: 4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704

DATE: 12/16/19
TELEPHONE: 501-548-4651


CHECK ONE:

☐ Revise section to read as follows:
☐ Add new section to read as follows:
☐ Delete section and substitute the following:
☐ Delete without substitution:

LINE THROUGH MATERIAL TO BE DELETED:
UNDERLINE MATERIAL TO BE ADDED

SECTION: R301.1/C301.1

DESCRIPTION: Additional Attached Pages

R301.1 General.
Climate zones from Figure R301.1 or Table R301.1 shall be used for determining the applicable requirements from Chapter 4. Locations not indicated in Table R301.1 shall be assigned a climate zone in accordance with Section R301.3.

FIGURE R301.1
CLIMATE ZONES
### ARKANSAS CLIMATE ZONES

#### TABLE R301.1/C301.1
CLIMATE ZONES, MOISTURE REGIMES, AND WARM-HUMID DESIGNATIONS BY STATE, COUNTY AND TERRITORY

Key: A – Moist, B – Dry, C – Marine. Absence of moisture designation indicates moisture regime is irrelevant. Asterisk (*) indicates a warm-humid location.

#### US STATES

<table>
<thead>
<tr>
<th>State</th>
<th>Climate Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALABAMA</td>
<td></td>
</tr>
<tr>
<td>ALASKA</td>
<td></td>
</tr>
<tr>
<td>ARIZONA</td>
<td></td>
</tr>
<tr>
<td>ARKANSAS</td>
<td>3A Arkansas</td>
</tr>
<tr>
<td></td>
<td>3A Ashley</td>
</tr>
<tr>
<td></td>
<td>4A Baxter</td>
</tr>
<tr>
<td></td>
<td>4A Benton</td>
</tr>
<tr>
<td></td>
<td>4A Boone</td>
</tr>
<tr>
<td></td>
<td>3A Bradley</td>
</tr>
<tr>
<td></td>
<td>3A Calhoun</td>
</tr>
<tr>
<td></td>
<td>4A Carroll</td>
</tr>
<tr>
<td></td>
<td>3A Chicot</td>
</tr>
<tr>
<td></td>
<td>3A Clark</td>
</tr>
<tr>
<td></td>
<td>3A Clay</td>
</tr>
<tr>
<td></td>
<td>3A Cleburne</td>
</tr>
<tr>
<td></td>
<td>3A Cleveland</td>
</tr>
</tbody>
</table>

---

FIGURE R301.1.1/C301.1
ARKANSAS CLIMATE ZONES
3A Columbia*
3A Conway
3A Craighead
3A Crawford
3A Crittenden
3A Cross
3A Dallas
3A Desha
3A Drew
3A Faulkner
3A Franklin
4A Fulton
3A Garland
3A Grant
3A Greene
3A Hempstead*
3A Hot Spring
3A Howard
3A Independence
4A Izard
3A Jackson
3A Jefferson
3A Johnson
3A Lafayette*
3A Lawrence
3A Lee
3A Lincoln
3A Little River*
3A Logan
3A Lonoke
4A Madison
4A Marion
3A Miller*
3A Mississippi
3A Monroe
3A Montgomery
3A Nevada
4A Newton
3A Ouachita
3A Perry
3A Phillips
3A Pike
3A Poinsett
3A Polk
3A Pope
3A Prairie
3A Pulaski
3A Randolph
3A Saline
3A Scott
4A Searcy
3A Sebastian
3A Sevier*
3A Sharp
3A St. Francis
4A Stone
3A Union*
3A Van Buren
4A Washington
3A White
3A Woodruff
3A Yell

CALIFORNIA
COLORADO
CONNECTICUT
DELAWARE
DISTRICT OF COLUMBIA
FLORIDA
GEORGIA
HAWAII
IDAHO
ILLINOIS
INDIANA
IOWA
KANSAS
KENTUCKY
LOUISIANA
MAINE
MARYLAND
MASSACHUSETTS
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
REASON/INTENT/REFERENCED STANDARDS:
For ease of use, this includes a close-up view of the climate zones in Arkansas which is easier to read than the entire-country climate map. This also deletes the listed counties for all other states, which reduces clutter in the code and saves twelve pages of paper. The 2014 Arkansas Energy Code listed counties by climate zone; the IECC typically lists counties in alphabetical order and this amendment keeps the IECC format.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
If printing costs 5 cents per page, this amendment would save $600 for 1000 copies statewide.
R301.3/C301.3

The climate zone for any location outside the United States shall be determined by applying Table R301.3(1) and then Table R301.3(2).

<table>
<thead>
<tr>
<th>MAJOR CLIMATE-TYPE DEFINITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine (C) Definition—Locations meeting all four criteria:</td>
</tr>
<tr>
<td>1. Mean temperature of coldest month between -3°C (27°F) and 18°C (65°F).</td>
</tr>
<tr>
<td>2. Warmest month mean &lt; 22°C (72°F).</td>
</tr>
<tr>
<td>3. Not fewer than four months with mean temperatures over 10°C (50°F).</td>
</tr>
<tr>
<td>4. Dry season in summer. The month with the heaviest precipitation in the cold season has not less than three times as much precipitation as the month with the least precipitation in the rest of the year. The cold season is October through March in the Northern Hemisphere and April through September in the Southern Hemisphere.</td>
</tr>
</tbody>
</table>

| Dry (B) Definition—Locations meeting the following criteria: |
| Not marine and $P_n < 0.44 \times (T - 19.5) [P_{cm} < 2.0 \times (T + 7) \text{ in SI units}]$ where: |
| $P_n = \text{Annual precipitation in inches (cm)}$ |
| $T = \text{Annual mean temperature in °F (°C)}$ |

| Moist (A) Definition—Locations that are not marine and not dry. |
| Warm-humid Definition—Moist (A) locations where either of the following wet-bulb temperature conditions shall occur during the warmest six consecutive months of the year: |
| 1. 67°F (19.4°C) or higher for 3,000 or more hours. |
| 2. 73°F (22.8°C) or higher for 1,500 or more hours. |

For SI: °C = (°F - 32)/1.8, 1 inch = 2.54 cm.
TABLE R301.3(2)
INTERNATIONAL CLIMATE ZONE DEFINITIONS

<table>
<thead>
<tr>
<th>ZONE NUMBER</th>
<th>THERMAL CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IP Units</td>
</tr>
<tr>
<td>1</td>
<td>9000 &lt; CDD50°F</td>
</tr>
<tr>
<td>2</td>
<td>6300 &lt; CDD50°F ≤ 9000</td>
</tr>
<tr>
<td>3A and 3B</td>
<td>4500 &lt; CDD50°F ≤ 6300 AND HDD65°F ≤ 5400</td>
</tr>
<tr>
<td>4A and 4B</td>
<td>CDD50°F ≤ 4500 AND HDD65°F ≤ 5400</td>
</tr>
<tr>
<td>3C</td>
<td>HDD65°F ≤ 3600</td>
</tr>
<tr>
<td>4C</td>
<td>3600 &lt; HDD65°F ≤ 5400</td>
</tr>
<tr>
<td>5</td>
<td>5400 &lt; HDD65°F ≤ 7200</td>
</tr>
<tr>
<td>6</td>
<td>7200 &lt; HDD65°F ≤ 9000</td>
</tr>
<tr>
<td>7</td>
<td>9000 &lt; HDD65°F ≤ 12600</td>
</tr>
<tr>
<td>8</td>
<td>12600 &lt; HDD65°F</td>
</tr>
</tbody>
</table>

For SI°C = [°F] - 32/1.8.

REASON/INTENT/REFERENCED STANDARDS:
This amendment deletes international code provisions for climate zones irrelevant to Arkansas.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None.
R301.4 Tropical climate zone.
The tropical climate zone shall be defined as:
1. Hawaii, Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, Commonwealth of Northern Marianas Islands; and
2. Islands in the area between the Tropic of Cancer and the Tropic of Capricorn.

REASON/intENT/REFERENCED STANDARDS:
This amendment deletes code provisions for climate zones irrelevant to Arkansas.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None.
Residential buildings in the tropical zone at elevations less than 2,400 feet (731.5 m) above sea level shall be deemed to be in compliance with this chapter provided that the following conditions are met:

1. Not more than one-half of the occupied space is air conditioned.
2. The occupied space is not heated.
3. Solar, wind or other renewable energy source supplies not less than 50 percent of the energy for service water heating.
4. Glazing in conditioned spaces has a solar heat gain coefficient of less than or equal to 0.40, or has an overhang with a projection factor equal to or greater than 0.30.
5. Permanently installed lighting is in accordance with Section R404.
6. The exterior roof surface complies with one of the options in Table C402.3 or the roof or ceiling has insulation with an R-value of R-15 or greater. Where attics are present, attic above the insulation are vented and attics below the insulation are unvented.
7. Roof surfaces have a slope of not less than onefourth unit vertical in 12 units horizontal (21-percent slope). The finished roof does not have water accumulation areas.
8. Operable fenestration provides a ventilation area of not less than 14 percent of the floor area in each room. Alternatively, equivalent ventilation is provided by a ventilation fan.
9. Bedrooms with exterior walls facing two different directions have operable fenestration on exterior walls facing two directions.
10. Interior doors to bedrooms are capable of being secured in the open position.
11. A ceiling fan or ceiling fan rough-in is provided for bedrooms and the largest space that is not used as a bedroom.
REASON/INTENT/REFERENCED STANDARDS:
This amendment deletes code provisions for climate zones irrelevant to Arkansas.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None.
R401.3 Certificate (Mandatory).
A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certificate shall indicate the predominant R-values of insulation installed in or on ceilings, roofs, walls, foundation components such as slabs, basement walls, crawl space walls and floors and ducts outside conditioned spaces; U-factors of fenestration and the solar heat gain coefficient (SHGC) of fenestration, and the results from any required duct system and building envelope air leakage testing performed on the building. Where there is more than one value for each component, the certificate shall indicate the value covering the largest area. The certificate shall indicate the total capacity of mechanical ventilation. The certificate shall indicate the types and efficiencies of heating, cooling, mechanical ventilation, and service water heating equipment. Where a gas-fired unvented room heater, electric furnace or baseboard electric heater is installed in the residence, the certificate shall indicate “gas-fired unvented room heater,” “electric furnace” or “baseboard electric heater,” as appropriate. An efficiency shall not be indicated for gas-fired unvented room heaters, electric furnaces and electric baseboard heaters.

R401.3.1 Certificate Maintenance.
The Arkansas Department of Energy and Environment - Energy Office shall create and maintain a certificate template and make it available to the public on its website, through E-mail and by other means. Local jurisdictions, utilities, or contractors may create and maintain a unique certificate template, provided it complies with the certificate requirements in this section. The certificate may include other energy related information from various rating systems, designations or local utility programs. Alterations made to this certificate, by the Arkansas Energy Office or by others, cannot increase or decrease the stringency of the standards reflected in this Code.
REASON/INTENT/REFERENCED STANDARDS:
Comparing this section to the 2014 Arkansas Energy Code, this eliminates the following requirements:

- “door hanger”
- completion date
- builder name and license number
- copies provided to the lender and appraiser, and if requested, realtors and other stakeholders.

IECC has added the following certificate requirements since 2009:

- blower door results
- duct test results if applicable

AEO is advocating for the following additional certificate requirements:

- Mechanical ventilation capacity

The “maintenance” section of this amendment is in keeping with the 2014 Arkansas Energy Code which requires the Arkansas Energy Office to maintain the certificate template. However, this amendment language now allows individuals to customize their own template if they do not wish to use the AEO template.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None.
Send completed forms to energyinfo@adeq.state.ar.us or to ARKANSAS ENERGY OFFICE
ATTN: Tim Quetsch
5301 Northshore Drive
North Little Rock, AR 72118-5317

NAME: Tim Quetsch
DATE: 12/16/19

ORGANIZATION/POSITION: AEO/Engineer

EMAIL: Tim.quetsch@adeq.state.ar.us

TELEPHONE: 501-548-4651

ADDRESS: 4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704


CHECK ONE:
☐ Revise section to read as follows:
☐ Add new section to read as follows:
☐ Delete section and substitute the following:
☐ Delete without substitution:

LINE THROUGH MATERIAL TO BE DELETED:
UNDERLINE MATERIAL TO BE ADDED

SECTION: R403.1.3

DESCRIPTION: Additional Attached Pages

R403.1.1 Programmable Thermostat. The thermostat controlling the primary heating or cooling system of the dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures of not less than 55°F (13°C) to not greater than 85°F (29°C). The thermostat shall be programmed initially by the manufacturer with a heating temperature setpoint of not greater than 70°F (21°C) and a cooling temperature setpoint of not less than 78°F (26°C). This section shall not be interpreted to require wifi-enabled or 'smart' features in a thermostat.

REASON/INTENT/REFERENCED STANDARDS:
There is some confusion as to whether a programmable thermostat is the same as an expensive smart thermostat.

The 2014 Arkansas Energy Code eliminated the programmable thermostat requirement. Arkansas Electric Cooperative Corporation finds that where these are installed they are mostly operated in the "dumb" configuration. Installers and consumers need education on how to use a programmable thermostat to realize the energy savings. The alternative is a user-friendly expensive smart thermostat, but that is not currently suggested in this amendment.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
$10 initial cost increase (programmable thermostats are $30-$60 and older thermostats are $20-$50.)
10% heating/cooling cost savings every year (approximately $70-$145 per year)
ENERGY CODE AMENDMENT PROPOSAL FORM

Send completed forms to energyinfo@adep.state.ar.us or to
ARKANSAS ENERGY OFFICE
ATTN: Tim Quetsch
5301 Northshore Drive
North Little Rock, AR 72118-5317

NAME: Tim Quetsch
ORGANIZATION/POSITION: AEO/Engineer
EMAIL: Tim.quetsch@adep.state.ar.us
ADDRESS: 4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704

DATE: 12/16/19

TELEPHONE: 501-548-4651


CHECK ONE:
☐ Revise section to read as follows:
☒ Add new section to read as follows:
☐ Delete section and substitute the following:
☐ Delete without substitution:

LINE THROUGH MATERIAL TO BE DELETED: UNDERLINE MATERIAL TO BE ADDED

SECTION: R403.7

DESCRIPTION: ☐ Additional Attached Pages
R403.7 Equipment sizing and efficiency rating (Mandatory).

Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

Exceptions: Heating and cooling equipment and appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies where any of the following conditions apply:
1. The specified equipment or appliance utilizes multistage technology or variable refrigerant flow technology and the loads calculated in accordance with the approved heating and cooling methodology fall within the range of the manufacturer's published capacities for that equipment or appliance.
2. The specified equipment or appliance manufacturer's published capacities cannot satisfy both the latent and sensible heat loads calculated in accordance with the approved heating and cooling methodology and the next larger standard size unit is specified.
3. The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

This amendment language for the Exceptions was taken from the Virginia Energy Conservation Code. AEO uses the term "latent heat load" where Virginia does not. This amendment intends to allow HVAC contractors to safely and reasonably "oversize" after following Manual J and S calculations. The amendment does this by:

- Allowing oversized equipment ONLY where the energy-efficient multistage or variable refrigerant flow equipment has turndown capabilities with effective dehumidifying functions equivalent to ACCA sizing of a single-stage air conditioner; or
- Allowing rounding up to the nearest standard size (usually not more than a half-ton increment).

Contractors may run into a situation where a customer demands heating and cooling set points significantly different than ACCA standards (70F heating and 75F cooling with 50% humidity). ACCA Manual J already allows for divergence from standard design values when superseded by a “documented health requirement.” The reality is that with a standard ACCA design occupants will be able to achieve much colder indoor temperatures for most of the summer if desired, only failing to reach those temperatures for a few hours during the hottest days of the year; furthermore during those few hours, comfort is enhanced by the reduced indoor humidity with a properly-sized standard ACCA design.

Training opportunity: continuing Manual J trainings to improve HVAC knowledge and practices across the state.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
Estimates indicate HVAC equipment is $300-$400 additional cost per ton. If oversizing stops, this could save on initial building costs as well as long-term energy savings.

ACCA calculations are already a requirement in Arkansas, so theoretically there is no additional HVAC labor in the building cost. However compliance is an issue in Arkansas and additional training efforts may increase contractor overhead costs.
R406.4 ERI-based compliance.
Compliance based on an ERI analysis requires that the rated design be shown to have an ERI less than or equal to the appropriate value indicated in Table R406.4 when compared to the ERI reference design.

<table>
<thead>
<tr>
<th>CLIMATE ZONE</th>
<th>ENERGY RATING INDEX 1/1/2022-12/31/2024</th>
<th>ENERGY RATING INDEX 1/1/2025-12/31/2027</th>
<th>ENERGY RATING INDEX 1/1/2028 ONWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>57</td>
<td>67</td>
<td>62</td>
</tr>
<tr>
<td>2</td>
<td>57</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>57 78</td>
<td>67</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>62 82</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td>5</td>
<td>61</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Where on-site renewable energy is included for compliance using the ERI analysis of Section R406.4, the building shall meet the mandatory requirements of Section R406.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.

b. The dates shown indicate the period that the ERI score is effective. Refer to Section R103.3.2 of this Code regarding previous approvals.
REASON/INTENT/REFERENCED STANDARDS:
Similar to Texas, this amendment has a transition period where ERI scores gradually reduce. Texas stepped numbers down by 6 points in 3 phases over 6 years to reach the numbers shown below. So for a 3-phase 6-year approach in Arkansas, an even more gradual stepdown would start in 2022 with ERI scores that reflect the 2009 IECC, drop halfway in 3 years, and drop to the 2018 IECC values in year 2028. The values of IECC 2009 ERI scores (the ERI did not exist back then) were obtained from a RESNET Fact Sheet developed by US Department of Energy and Britt Makela Group.

<table>
<thead>
<tr>
<th>Climates</th>
<th>2009 IECC HERS Index Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1 - 2</td>
<td>79</td>
</tr>
<tr>
<td>Zone 3</td>
<td>70</td>
</tr>
<tr>
<td>Zone 4 - 5</td>
<td>82</td>
</tr>
<tr>
<td>Zone 6</td>
<td>83</td>
</tr>
<tr>
<td>Zone 7</td>
<td>85</td>
</tr>
<tr>
<td>Zone 9</td>
<td>94</td>
</tr>
<tr>
<td>U.S. Average</td>
<td>82</td>
</tr>
</tbody>
</table>

Excerpt from RESNET Fact Sheet

Home builders have reiterated that, contrary to public perception, not all homes of a given age are built equally and therefore should not be priced similarly. Homebuilders have suggested the Arkansas Energy Office might find an easy-to-use energy scoring system so that the real estate marketplace can discern the additional value built into an energy-efficient home. Real estate agents and appraisers are not, by and large, experts on energy efficiency, and even less so are the general public. The ERI score is a useful tool to summarize and visualize the “unseen” energy efficiency features of a home.

The goal with this amendment is that more builders will be incentivized to use the ERI Compliance Path by allowing 2009 performance until 2025 while having a more stringent Prescriptive Path. Then with better information and more “comps”, consumers will be able to make informed decisions on their home purchases. National Association of Home Builders published a study that concluded home buyers would pay more for an energy efficient home, yet the reality is consumers and professionals often cannot tell a regular home apart from an energy efficient home.
FINANCIAL IMPACT OF PROPOSED AMENDMENT:
HERS ratings cost $350-$1500 or $0.19 to $0.31 per square foot (DOE HERS Variability Study, 9/30/2018), which includes a blower door test and duct test (eliminating that cost compared to the prescriptive building path alternative).

This amendment may increase the long-term energy cost of an individual home, or it may aid in awareness and compliance, therefore reducing the long-term energy cost of Arkansas homes.
ENERGY CODE AMENDMENT PROPOSAL FORM

Send completed forms to energyinfo@adeq.state.ar.us or to ARKANSAS ENERGY OFFICE
ATTN: Tim Quetsch
5301 Northshore Drive
North Little Rock, AR 72118-5317

NAME: Tim Quetsch                                  DATE: 12/18/19

ORGANIZATION/POSITION: AEO/Engineer

EMAIL: Tim.quetsch@adeq.state.ar.us  TELEPHONE: 501-548-4651

ADDRESS: 4170 M.L.K. Jr. Blvd #5, Fayetteville, AR 72704


CHECK ONE:
☐ Revise section to read as follows:  ☒ Add new section to read as follows:
☐ Delete section and substitute the following:
☐ Delete without substitution:

LINE THROUGH MATERIAL TO BE DELETED:  UNDERLINE MATERIAL TO BE ADDED

Table R402.1.2.1 Energy Rating Index
Compliance Alternative Insulation and Fenestration Requirements by Component

DESCRIPTION:  ☐ Additional Attached Pages

TABLE R402.1.2
ENERGY RATING INDEX COMPLIANCE ALTERNATIVE INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT
(EXCERPT FROM TABLE 402.1.1 OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE)

<table>
<thead>
<tr>
<th>CLIMATE ZONE</th>
<th>FENESTRATION U-FACTOR</th>
<th>SKYLIGHT U-FACTOR</th>
<th>GLAZED FENESTRATION SHGC</th>
<th>CEILING R-VALUE</th>
<th>WOOD FRAME WALL R-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0.50</td>
<td>0.65</td>
<td>0.30</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>4 except Marine</td>
<td>0.35</td>
<td>0.60</td>
<td>NR</td>
<td>38</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLIMATE ZONE</th>
<th>MASS WALL R-VALUE</th>
<th>FLOOR R-VALUE</th>
<th>BASEMENT WALL R-VALUE</th>
<th>SLAB R-VALUE AND DEPTH</th>
<th>CRAWL SPACE WALL R-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5/8</td>
<td>19</td>
<td>5/13</td>
<td>0</td>
<td>5/13</td>
</tr>
<tr>
<td>4 except Marine</td>
<td>5/10</td>
<td>19</td>
<td>10/13</td>
<td>10, 2 ft</td>
<td>10/13</td>
</tr>
</tbody>
</table>

ITEM NUMBER __011__ (FOR OFFICE USE ONLY)
REASON/INTENT/REFERENCED STANDARDS:
The Energy Rating Index compliance pathway requires the minimum thermal envelope specifications of the 2009 IECC. This added table duplicates those specifications so that a user would not need to access the 2009 IECC. This proposed amendment is placed in Section R402 to juxtapose the ERI components against the prescriptive components but would also make sense to locate it in Section R406.

FINANCIAL IMPACT OF PROPOSED AMENDMENT:
None