

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Energy Conservation Code

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

NOTE: This request when viewed on computer extends several pages. Please be sure you have reached the end of the document.

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

I note that "code" is not capitalized throughout this Code. So, I take it that it should remain lowercase everywhere is used as such?

Correct. "Code" is capitalized for specific uses (NC Building Code, International Building Code, etc.) and lowercase for general use elsewhere. We will coordinate this, where necessary, in the final ICC publication.

So that I'm clear – this will be the 2018 Existing Building Code?

This will be the 2018 NC Energy Conservation Code. The effective date will be 1/1/2019.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

**Barry Gupton, PE
Chief Code Consultant**

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Commercial Energy Conservation Code, Chapter 1

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

C101.1: Please insert the appropriate dates here.

C101.1 Title.

This code shall be known as the *International Energy Conservation Code* of **[NAME OF JURISDICTION]**, and shall be cited as such. It is referred to herein as "this code." This code shall be known as the *North Carolina Energy Conservation Code* as adopted by the North Carolina Building Code Council on **June 13, 2017 to be effective January 1, 2019.** References to the *International Codes* shall mean the North Carolina Codes. The *North Carolina Energy Conservation Code* is referred to herein as "this code." The North Carolina amendments to the *International Codes* are underlined.

C101.5: So that I'm clear, how will this interact with the exemption for existing buildings in G.S. 143-138(b15) and (b18)?

C102.1, C103.3, C103.3.1, C103.3.2, C103.3.3, C103.4, C103.5, C104, C105, C107, C108, and C109: I take it that when you are referring to the Administrative Code and Policies you are referring to this volume of the NC Building Code?

Correct.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

Barry Gupton, PE
Chief Code Consultant

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Commercial Energy Conservation Code, Chapter 2

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

In "Building Thermal Envelope" and "Exterior Wall" why is the term "walls, below-grade" in quotation marks? In "Exterior Wall" the term "above-grade walls" is not italicized.

BUILDING THERMAL ENVELOPE. The walls, below-grade, ~~basement walls,~~ exterior walls, floor, roof and any other building elements that enclose *conditioned space* or provide a boundary between *conditioned space* and exempt or *unconditioned space*.

EXTERIOR WALL. Walls including both above-grade walls and ~~basement walls~~ walls, below-grade.

In "On-Site Renewable Energy" what is "small hdyro"?

Also, on the second to last line, should it be "on-site" (hyphenated) to be consistent with the definition?

ON-SITE RENEWABLE ENERGY. ~~Energy derived from solar radiation, wind, waves, tides, landfill gas, biomass or the internal heat of the earth. The energy system providing on-site renewable energy shall be located on the project site. Includes solar photovoltaic; active solar thermal that employs collection panels, heat transfer mechanical components; wind; small~~ hydroelectric; tidal; wave energy; geothermal (core earth); biomass energy systems; landfill gas and bio-fuel based electrical production. On-site energy shall be generated on or adjacent to the project site and shall not be delivered to the project through the utility service.

In "Process Energy" should it be "in support of the manufacturing..."? If not, then should "process" be plural?

PROCESS ENERGY. Energy consumed in support of manufacturing, industrial, or commercial processes other than conditioning spaces and maintaining comfort and amenities for the occupants of a building.

By changing "Registered Design Professional" to "Licensed Design Professional" won't you need to change the term everywhere it is used in this code? See for example C103.1.

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REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed. Design by a Registered Design Professional is not required where exempt under the registration or licensure laws.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Commercial Energy Conservation Code, Chapter 3

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In reviewing these rules, the staff determined that the following technical changes need to be made:

C301.3: *So that I'm clear, you will include these Tables in the published code?*

Correct.

Figure C301.2: *What is this used for? Should this be referenced in C301.3?*

Retain the IECC Figure number of C301.1. The State map is an enlargement of this map.

C303.1.3: *In the Exception, I take it that "Where required" will not be part of the code when published? If so, please remove it.*

Exception: When a garage door is a part of the building thermal envelope, garage door U-factors shall be determined in accordance with either NFRC 100 or ANSI/DASMA 105.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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REQUEST FOR TECHNICAL CHANGE

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RULE CITATION: NC Commercial Energy Conservation Code, Chapter 4

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In reviewing these rules, the staff determined that the following technical changes need to be made:

401.2: What is "COMcheck"?

This is a standard energy compliance software package used by the US DOE.

C403.2.4.2: In Exception 3, shouldn't "Section" be capitalized to be consistent?

Capitalized for consistency.

Also, is this referring to C403.2.2? If not, what code are you referencing?

C403.2.4.2 Off-hour controls.

Each zone shall be provided with thermostatic setback controls that are controlled by either an automatic time clock or programmable control system.

Exceptions:

1. Zones that will be operated continuously.
2. Zones with a full HVAC load demand not exceeding 6,800 Btu/h (2 kW) and having a readily accessible manual shutoff switch.
3. HVAC systems serving hotel/motel guestrooms or other residential units complying with Section C403.2.2 requirements.

C403.2.9.1.1: In Exception 2, please delete the errant bracket at the end of the line.

Errant bracket deleted.

Table C403.2.10: To what part of the table do the Footnotes apply to? All of it? Should that be reflected in the table?

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TABLE C403.2.10
MINIMUM PIPE INSULATION ^{a,b}
(thickness in inches)

C403.2.15: So that I'm clear – are you going to retain the language regarding the preemption in the code? If so, please state "10 CFR 431.306"

C403.2.15 Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers.

Deleted. Preempted by Energy Independence and Security Act 2007, Section 312 and 10 CFR 431.306.

And this applies to C403.2.15 through 17?

Correct, but the first notation covers it without repeating.

C403.4.2.4: Just checking – I thought the code didn't use commas in five digit numbers? Isn't this going to be "(87 930 W)"?

Correct.

C404.3: Is this going to apply to all pipes, or just those larger than one-fourth of an inch, pursuant to G.S. 143-138(b10)(2)?

This Statute only applies to replacement water heaters. This Code only requires insulation for new circulating water piping.

C404.6: I take it "conveniently" is known to your regulated public? And is this convenient to the owner/occupant?

Yes. Convenient to the owner/occupant. It would typically be located in places such as a closet, near the water heater or near the crawlspace entrance.

C404.9: I take it that when you publish, "readily accessible" will be italicized, since it is defined in Chapter 2?

All defined terms will be italicized.

And is the term "constantly burning"?

C404.9.1

Heaters.

All heaters shall be equipped with a **readily accessible** on-off switch that is mounted outside of the heater to allow shutting off the heater without adjusting the thermostat setting. Gas-fired heaters shall not be equipped with **constantly** burning pilot lights.

C405.2.1: Is a "computer server room" the same as the defined term "computer room"? If so, why not use that term?

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A server room is a room used to store, power and operate computer servers and their associated components. A computer room is usually occupied for longer time periods.

Please end all parts of the lists with periods in order to be consistent.

Periods added.

C405.2.5: *Please underline the language on Page 130 of the packet, as this is being added.*

C405.2.5 Exterior lighting controls.

Lighting not designated for dusk-to-dawn operation shall be controlled by either a combination of a photosensor and a time switch, or an astronomical time switch. Lighting designated for dusk-to-dawn operation shall be controlled by an astronomical time switch or photosensor. All time switches shall be capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

C405.4.2.1: *What is a “trade-off among building area types”? Does your regulated public know? I see that the code refers to “trade-offs” but I am not sure what the “among building area types” means.*

It refers to the building area types in the preceding Tables C405.4.2.

Tables C405.5.2: *In the IECC, these tables are listed as “C405.5.1” Is the renumbering here intentional?*

They are listed as Tables C405.5.2(1) and (2) in the IECC.

C405.7: *What is your authority to regulate transformers, given the language of G.S. 143-138(b8)(2)? If you are excluding those transformers owned by public utilities, should this be added to the list of exceptions?*

The electrical transformers covered here are on the load side of the distribution panel. Utility side transformers are exempt by both the Statute and the Electrical Code.

C408.1: *In the Exception, I see that you use the term “licensed design professional” but elsewhere in C408.1, you refer to a “registered design professional” I’d asked in Chapter 2 about changing the term. Do you need in that chapter to instead add a definition of “licensed design professional” rather than replacing “registered design professional”?*

The title “registered design professional” will be used throughout.

C408.2: *Given the deletion, should the “Exceptions” now be “Exception”?*

It will remain plural since the numbering will remain the same for cross-reference.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Commercial Energy Conservation Code, Chapter 5

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In reviewing these rules, the staff determined that the following technical changes need to be made:

C501.1: *I am just checking, but you don't usually add language like this. Do you need it here but not elsewhere in the code?*

Deleted. The statement is not necessary.

C503.1.1: *Why is the table "C-402.4"? You don't use a hyphen elsewhere to refer to other parts of the Commercial Energy Code, including in the Exceptions below.*

Deleted the errant hyphen.

C503.2: *What does this mean? Does your regulated public know?*

This is similar to the USDOJ disproportionality rule (for accessibility upgrades). It allows small projects to proceed without energy compliance upgrades. Projects larger than the \$10000 threshold require progressive energy compliance equal to 10% of the project cost.

C504.2: *What is the purpose of the commentaries here? Are these commentaries contemplated by G.S. 143-138(d)?*

(d) Amendments of the Code. - The Council, through the Department of Insurance, shall publish in the North Carolina Register all appeal decisions made by the Council and all formal opinions at least semiannually. The Council, through the Department of Insurance, shall also publish at least semiannually in the North Carolina Register a statement providing the accurate Web site address and information on how to find additional commentary and interpretation of the Code.

If the purpose is the statute, why is it in this Chapter, rather than on the website?

The commentary is not part of the rule and will not be published in the Code.

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Or is this the “written commentary” contemplated by G.S. 143-138.1(b), and posted on the website and in the Code?

§ 143-138.1. Introduction and instruction of the North Carolina Building Code; posting of written commentaries and interpretations on Department of Insurance Web site.

(a) Prior to the effective date of Code changes pursuant to G.S. 143-138, the State Building Code Council and Department of Insurance shall provide for instructional classes for the various trades affected by the Code. The Department of Insurance shall develop the curriculum for each class but shall consult the affected licensing boards and trade organizations. The curriculum shall include explanations of the rationale and need for each Code amendment or revision. Classes may also be conducted by, on behalf of, or in cooperation with licensing boards, trade associations, and professional societies. The Department of Insurance may charge fees sufficient to recover the costs it incurs under this section. The Council shall ensure that courses are accessible to persons throughout the State.

(b) The Department of Insurance shall post and maintain on its Web site written commentaries and written interpretations made and given by staff to the North Carolina Building Code Council and the Department for each section of the North Carolina Building Code. (1997-26, s. 6; 2013-118, s. 3.5.)

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Commercial Energy Conservation Code, Appendix 1

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In reviewing these rules, the staff determined that the following technical changes need to be made:

This is a North Carolina addition, correct, in that it does not appear in the IECC?

Correct. It is not underlined to make it easier to read.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Chapter 1

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In reviewing these rules, the staff determined that the following technical changes need to be made:

R101.1: Please insert the appropriate dates here.

R101.1 Title.

This code shall be known as the North Carolina Energy Conservation Code as adopted by the North Carolina Building Code Council on June 13, 2017 to be effective January 1, 2019. References to the International Codes shall mean the North Carolina Codes. The NCECC is referred to herein as "this code."

R101.5: So that I'm clear, how will this interact with the exemption for existing buildings in G.S. 143-138(b15)?

This Statute only applies to commercial buildings. This Code section does not affect the Statute.

R102.1, R103.3, R103.3.1, R103.3.2, R103.3.3, R103.4, R103.5, R104, R105, R107, R108, and R109: I take it that when you are referring to the Administrative Code and Policies you are referring to this volume of the NC Building Code?

Correct.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Chapter 2

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

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In reviewing these rules, the staff determined that the following technical changes need to be made:

In "CFM25" you state "Cubic Feet per minute" and in "CFM50" you state "Cubic Feet per Minute" Please be consistent with your capitalization.

Capitalized for consistency.

In "HERS Rater" does your regulated public know how to sign up for and take the training and what a current certification is?

Yes. The Residential Energy Services Network is recognized by the federal government for verification of building energy performance. Training and certification information is available on their website.

Will the term "Licensed Design Professional" be in addition to the use of the term "Registered Design Professional" or is it intended to be a replacement?

No. The appropriate term will be included.

REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed. Design by a Registered Design Professional is not required where exempt under the registration or licensure laws.

Also, please state "his or her"

Gender neutral is covered in C201.2 and R201.2.

In "On-Site Renewable Energy" what is "small hdyro"?

Also, on the second to last line, replace the comma after "production" with a period. And should it be "on-site" (hyphenated) to be consistent with the definition?

Amanda J. Reeder
Commission Counsel

Date submitted to agency: August 22, 2017

ON-SITE RENEWABLE ENERGY. Includes solar photovoltaic; active solar thermal that employs collection panels, heat transfer mechanical components; wind; small hydroelectric; tidal; wave energy; geothermal (core earth); biomass energy systems; landfill gas and bio-fuel based electrical production. On-site energy shall be generated on or adjacent to the project site and shall not be delivered to the project through the utility service.

In "Semi-conditioned space" please replace "and/or" with "or" unless it would contradict other usages in the code.

SEMI-CONDITIONED SPACE. A space within the building thermal envelope that is not directly heated or cooled.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Chapter 3

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In reviewing these rules, the staff determined that the following technical changes need to be made:

R301.3: *So that I'm clear, you will include these Tables in the published code?*

Correct.

Figure R301.2: *What is this used for? Should this be referenced in R301.3?*

Retain the IECC Figure number of C301.1. The State map is an enlargement of this map.

R303.1.3: *In the Exception, I take it that "Where required" will not be part of the code when published? If so, please remove it.*

Correct. Removed from the NC amendment.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

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Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Chapter 4

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

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In reviewing these rules, the staff determined that the following technical changes need to be made:

R401.3: I suggest inserting "and the" before "U-factors"

Added as requested.

R402.1: Given that you are deleting R402.1.1, should it read "Sections R402.1.2"? Or are you renumbering these when publishing?

No. The IECC numbering is retained to reduce cross-reference problems.

Table 402.1.2: In Footnote a, I know this is in the IECC, but consider replacing "which" with "that"

In Footnote d, insert a comma after "below grade" to be consistent with the line below.

In Footnote j, please be sure to insert a space between "U-factor" and "no"

In Footnote m, consider replacing the comma after "roof" with a semicolon.

In Footnote n, consider replacing "is deemed" with "shall be deemed" and "is not deemed" with "shall not be deemed"

Modified Footnotes d, j and m as suggested.

Table R402.1.4: In Footnote d, what is the "REScheck "UA Trade-off"? Does your regulated public know? Is this addressed by R402.1.5?

This is a standard energy compliance software package used by the US DOE. The UA tradeoff is one of the compliance paths, similar to R402.1.5.

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R402.2.5: Consider replacing “immediately following” with “meeting the following:” I suggest putting the new language in a list. If you do not want to do a list, please be consistent and either separate all types of walls by periods or semicolons.

R402.2.5 Mass walls.

Mass walls for the purposes of this chapter shall be considered ~~above-grade~~ walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth) and solid timber/logs, or any other walls meeting the following. ~~having a heat capacity greater than or equal to 6 Btu/ft² *°F (123 kJ/m² * K).~~ Masonry or concrete walls having a mass greater than or equal to 30 pounds per square foot (146 kg/m²). Solid wood walls having a mass greater than 20 pounds per square foot (98 kg/m²). Any walls having a heat capacity greater than or equal to 6 Btu/ft² *°F [266 J/(m²*K)].

R402.2.8: In the Exception, should this read “An enclosed floor cavity... with an enclosed...”?

Exception: An enclosed floor cavity such as garage ceilings, cantilevers or buildings on pilings with an enclosed floor cavity with the insulation fully in contact with the lower air barrier. In this case, the band boards shall be insulated to maintain thermal envelope continuity.

R402.2.11: What is an “energy penalty”? Does your regulated public know?

Yes. There is no penalty in either prescriptive or calculated thermal performance because of the required termite inspection gap.

In 2, what is the “North Carolina-specific version of RESCHECK”? Why is it the term in all caps here?

US DOE produces state-specific versions of the program where the state Code differs from the IECC and still complies with the federal energy mandates.

402.1.14: Consider ending the list in 1-4 with punctuation, such as a period.

Periods added to items 1-4.

R402.3.4: In the Exception, the cross-reference is now R402.1.2, correct?

Correct.

R402.3.5: In Exception 2, please insert a comma after “0.70”

A comma is not needed here.

R402.4.2.2: Insert a semicolon before “or” in 1

Semicolon added as requested.

On Page 233 of the packet, consider stating “A single point depressurization test that is not temperature corrected shall be sufficient...” If that will not convey what you are saying, consider putting “not temperature corrected” in parenthesis.

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Added parentheses as suggested.

What is a “certified BPI Envelope Professional”? Are you relying upon the definition in the NC Residential Code?

It is a certification level offered by the Building Performance Institute. Training and certification information is available at their website.

Table R402.4.2: When you publish, please be sure to insert a period after “finish” and “official” in the Ceiling/attic row. And insert a period after “envelope” in the Ceiling penetrations row.

Periods added as requested.

In “Ceiling/Attic” delete the comma before “(for example,..)”

Comma deleted as requested.

R402.5: In the Exception, what is the penalty? Does your regulated public know?

Yes. There is no penalty in either prescriptive or calculated thermal performance because of the two allowed glazed fenestration products.

R403.1.2: Should this be “Exceptions” plural?

Yes. Plural added.

R403.3.1: Should there be a word after “R-8” and “R-4” like “value” or “insulation value”?

No. This is standard terminology.

R403.3.2: When you publish, please be sure to change it to “Exception:”

Retain the plural along with 2. Deleted.

R403.3.3: The language on Page 238 of the packet will not be added to the code, correct, but instead the language from the rulemaking petition?

Correct. The individual amendment will be correlated with the package.

R403.3.3.1: This sentence appears to be incomplete. Are you missing a verb? I note that R403.3.3.2 is written in an active voice and is clear; perhaps that would be a good model for this rule?

403.3.3.1 Total Duct leakage. Total duct leakage shall be less than or equal to 5 CFM (12 L/min) per 100 ft² (9.29 m²) of conditioned floor area served by that system when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer’s air handler enclosure. During testing:

R403.7: Please replace “and/or” with “or” unless you need to retain this language to be consistent with the rest of the IECC.

R403.7 Equipment sizing and efficiency rating (Mandatory).

Heating and cooling equipment shall be sized in accordance with the North Carolina Mechanical

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Code **or** the North Carolina Residential Code. New heating and cooling systems 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.

R406: So that I'm clear – the intent is to replace R406.2 and R 406.5 that is on Pages 251 and 253 of the packet with the language in the separate rulemaking petition?

Correct. The individual amendment will be correlated with the package.

R406.6: Given the deletion of R406.6.3, shouldn't this be changed to "Sections R406.6.1 and R406.6.2"?

No. The IECC numbering is retained to reduce cross-reference problems.

R406.7: Given the deletions of R406.7.2 and 406.7.3, shouldn't this read "Section R406.7.1."?

No. The IECC numbering is retained to reduce cross-reference problems.

R406.7.1: Is the intent is to not include "and shall include the following capabilities"?

Yes. The committee chose to add this as a separate sentence.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

**Barry Gupton, PE
Chief Code Consultant**

Amanda J. Reeder
Commission Counsel
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RULE CITATION: NC Residential Energy Conservation Code, R403.3.3

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

Please verify that these changes are what is intended for the Code, rather than the version of the rules on Page 238 of the packet.

Correct. The individual amendment will be correlated with the package.

Also, please verify this is a change to the Residential Code.

Correct. Residential Energy.

In the third paragraph, where does the end quotation go after "Total duct leakage test"? You are missing one.

"Total duct leakage"

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

**Barry Gupton, PE
Chief Code Consultant**

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, R406

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

Please verify that these changes are what is intended for the Code, rather than the version of these rules beginning on Page 251 of the packet.

Correct. The individual amendment will be correlated with the package.

When you published the rulemaking petition in the NC Register, you allowed a "RESNET certified home energy rater" to do this, rather than a certified HERS rater. Did you decide after publication to not proceed with that part of the petition? How did you determine to add the HERS rater after publication?

They are the same. It was changed for consistency.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

**Barry Gupton, PE
Chief Code Consultant**

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Chapter 5

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

R501.1: *I am just checking, but you don't usually add language like this. Do you need it here but not elsewhere in the code?*

Deleted. The statement is not necessary.

R503.1.1: *In Exception 7, should the reference to the tables be R402.1.2 and R402.1.4 and sections as R402.2.14 and R402.2.15?*

Correct.

R503.1.1.1: *In the Exception, will "like or better" be known to your regulated public? Will the determination be based upon this code?*

Yes. Based on equivalency.

C503.2: *What does this mean? Does your regulated public know?*

This is similar to the USDOJ disproportionality rule (for accessibility upgrades). It allows small projects to proceed without energy compliance upgrades. Projects larger than the \$10000 threshold require progressive energy compliance equal to 10% of the project cost.

And how does this interact with G.S. 143-138(b5)?

The Statute exclusion applies to single-family residential construction. This Section applies to building code residential.

R504.2: *What is the purpose of the commentaries here? Are these commentaries contemplated by G.S. 143-138(d)? If so, why is it in this Chapter, rather than on the website?*

The commentary is not part of the rule and will not be published in the Code.

Amanda J. Reeder
Commission Counsel

Date submitted to agency: August 22, 2017

Or is this the “written commentary” contemplated by G.S. 143-138.1(b), and posted on the website and in the Code?

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

Barry Gupton, PE
Chief Code Consultant

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Appendix 3A

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

Table R402.4.2: When you publish, please be sure to insert a period after "finish" and "official" in the Ceiling/attic row. And insert a period after "envelope" in the Ceiling penetrations row.

Periods added.

In "Ceiling/Attic" delete the comma before "(for example,...)"

Comma deleted.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

Barry Gupton, PE
Chief Code Consultant

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

REQUEST FOR TECHNICAL CHANGE

AGENCY: NC Building Code Council

RULE CITATION: NC Residential Energy Conservation Code, Appendix 4

DEADLINE FOR RECEIPT: Wednesday, September 6, 2017

The Rules Review Commission staff has completed its review of this rule prior to the Commission's next meeting. The Commission has not yet reviewed this rule and therefore there has not been a determination as to whether the rule will be approved. You may call this office to inquire concerning the staff recommendation.

In reviewing these rules, the staff determined that the following technical changes need to be made:

Table 4A: When you publish, please delete the errant quotation mark at the end of Footnote c.

Quotation deleted.

In Footnote d, second line, please insert a comma before "whichever is less" to be consistent with the language on the third line.

Comma added.

Why are you deleting Footnote e, rather than simply omitting it?

To avoid cross-reference problems.

In c., I recommend inserting a semicolon before "or" in (c)(i).

Semicolon added.

4D.2: Should the R403.3.3 be the same version that was adopted from the petition for rulemaking?

No. These are additional voluntary standards.

R403.3.3.1: This sentence appears to be incomplete. Are you missing a verb? I note that R403.3.3.2 is written in an active voice and is clear; perhaps that would be a good model for this rule?

Added "shall be" to complete the sentence.

Please retype the rule accordingly and resubmit it to our office at 1711 New Hope Church Road, Raleigh, North Carolina

Amanda J. Reeder
Commission Counsel

Date submitted to agency: August 22, 2017

Barry Gupton, PE
Chief Code Consultant

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

From: Reeder, Amanda J
Sent: Wednesday, September 13, 2017 11:34 AM
To: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Cc: Reeder, Amanda J <amanda.reeder@oah.nc.gov>
Subject: RE: Building Code Council Requests for Technical Changes - energy conservation

Barry:

Thank you so much for your assistance! And I especially thank you for clarifying that the 143-138(b18) exclusions are not contradicted by this Code and will be addressed in future rulemaking, which I look forward to seeing next year.

I am going to go ahead and add this email to your reply and send the responses to oah.rules@oah.nc.gov. I will also recommend approval of the Energy Conservation Code at the meeting.

Thank you!

Amanda

*Amanda J. Reeder
Counsel to the Rules Review Commission
NC Office of Administrative Hearings
919/ 431-3079*

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law N.C.G.S. Chapter 132 and may be disclosed to third parties.

From: Gupton, Barry
Sent: Wednesday, September 13, 2017 11:18 AM
To: Reeder, Amanda J <amanda.reeder@oah.nc.gov>
Subject: RE: Building Code Council Requests for Technical Changes - energy conservation

See additional **responses** inserted below. Thanks. Barry.

From: Reeder, Amanda J
Sent: Wednesday, September 06, 2017 3:37 PM
To: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Cc: Reeder, Amanda J <amanda.reeder@oah.nc.gov>
Subject: RE: Building Code Council Requests for Technical Changes - energy conservation

And hello again, Barry!

I reviewed these and again, thank you for your answers to my questions!

A few things:

Commercial Code:

In Chapter 1, C101.5: I'd asked about the interaction with the exemption in G.S. 143-138(b15) and (b18) and I didn't get an answer. I think you overlooked it. Is the idea that the owners of the exempted buildings will in fact know they are exempt?

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

Section b15 is an exclusion for existing buildings prior to 1/1/2012. The owner should know that they are exempt. Section b18 exclusions are being addressed by rules currently in the BCC process. They will likely be adopted in December.

In Chapter 4, C405.7: I'd asked about the authority to regulate transformers and you stated that the code is covering the load side of the distribution panel and not utility transformers? I just wanted to check – I take it this is known by everyone?

Yes. The utility side of the distribution panel is under the Utilities Commission authority.

Residential Code:

Chapter 1, R101.5: I am sorry for my typos that you had to correct. However, I did mean to refer to G.S. 143-138(b18).

Section b18 was part of S131/SL2017-10 that was approved by the Governor on 5/4/2017. The BCC began the rule change to address this on 6/13/2017.

(b18) Exclusion From Energy Efficiency Code Requirements for Certain Use and Occupancy Classifications.--The Council shall provide for an exemption from any requirements in the energy efficiency standards pursuant to Chapter 13 of the 2012 North Carolina Building Code and the 2012 Energy Conservation Code, and any subsequent amendments to the Building Code and Energy Conservation Code, for the following use and occupancy classifications pursuant to Chapter 3 of the 2012 North Carolina Building Code: Section 306, Factory Group F; Section 311, Storage Group S; and Section 312, Utility and Miscellaneous Group U. This exclusion shall apply to the entire floor area of any structure for which the primary use or occupancy is listed herein.

Now, it may well be that your answer is the same and it really only affects commercial buildings, but I did want to check.

Correct. The answer is still the same.

Chapter 4, R402.2.5: I am recommending that you state "meeting the following: Masonry or concrete walls..." So, I recommend inserting a colon after "following" But if you don't want to do that, it's fine.

I prefer to leave the period since it is a complete sentence.

And again, thank you for your patience. I look forward to reviewing the final remaining code, Residential (woo!) once you send it.

Amanda

*Amanda J. Reeder
Counsel to the Rules Review Commission
NC Office of Administrative Hearings
919/431-3079*

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law N.C.G.S. Chapter 132 and may be disclosed to third parties.

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017

From: Gupton, Barry
Sent: Thursday, August 31, 2017 11:26 AM
To: Reeder, Amanda J <amanda.reeder@oah.nc.gov>
Cc: Burgos, Alexander N <alexander.burgos@oah.nc.gov>
Subject: RE: Building Code Council Requests for Technical Changes - energy conservation

See attached 2018 NC Energy Conservation Code response with corrections. Thanks. Barry.

Amanda J. Reeder
Commission Counsel
Date submitted to agency: August 22, 2017