

North Carolina Building Code Council

Staffed by the NC Department of Insurance

Brian Taylor, State Fire Marshal
David Bruce Rittlinger, PE, Secretary

(919) 647-0001
(919) 662-4414 Fax

1202 Mail Service Center
Raleigh, NC 27699-1202

1429 Rock Quarry Road, Suite 105
Raleigh, NC 27610

Building Code Council

Chair:

Bridget Herring - 29
(Public Representative)

Vice Chairman:

Mark Matheny - 27
(Building Inspector)

Members:

Michael Ali, PE - 29
(State Agency)

Robert Axford - 25
(Electrical Contractor)

Chris Berg, PE - 27
(Structural Engineer)

Andrew C. Cole, AIA - 28
(Architect)

Ralph Euchner - 25
(Gas Industry)

David Gieser, RA - 28
(Architect)

Jeff Hilton - 28
(Coastal Contractor)

Robert Howard - 29
(Home Builder)

Taiwo Jaiyeoba - 28
(Municipal Government Rep)

Natalie MacDonald, PE - 27
(Mechanical Engineer)

Gloria Shealey - 27
(General Contractor)

Deborah Shearin - 25
(Plumbing & Heating Contractor)

Jason B. Shepherd - 27
(Fire Services)

Kim Wooten, PE - 25
(Electrical Engineer)

Robert Zapple - 28
(County Gov't Rep)

April 29, 2024

North Carolina Rules Review Commission

Attn: Brian Liebman, Esq.

1711 New Hope Church Road

Raleigh, NC 27609

VIA EMAIL TO BRIAN.LIEBMAN@OAH.NC.ORG

Dear Members of the Rules Review Commission:

Thank you for the invitation to respond and provide comment to the two staff opinions addressing the 2024 North Carolina Energy Conservation Code ("NCECC") (**Agenda Item III.7.**) posted on April 26, 2024. For the reasons set out in more detail below, the Commission should reject staff's recommendations that the Commission object to Section R402 *Building Thermal Envelope* (R402.1-R402.4.6) and Section C101.2 *Scope*.

Instead, the North Carolina Building Code Council ("BCC") respectfully requests that the Commission approve the 2024 NCECC rule as revised in response to Commission staff's April 11, 2024 Request for Changes. In short, the Commission should approve the rule in full because:

- **Staff's contention that the BCC lacks statutory authority to revise Section R402 is mistaken. The BCC has complied with the directive of Section 6 of N.C. Session Law 2023-108 to develop a rule allowing optional use of air-impermeable insulation that will be acted upon at the BCC's next scheduled meeting on June 11, 2024. (See Attachment A).**

- **Staff's contention that the BCC lacks statutory authority to amend Section C101.2 because it does not reference the exception for existing buildings in N.C. Gen. Stat. § 143-138(b15) is incorrect. Section C101.2 states "[t]his code applies to *commercial buildings* ..." a defined term. The C202 definition of "COMMERCIAL**

Mr. Brian Liebman, Esq.

April 29, 2024

Page 2

BUILDING” provides “[f]or this code, all buildings that are not included in the definition of ‘Residential building’ and are not exempted by N.C.G.S. 143-138(b4), (b15), (b18), and (b19).” Because the exception in G.S. § 143-138(b15) is explicitly referenced in the C202 definition of “COMMERCIAL BUILDING,” and the substance of C101.2 turns on that defined term, staff’s contention is mistaken.

Background

Broadly speaking, the NCECC is a technical code regulating minimum energy conservation requirements for new buildings. More explicitly, the NCECC is a design document used on a daily basis by builders, designers, and code enforcement officials across North Carolina to determine whether new buildings meet minimum requirements for exterior envelope insulation, window and door *U*-factors and solar heat gain coefficient ratings, duct insulation, lighting and power efficiency, and water distribution insulation. In N.C. Gen. Stat. § 143-138(b), the General Assembly granted the BCC express authority to promulgate the rules contained in the NCECC.

The NCECC is one of the ten volumes of the State Building Code to be updated effective January 1, 2025, in compliance with the requirements of N.C. Gen. Stat. § 143-138(d). That statute requires that certain code volumes, including the NCECC, be updated by the BCC every six-years, with the next update effective January 1, 2025, and mandates that there be “at least six months between adoption and effective date.”

Since 2021, the BCC, and its *ad hoc* and standing committees, have been laboring to ensure that the adoption of the 2024 NCECC would occur within this narrow statutory window. After the proposed rule was prepared by the BCC’s energy ad hoc committee and approved by the BCC’s energy standing committee, the BCC approved the 2024 NCECC as a proposed rule on December 12, 2022. Following this, a notice of the rule was published in the January 17, 2023 issue of the *North Carolina Register*, a hearing to receive public comment was held on March 14, 2023, a fiscal note was approved for publication by the Office of State Budget and Management (“OSBM”) on August 21, 2023, and a separate cost-benefit analysis required by N.C. Gen. Stat. § 143-138(a1)(2) was published on August 24, 2023. A second notice of public hearing, providing the OSBM-approved fiscal note and cost-benefit analysis, was published in the September 15, 2023 issue of the *North Carolina Register* and a second public hearing on the rule was held on October 17, 2023. On December 12, 2023, the rule was adopted by the BCC, and submitted to the Commission for review on January 11, 2024. On February 28, 2024, the Commission granted Commission staff’s request to extend the period of review additional time to review the rule. Pursuant to 26 N.C. Admin. Code 5.0115, the Commission is required to review the 2024 NCECC at the April 30, 2024 meeting.

Response to RRC Staff Opinion #1

The Staff Opinion is Mistaken Because the BCC Has Complied with the General Assembly's Directives and Section 6(b) of N.C. Sess. L. 2023-108 Did Not Divest the BCC of its Statutory Authority to Adopt Section R402.

The Commission should approve the 2024 NCECC permanent rule, including Section R402 *Building Thermal Envelope* (R402.1-R402.4.6, pp. 227-243). The staff opinion mistakenly fails to consider the plain language of the statutory provision at issue (N.C. Sess. L. 2023-108, Sec. 6(b)), which did not divest the BCC of its authority to adopt the already-noticed 2024 NCECC rule and specifically contemplated that the BCC would “develop” a separate amendment addressing multiple “provisions and tables within Section 402.” Indeed, the BCC has fully complied with the statutory provision at issue by developing a proposed rule in conjunction with the subject matter experts on the BCC’s Energy Standing Committee that will be acted on at the BCC’s next scheduled meeting on June 12, 2024. (See Attachment A). In compliance with the procedural requirements of the APA and the BCC’s Administrative Code and Policies, after approval in June, notice of the rule will subsequently be published in the *North Carolina Register*, a public hearing held on September 11, 2024, with final adoption expected at the BCC’s December 10, 2024 meeting.

The Commission is directed by N.C. Gen. Stat. § 150B-21.9(a) to determine whether the agency has the authority to adopt a given rule. “Express powers delegated by statute and implied powers reasonably necessary for its proper functioning are the only powers which an administrative agency possesses.” *Charlotte Liberty Mut. Ins. Co. v. State*, 16 N.C. App. 381, 384, 192 S.E.2d 57, 58 (1972). In N.C. Gen. Stat. § 143-138(b), the General Assembly granted the BCC express authority to promulgate “rules for the lighting and ventilation of buildings and structures” and “rules governing plumbing, heating, air conditioning for the purpose of comfort cooling by lowering of temperature, and electrical systems.” More generally, N.C. Gen. Stat. § 143-138(b) also vests the BCC with the authority to promulgate “such other reasonable rules pertaining to the construction of buildings and structures and the installation of particular facilities therein as may be found reasonably necessary for the protection of the occupants of the building or structure, its neighbors, and members of the public at large.” Since N.C. Gen. Stat. § 143-138(b) speaks directly to the *rule-making authority* of the BCC in this context, it must be construed as controlling absent “clear legislative intent to the contrary.” *Whittington v. N.C. Dept. of Human Resources*, 100 N.C. App. 603, 614, 398 S.E.2d 40, 47 (1990) (emphasis added).

Mr. Brian Liebman, Esq.

April 29, 2024

Page 4

Here, section 6(b) of N.C. Sess. L. 2023-108 contains no such “clear legislative intent.” Instead, section 6(b) requires that the BCC amend “R402 Rules” – defined as “provisions and tables” in Section R402 – to allow the use of air-impermeable insulation as “an optional alternative” in unvented attic and unvented enclosed rafter assemblies. (See Attachment B). The plain language of Section 6 demonstrates that the General Assembly intended that the BCC would “develop” a rulemaking petition, since implementing this alternative would require changes to multiple provisions and coordination across the 43 sections, subsections, and tables in Section R402.

First, by generally defining “R402 Rules” to mean “provisions and tables within Section 402, Building Thermal Envelope, North Carolina – Residential Provisions, of the North Carolina Energy Conservation Code[,]” rather than specifically identifying the sections, subsections, and tables to be amended, the General Assembly necessarily directed the BCC’s subject matter experts to identify the relevant provisions and coordinate changes to tables and sections in Section R402 to implement the “optional alternative.”

Second, the second sentence of Section 6(b) clearly states that “[i]n ***developing*** this amendment, the Council shall include in that optional alternative...” (emphasis added). By providing explicit instructions regarding *how* the BCC should “develop[] this amendment,” the plain language of Section 6(b) demonstrates the General Assembly’s intent that the BCC develop a new rulemaking petition, not divest the BCC’s authority to also adopt the 2024 NCECC rule.

Third, unlike other sections of N.C. Sess. L. 2023-108, Section 6 became effective when the Session Law became law on August 16, 2023 and did not apply retroactively to nullify the BCC’s December 12, 2022 action approving the 2024 NCECC proposed rule. (See Sections 7(c) and 8(c) of N.C. Sess. L. 2023-108, which provide that sections 7 and 8 apply retroactively to March 1, 2023 to bar prior BCC actions on Parts V, VI and Chapter 11 of the North Carolina Residential Code). Accordingly, had the General Assembly wished to provide “clear legislative intent” in Section 6 of N.C. Sess. L. 2023-108 that it was divesting the BCC of the authority to amend Section R402 in the 2024 NCECC rule, it knew how to do so, but chose not to.

Common sense also supports this plain reading. Significantly, the 2024 NCECC rule had been published to the public in the *North Carolina Register* seven months before Section 6(b) of N.C. Sess. L. 2023-108 even became law. Since it already had been published to the public, amending the 2024 NCECC rule to add the new “optional alternative” would have resulted in a final rule that “substantially differed” from the rule published to the public, potentially requiring republication and additional rulemaking under N.C. Gen. Stat. § 150B-21.2(g).

Requiring additional rulemaking and republication of the 2024 NCECC rule would run counter to the General Assembly’s instruction in Section 1(g) of N.C. Sess. L. 2023-108 that “nothing in this

Mr. Brian Liebman, Esq.
April 29, 2024
Page 5

section shall be construed to affect the timing of, or abrogate the duties of, the Building Code Council in its revision of the North Carolina State Building Code collection ... into the 2024 North Carolina State Building Code collection, to become effective on January 1, 2025, as required by G.S. 143-138(d).”

Accordingly, because the BCC has complied with Section 6(b) of N.C. Sess. L. 2023-108 by developing the mandated rule amendment and will act on the rulemaking petition at its next scheduled meeting – and because Section 6 did not divest the BCC of its rulemaking authority – the Commission should approve the 2024 NCECC rule in full.¹

Response to RRC Staff Opinion #2

The Staff Opinion is Mistaken Because Section C101.2 Hinges on the C202 Defined Term “COMMERCIAL BUILDING” Which Explicitly Provides That All Buildings Subject to the Exemption in N.C. Gen. Stat. § 143-138(b15) Are Not Included and, Thus, Not Subject to the 2024 NCECC.

The Commission should approve the 2024 NCECC permanent rule, including Section C101.2 *Scope* (See Attachment C). The Staff Opinion mistakenly asserts that the BCC acted outside its statutory authority by promulgating C101.2 because the language of the section “appears to extend the reach of the NCECC beyond the scope authorized by the General Assembly.” Specifically, the Staff Opinion incorrectly concludes that Section C101.2 is overbroad because it does not contain a reference to the exemption for certain existing buildings set out in N.C. Gen. Stat. § 143-138(b15). This is incorrect.

In response to RRC staff’s Request for Changes, the BCC revised the Section R202 definition of the defined term “COMMERCIAL BUILDING” (See Attachment D). Pursuant to the revised definition provided to RRC staff, buildings “exempted by N.C.G.S. 143-138(b4), (b15), (b18), and (b19)” do not qualify as a “COMMERCIAL BUILDING.” As shown below, because Section C101.2 turns on the italicized defined term “COMMERCIAL BUILDING,” the change to the R202 definition resolved staff’s concern that buildings exempted by N.C. Gen. Stat. § 143-138(b15) were somehow included within the scope of Section C101.2.

In its entirety, Section C101.2 provides:

¹ In response to RRC staff’s April 26, 2024 inquiry, the BCC’s view is that an objection by the Commission to Section R402 of the 2024 NCECC rule would not create interconnectivity issues that disrupt the functioning of the rule as a whole. Pursuant to the petition for rulemaking developed by the BCC, one section and two tables contained in Section R402 (402.2.2 Ceilings without attic spaces, Table R402.1.2 Insulation and Fenestration Requirements by Component, and Table R402.14 Equivalent U-Factors) will need to be amended to implement the “optional alternative” addressed by Section 6(b) of N.C. Sess. L. 2023-108. (See Attachment A).

C101.2 Scope. This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment.

(Attachment C).

The definition of "COMMERCIAL BUILDING" in Section C202 is:

COMMERCIAL BUILDING. For this code, all buildings that are not included in the definition of "*Residential building*" and are not exempted by N.C.G.S. 143-138(b4), (b15), (b18), and (b19).

(Attachment D).

Accordingly, because those existing buildings exempted from the requirements of the 2024 NCECC rule by N.C. Gen. Stat. § 143-138(b15) are not included in the R202 definition of "COMMERCIAL BUILDING," they also do not fall within the scope set out in Section C101.2.

The Staff Opinion fails to address these changes, instead focusing on the BCC's intention to act on a new petition for rulemaking to add an exception to Section C101.2 setting out the statutory criteria for those existing buildings that qualify for the exemption under N.C. Gen. Stat. § 143-138(b15). (See Attachment E). Such a future amendment would be a beneficial convenience to the users of the code, but would not be necessary to limit the scope of Section C101.2, as those buildings subject to the exemption would already not qualify as "*commercial buildings*."

Accordingly, because the Staff Opinion is based on a misunderstanding of the R202 definition of "COMMERCIAL BUILDING" and Section C101.2 *already* excludes buildings subject to the exemption in N.C. Gen. Stat. § 143-138(b15) from the scope of the Commercial Chapter of the 2024 NCECC rule, the Commission should approve the rule in full.²

For these reasons, the BCC respectfully requests that the Commission reject the recommendations of the two Staff Opinions and approve the 2024 NCECC permanent rule in full.

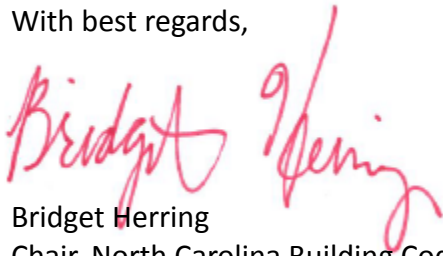
² In response to RRC staff's April 26, 2024 inquiry, the BCC's view is that an objection by the Commission to Section C101.2 of the 2024 NCECC would not create interconnectivity issues that disrupt the functioning of the rule as a whole.

Mr. Brian Liebman, Esq.

April 29, 2024

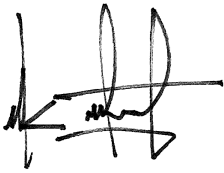
Page 7

With best regards,



Bridget Herring

Chair, North Carolina Building Code Council



Mark Matheny

Vice Chair, North Carolina Building Code Council

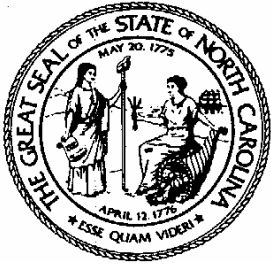
Enclosures

CC: David Rittlinger, Division Chief of Codes and Interpretations, North Carolina Office of State Fire Marshal (*via email*)
Nathan D. Childs, Assistant Attorney General (*via email*)

ATTACHMENT A

BCC Code Change Proposal
Filed to Comply With N.C. Sess. L. 2023-108, § 6

Item B-3 (June 12, 2024)



APPENDIX C CODE CHANGE PROPOSAL NORTH CAROLINA BUILDING CODE COUNCIL

B-3

1429 Rock Quarry Road, Suite 105
Raleigh, North Carolina 27610
(919) 647-0008
david.rittlinger@ncdoi.gov

Petition for Rule Making

Item Number _____

Granted by BCC _____
Denied by BCC _____

Adopted by BCC _____
Disapproved by BCC _____

Approved by RRC _____
Objection by RRC _____

PROPONENT: Dan Dittman _____ PHONE: (919) 647-0012
REPRESENTING: NCOSFM – Building Code Council Staff _____
ADDRESS: 1202 Mail Service Center _____
CITY: Raleigh _____ STATE: NC _____ ZIP: 27699 _____
E-MAIL: dan.dittman@ncdoi.gov _____ FAX: () - _____

North Carolina State Building Code, Volume 2018 Energy Conservation Code – Section R402.2.2.1, R402.2.2.2, Table R402.1.2 and R402.1.4.

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

~~LINE THROUGH MATERIAL TO BE DELETED~~

UNDERLINE MATERIAL TO BE ADDED

Please type. Continue proposal or reason on plain paper attached to this form. See reverse side for instructions.

See attached for code amendment proposal. New underlined code language is shown with an underline and yellow highlighting. Existing underlined code language is shown with underlining only.

Will this proposal change the cost of construction? Decrease [] Increase [] No [X]
Will this proposal increase to the cost of a dwelling by \$80 or more? Yes [] No [X]
Will this proposal affect the Local or State funds? Local [] State [] No [X]
Will this proposal cause a substantial economic impact (≥\$1,000,000)? Yes [] No [X]

- Non-Substantial – Provide an economic analysis including benefit/cost estimates.
- Substantial – The economic analysis must also include 2-alternatives, time value of money and risk analysis.
- Pursuant to §143-138(a1)(2) a cost-benefit analysis is required for all proposed amendments to the NC Energy Conservation Code. The Building Code Council shall also require same for the NC Residential Code, Chapter 11.

REASON: This amendment is being filed to comply with the requirements of N.C. Sess. L. 2023-108, § 6 (eff. Aug. 16, 2023). As such, the proposal was not vetted for cost of construction, increasing the cost of a dwelling by \$80 or more, affecting Local or State funds, or if it will cause a substantial impact. Likewise, a cost-benefit analysis was not performed because the code change was a directive by the North Carolina General Assembly to codify the language in the aforementioned N.C. Sess. L. 2023-108.

R402.2.2 Ceilings without attic spaces.

R402.2.2.1 Roof Ceiling Assemblies. Where Section R402.1.2 would require R-38 insulation and the design of the roof/ceiling assembly, including cathedral ceilings, bay windows and other similar areas, does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet (46 m²) of the total insulated ceiling area. This reduction shall not apply to the U-factor alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5.

R402.2.2.2 Unvented attic and unvented enclosed rafter assembly alternate.

Where Table R402.1.2 requires R-38 insulation in the ceiling, or Table R402.1.4 requires a ceiling U-factor of 0.030, installing air-impermeable insulation, as follows, to the underside or directly above the roof deck shall be deemed to satisfy the R-38 requirements: (i) R-20 (equivalent U-factor 0.05) for climate zone 3; (ii) R-25 (equivalent U-factor 0.037) for climate zone 4; and (iii) R-25 (equivalent U-factor 0.037) for climate zone 5. These air-impermeable insulation alternative R-value minimums apply in residences meeting the following criteria:

- (1) The unvented attic or unvented enclosed rafter assemblies are constructed under Section R806.5 of the North Carolina Residential Code.
- (2) The residence contains a mechanical ventilation system that operates on a positive, balanced, or hybrid pressure strategy in accordance with North Carolina Mechanical Code Section 403.3.
- (3) For residences with air-impermeable insulation installed below the roof deck, exposed portions of the roof rafters are wrapped by a minimum of R-3 insulation unless directly covered by drywall or finished ceiling material. For residences with air-impermeable insulation installed above the roof deck, roof rafters do not require insulation wrapping if air-impermeable insulation installed above the roof deck is continuous.
- (4) The residence obtains an ACH50 blower door test result of less than 3.0.
- (5) The residence contains heating, cooling, and ventilation equipment and ductwork within thermal envelope.

**TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a**

CLIMATE ZONE	FENESTRATION U-FACTOR ^{b,l}	SKYLIGHT ^p U-FACTOR	GLAZED FENESTRATION SHGC ^{b,k}	CEILING R-VALUE ^{m,p}	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT ^{c,q} WALL R-VALUE	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE
3	0.35	0.55	<u>0.30</u>	<u>38 or 30ci^l</u>	<u>15 or 13+2.5^h</u>	<u>5/13 or 5/10ci</u>	19	<u>5/13^f</u>	0	<u>5/13</u>
4	0.35	0.55	<u>0.30</u>	<u>38 or 30ci^l</u>	<u>15 or 13+2.5^h</u>	<u>5/13 or 5/10ci</u>	19	<u>10/15</u>	10	<u>10/15</u>
5	<u>0.35</u>	0.55	NR	<u>38 or 30ci^l</u>	<u>19ⁿ or 13+5^h or 15+3^h</u>	<u>13/17 or 13/12.5ci</u>	30 ^g	<u>10/15</u>	10	<u>10/19</u>

p. Alternately, per N.C. Sess. L. 2023-108, § 6 (eff. Aug. 16, 2023), unvented attic and unvented enclosed rafter assemblies can utilize R402.2.2.2 where the assembly can comply with the criteria listed under R402.2.2.2.

**TABLE R402.1.4
EQUIVALENT U-FACTORS^a**

CLIMATE ZONE	FENESTRATION U-FACTOR ^d	SKYLIGHT U-FACTOR	CEILING U-FACTOR ^e	FRAME WALL U-FACTOR	MASS WALL U-FACTOR ^b	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.35	0.55	0.030	<u>0.077</u>	<u>0.141</u>	0.047	0.091 ^c	0.136
4	0.35	0.55	<u>0.030</u>	<u>0.077</u>	<u>0.141</u>	0.047	0.059	0.065
5	<u>0.35</u>	0.55	<u>0.030</u>	<u>0.061</u>	0.082	0.033	<u>0.059</u>	<u>0.065</u>

e. Alternately, per N.C. Sess. L. 2023-108, § 6 (eff. Aug. 16, 2023), unvented attic and unvented enclosed rafter assemblies can utilize R402.2.2.2 where the assembly can comply with the criteria listed under R402.2.2.2.

ATTACHMENT B

Excerpt from N.C. Sess. L. 2023-108

Sections 5(d) - 10

Effective August 16, 2023

SECTION 5.(d) Additional Rulemaking Authority. – The Council shall adopt rules to amend the Appendix B Rules and Appendix B to be consistent with subsection (c) of this section. Notwithstanding G.S. 150B-19(4), the rules adopted by the Council pursuant to this section shall be substantively identical to the provisions of subsection (c) of this section. Rules adopted pursuant to this section are not subject to Part 3 of Article 2A of Chapter 150B of the General Statutes. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1), as though 10 or more written objections had been received as provided in G.S. 150B-21.3(b2).

SECTION 5.(e) Sunset. – This section expires when permanent rules adopted as required by subsection (d) of this section become effective.

AMEND INSULATION REQUIREMENTS FOR UNVENTED ATTIC AND ENCLOSED RAFTER ASSEMBLIES

SECTION 6.(a) Definitions. – As used in this section, "Code" means the current North Carolina State Building Code collection, and amendments to the Code, as adopted by the Council. For purposes of this section and its implementation, "R402 Rules" means provisions and tables within Section 402, Building Thermal Envelope, North Carolina – Residential Provisions, of the North Carolina Energy Conversation Code. As used in this section, "Council" means the Building Code Council. On or after January 1, 2025, "Council" means the Residential Code Council as created in Section 1 of this act.

SECTION 6.(b) R402 Rules Amendment. – The Council shall amend R402 Rules to include, as an optional alternative to residential ceiling insulation minimums, minimum insulation requirements for the use of air-impermeable insulation in unvented attic and unvented enclosed rafter assemblies. In developing this amendment, the Council shall include in that optional alternative that where R402 Rules require R-38 insulation in the ceiling, installing air-impermeable insulation, as follows, to the underside or directly above the roof deck shall be deemed to satisfy the R-38 requirements: (i) R-20 (equivalent U-factor 0.05) for climate zone 3; (ii) R-25 (equivalent U-factor 0.037) for climate zone 4; and (iii) R-25 (equivalent U-factor 0.037) for climate zone 5. These air-impermeable insulation alternative R-value minimums apply in residences meeting the following criteria:

- (1) The unvented attic or unvented enclosed rafter assemblies are constructed under Section R806.5 of the North Carolina Residential Code.
- (2) The residence contains a mechanical ventilation system that operates on a positive, balanced, or hybrid pressure strategy.
- (3) For residences with air-impermeable insulation installed below the roof deck, exposed portions of the roof rafters are wrapped by a minimum of R-3 insulation unless directly covered by drywall or finished ceiling material. For residences with air-impermeable insulation installed above the roof deck, roof rafters do not require insulation wrapping if air-impermeable insulation installed above the roof deck is continuous.
- (4) The residence obtains an ACH50 blower door test result of less than 3.0.
- (5) The residence contains heating, cooling, and ventilation equipment and ductwork within thermal envelope.

SECTION 6.(c) Sunset. – This section expires when permanent rules adopted as required by subsection (b) of this section become effective.

PROHIBIT FURTHER AMENDMENTS TO VARIOUS CHAPTERS WITHIN THE NORTH CAROLINA RESIDENTIAL CODE

SECTION 7.(a) Definitions. – As used in this section, "Council" means the Building Code Council.

SECTION 7.(b) The Council shall not adopt rules to amend the following Parts within the North Carolina State Building Code: Residential Code for One- and Two-Family Dwellings:

- (1) Part V – Mechanical (Chapters 12 through 23).
- (2) Part VI – Fuel Gas (Chapter 24).

SECTION 7.(c) This section is effective when it becomes law and applies retroactively to March 1, 2023.

SECTION 7.(d) Sunset. – This section expires January 1, 2026.

PROHIBIT FURTHER ENERGY CONSERVATION AND EFFICIENCY AMENDMENTS TO THE NORTH CAROLINA STATE BUILDING CODE UNTIL 2026

SECTION 8.(a) Definitions. – As used in this section, "Code" means the current North Carolina State Building Code collection and amendments to the Code, as adopted by the Council. As used in this section, "Council" means the Building Code Council. On or after January 1, 2025, "Council" means the Residential Code Council as created in Section 1 of this act.

SECTION 8.(b) Notwithstanding G.S. 143-138, the Council shall not: (i) adopt rules to amend Part IV – Energy Conservation (Chapter 11) within the North Carolina State Building Code: Residential Code for One- and Two-Family Dwellings; or (ii) prepare and adopt a new code provision, or any part of the Code, that relates to energy conservation or efficiency of buildings, dwellings, and structures to which the North Carolina State Residential Code applies.

SECTION 8.(c) This section is effective when it becomes law and applies retroactively to March 1, 2023.

SECTION 8.(d) Sunset. – This section expires January 1, 2026.

AMEND THE RESIDENTIAL CODE TO INCLUDE THREE-AND FOUR-FAMILY DWELLINGS

SECTION 9.(a) Definitions. – As used in this section, "Code" means the current North Carolina State Building Code collection and amendments to the Code, as adopted by the Council. As used in this section, "Council" means the Building Code Council. On or after January 1, 2025, "Council" means the Residential Code Council as created in Section 1 of this act.

SECTION 9.(b) The Council shall adopt rules to amend the North Carolina Residential Code to include three-family (triplex) and four-family (quadplex) dwellings within its scope by modifying, transitioning, and establishing minimum prescriptive requirements to address the design and construction of those dwellings and make conforming changes to the Code in accordance with this section. In amending rules pursuant to this subsection, the Council shall not require greater than a 2-hour fire resistance rating for triplex and quadplex wall, floor, and ceiling separation assemblies or require automatic fire sprinkler systems within the North Carolina Residential Code.

SECTION 9.(c) Sunset. – This section expires when the permanent rules adopted as required by subsection (b) of this section become effective.

SECTION 9.(d) This section is effective when it becomes law.

CLARIFY FEE CALCULATION FOR EROSION AND SEDIMENTATION CONTROL PLAN REVIEW

SECTION 10. G.S. 113A-60(a) reads as rewritten:

"§ 113A-60. Local erosion and sedimentation control programs.

(a) A local government may submit to the Commission for its approval an erosion and sedimentation control program for its jurisdiction and may adopt ordinances and regulations necessary to establish and enforce erosion and sedimentation control programs. An ordinance adopted by a local government may establish a fee for the review of an erosion and sedimentation control plan and related activities. The fee shall ~~be calculated on the basis of either~~ be, on the

ATTACHMENT C

Excerpt of 2024 NCECC Rule (Rev. 4-25-24)

Section C101.2 Scope.

CHAPTER 1 [CE] SCOPE AND ADMINISTRATION

PART 1—SCOPE AND APPLICATION

SECTION C101 SCOPE AND GENERAL REQUIREMENTS

C101.1 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 *North Carolina Energy Conservation Code* is referred to herein as “this code.” The North Carolina amendments to the *International Codes* are underlined. This code shall be known as the *Energy Conservation Code* of [NORTH CAROLINA], and shall be cited as such. It is referred to herein as “this code.”~~

C101.2 Scope. This code applies to *commercial buildings* and the buildings’ sites and associated systems and equipment.

Exceptions:

~~1. Energy expended in support of *process energy* applications does not invoke energy conservation code requirements or building thermal envelope requirements unless otherwise required in specific sections of this code.~~

~~2. Per G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2018 *North Carolina Building Code*. This exclusion shall apply to the entire building area.~~

C101.3 Intent. This code shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

C101.4 Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

~~**C101.4.1 Mixed occupancy.** Where a building includes both residential and *commercial* occupancies, each occupancy shall be separately considered and meet the applicable provisions of IECC—Commercial Provisions or IECC—Residential Provisions. **Mixed residential and commercial buildings.** Where a building includes both *residential building* and *commercial building* portions, each portion shall be separately considered and meet the applicable provisions of IECC (**International Energy Conservation Code**)—Commercial Provisions or IECC—Residential Provisions.~~

C101.5 Compliance. *Residential buildings* shall meet the provisions of IECC—Residential Provisions. *Commercial buildings* shall meet the provisions of IECC—Commercial Provisions.

C101.5.1 Compliance materials. The *code official* shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code.

~~**C101.5.2 Requirements of other State Agencies, occupational licensing boards, or commissions.** The North Carolina State Building Codes do not include all additional requirements for buildings and structures that may be imposed by other State agencies, occupational licensing boards, and commissions. It shall be the responsibility of a permit holder, design professional, contractor, or occupational license holder to determine whether any additional requirements exist.~~

C101.6 Requirements of other State agencies, occupational licensing board or commissions. -see the NC Administrative Code and Policies

SECTION C102 ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

ATTACHMENT D

Excerpt of 2024 NCECC Rule (Rev. 4-25-24)

Section C202 “COMMERCIAL BUILDING”

COEFFICIENT OF PERFORMANCE (COP) – HEATING. The ratio of the rate of heat delivered to the rate of energy input, in consistent units, for a complete heat pump system, including the compressor and, if applicable, auxiliary heat, under designated operating conditions.

COMMERCIAL BUILDING. For this code, all buildings that are not included in the definition of “Residential building.” “Residential building” and are not exempted by N.C.G.S. 143-138(b4), (b15), (b18) and (b19).

COMPUTER ROOM. ~~A room whose primary function is to house equipment for the processing and storage of electronic data and that has a design electronic data equipment power density exceeding 20 watts per square foot of conditioned floor area.~~ A room whose primary function is to house equipment for the processing and storage of electronic data which has a design total information technology equipment (ITE) equipment power density less than or equal to 20 watts per square foot (20 watts per 0.092 m²) of conditioned area or a design total ITE equipment load less than or equal to 10 kW.

CONDENSING UNIT. A factory-made assembly of refrigeration components designed to compress and liquefy a specific refrigerant. The unit consists of one or more refrigerant compressors, refrigerant condensers (air-cooled, evaporatively cooled or water-cooled), condenser fans and motors (where used) and factory-supplied accessories.

CONDITIONED FLOOR AREA. The horizontal projection of the floors associated with the *conditioned space*.

CONDITIONED SPACE. ~~A space within a building that is provided with heating or cooling equipment or systems capable of maintaining, through design or heat loss/gain, 50°F (10°C) during the heating season or 85°F (29°C) during the cooling season, or communicates directly with a conditioned space. Spaces within the building thermal envelope are considered conditioned space.~~ An area, room or space that is enclosed within the *building thermal envelope* and is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling.

CONTINUOUS AIR BARRIER. ~~A combination of materials and assemblies that restrict or prevent the passage of air through the building thermal envelope.~~

CONTINUOUS INSULATION (ci). Insulating material that is continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior or is integral to any opaque surface of the building envelope.

CRAWL SPACE WALL. The opaque portion of a wall that encloses a crawl space and is partially or totally below grade.

CURTAIN WALL. Fenestration products used to create an external nonload-bearing wall that is designed to separate the exterior and interior environments.

DATA CENTER. A room or series of rooms that share data center systems, whose primary function is to house equipment for the processing and storage of electronic data and that has a design total ITE equipment power density exceeding 20 watts per square foot (20 watts per 0.092 m²) of conditioned area and a total design ITE equipment load greater than 10 kW.

DATA CENTER SYSTEMS. HVAC systems and equipment, or portions thereof, used to provide cooling or ventilation in a data center.

DAYLIGHT RESPONSIVE CONTROL. A device or system that provides automatic control of electric light levels based on the amount of daylight in a space.

DAYLIGHT ZONE. That portion of a building’s interior floor area that is illuminated by natural light.

DEMAND CONTROL VENTILATION (DCV). A ventilation system capability that provides for the automatic reduction of outdoor air intake below design rates when the actual occupancy of spaces served by the system is less than design occupancy.

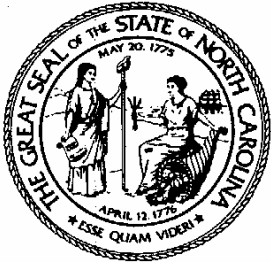
DEMAND RECIRCULATION WATER SYSTEM. A water distribution system where one or more pumps prime the service hot water piping with heated water upon a demand for hot water.

DIRECT DIGITAL CONTROL (DDC). A type of control where controlled and monitored analog or binary data, such as temperature and contact closures, are converted to digital format for manipulation and calculations by a digital computer or microprocessor, then converted back to analog or binary form to control physical devices.

DUCT. A tube or conduit utilized for conveying air. The air passages of self-contained systems are not to be construed as air ducts.

ATTACHMENT E

BCC Code Change Proposal
Filed to Provide Convenience to Code Users
Item B-2 (June 12, 2024)



APPENDIX C
CODE CHANGE PROPOSAL
NORTH CAROLINA
BUILDING CODE COUNCIL

B-2

1429 Rock Quarry Road, Suite 105
Raleigh, North Carolina 27610
(919) 647-0008
david.rittlinger@ncdoi.gov

Petition for Rule Making

Item Number _____

Granted by BCC _____
Denied by BCC _____

Adopted by BCC _____
Disapproved by BCC _____

Approved by RRC _____
Objection by RRC _____

PROPONENT: David Rittlinger PHONE: (919) 647-0008
REPRESENTING: NC-Office of State Fire Marshal-Engineering and Codes Division
ADDRESS: 1429 Rock Quarry Road, Suite 105
CITY: Raleigh STATE: NC ZIP: 27610
E-MAIL: david.rittlinger@ncdoi.gov FAX: () -

North Carolina State Building Code, Volume: 2024 NC Energy Conservation Code, Sections C101.2
Scope, Exception 3

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

LINE THROUGH MATERIAL TO BE DELETED UNDERLINE MATERIAL TO BE ADDED

Please type. Continue proposal or reason on plain paper attached to this form. See reverse side for instructions.

C101.2 Scope. This code applies to commercial buildings and the buildings' sites and associated systems and equipment.

Exceptions:

....

- 3. N.C.G.S. 143-138(b15): Exclusion from Energy Code Requirements for Existing Commercial Buildings. - The alteration of commercial buildings and structures that received a certificate of occupancy prior to January 1, 2012, may be subject to the rules pertaining to energy efficiency and energy conservation that were in effect on December 31, 2011. The addition to commercial buildings and structures that received a certificate of occupancy prior to January 1, 2012, may be subject to the rules pertaining to energy efficiency and energy conservation that were in effect on December 31, 2011, so long as the addition does not increase the building area of the existing commercial building or structure to more than one hundred fifty percent (150%) of the building area of the commercial building or structure as it was in existence on December 31, 2011. For the purpose of this subsection, the term "commercial buildings and structures" shall include all structures and buildings that are not classified as a Group R occupancy by the Building Code Council.

Will this proposal change the cost of construction? Decrease [] Increase [] No []
Will this proposal increase to the cost of a dwelling by \$80 or more? Yes [] No []
Will this proposal affect the Local or State funds? Local [] State [] No []
Will this proposal cause a substantial economic impact (\geq \$1,000,000)? Yes [] No []

- Non-Substantial – Provide an economic analysis including benefit/cost estimates.
- Substantial – The economic analysis must also include 2-alternatives, time value of money and risk analysis.
- Pursuant to §143-138(a1)(2) a cost-benefit analysis is required for all proposed amendments to the NC Energy Conservation Code. The Building Code Council shall also require same for the NC Residential Code, Chapter 11.

REASON: Includes a reference to a commercial building exemption per N.C.G.S. 143-138(b15), which became law on 7/30/14 in Session Law 2014-90. Including this reference is beneficial convenience to the users of the code.

BCC CODE CHANGES

Signature: David Rittlinger Date: 4/22/24 FORM 11/26/19

INSTRUCTIONS

Each proposed Code change request shall comply with the following policies:

Rule 1: The Original and twenty-two (22) copies of the proposed Petition for Rule-Making along with supporting documentation shall be filed with the Building Code Council Secretary. Submit one (1) electronic copy via email.

Rule 2: The filing shall be received by the first day of the month prior to the quarterly scheduled meeting date. Example: A December meeting date will require filing by November 1 prior to the meeting.

Rule 3: Each request shall be typewritten on this form and shall contain the following:

- (1) The proposed rule change must be set forth in full and contain explicit reference to the affected section or sections of the Code.
- (2) The request shall state the reasons for the proposed rule change with supporting documentation.
- (3) The proposed rule change shall comply with the standards set forth in GS 143-138(c) and reference to the particular standards shall be set forth in the request for the amendment.
- (4) The proposed rule change shall contain an economic impact analysis as required by GS 143-138(a).
- (5) A proposed rule change to the NC Energy Conservation Code shall have an accompanying cost-benefit analysis as required by GS 143-138(a1)(2).

Rule 4: When a request is improperly filed or not in accordance with all the rules listed above, the BCC Secretary shall reject the submittal and notify the applicant of the proper procedure to follow.

Rule 5: Upon the proper filing of a request, the BCC Secretary shall forward one copy of said request to each council member prior to the scheduled meeting date. Persons filing proposed petitions are hereby notified of the place and time of the scheduled hearings. The BCC Secretary shall cause to be published the notice of public hearing as specified in GS 143-138(a).

Rule 6: The Council shall either Grant or Deny the proposed Petition for Rulemaking at the meeting following receipt of the proposed rule change. The Council will take no further action on items that are Denied. Granted items may be referred to Committee for review.

Rule 7: The Council will hold a public hearing on Granted items at the next quarterly scheduled meeting. The Council will take final action on Granted items at the next quarterly scheduled meeting after the public hearing.

Timeline Example

Petition received:	February 1
Petition Granted:	March BCC meeting
Notice of Hearing published:	April NC Register
Committee review:	May - June
Hearing held:	June BCC meeting
Final Adoption:	September BCC meeting
Rules Review Meeting:	November RRC meeting
Approved:	December 1