



**APPENDIX C
CODE CHANGE PROPOSAL
NORTH CAROLINA
BUILDING CODE COUNCIL**

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Petition for Rule Making

Item Number _____

Granted by BCC _____

Adopted by BCC _____

Approved by RRC _____

Denied by BCC _____

Disapproved by BCC _____

Objection by RRC _____

PROPONENT Leon Meyers PHONE (919) 422- 5773 .

REPRESENTING BuildSense

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North Carolina State Building Code, Volume 2018 Energy Code Section C401.2 and R401.2

CHECK ONE: 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 proposal and reason statement.

Will this proposal change the cost of construction? Decrease [] Increase [] No [x]
Will this proposal increase the cost of a dwelling by \$80 or more? Yes [] No [x]
Will this proposal affect 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. N/A
Substantial - The economic analysis must also include 2-alternatives, time value of money and risk analysis. N/A

REASON:

See attached proposal and reason statement.

Signature *Leon Meyers*
BuildSense Inc.

DATE: 1 Nov 2019

BCC CODE CHANGES
FORM 3/14/17

Code Change Proposal for 2018 NC State Building Code: Energy Conservation Code

Revise section C401.2 and R401.2 as follows:

C401.2 Application

Commercial buildings shall comply with one of the following:

1. The requirements of ANSI/ASHRAE/IESNA 90.1.
2. The requirements of Sections C402 through C405. In addition, commercial buildings shall comply with Section C406 and tenant spaces shall comply with Section C406.1.1.
3. The requirements of Sections C402.5, C403.2, C404, C405.2, C405.3, C405.5, C405.6 and C407. The building energy cost shall be equal to or less than 85 percent of the standard reference design building.
4. ~~North Carolina-specific COMcheck~~ keyed to the 2018 IECC or ASHRAE 90.1—~~2013 2016 COMcheck~~ shall be permitted to demonstrate compliance with this code.

R401.2 Compliance.

Projects shall comply with one of the following:

1. Sections R401 through R404.
2. Section R405 and the provisions of Sections R401 through R404 labeled “Mandatory.”
3. An energy rating index (ERI) approach in Section R406.
4. ~~North Carolina-specific REScheck~~ keyed to the 2018 IECC shall be permitted to demonstrate compliance with this code. Envelope requirements may not be traded off against the use of high efficiency heating or cooling equipment. No tradeoff calculations are needed for required termite inspection and treatment gaps.

Reason Statement

This proposal will eliminate outdated references to REScheck and COMcheck, and eliminate a potential loophole that is inconsistent with the 2018 NC Energy Conservation Code. The 2012 version of the NC Energy Conservation Code permitted compliance via a state-specific REScheck or COMcheck that was based on the 2012 NC Energy Conservation Code. Even though the Building Code Council updated the NC Energy Conservation Code last year, this outdated reference to the old software remained in the new code. This creates several problems:

- The baseline for calculating compliance with the code is different in the 2012 and 2018 versions of the NC Energy Conservation Code, so builders using the old software could be designing to below-code efficiency levels, in contradiction to the current building code requirements.
- U.S. DOE no longer supports the old NC-specific (2012) software, and this software is likely to be phased out soon. DOE no longer creates state-specific versions of the software for states that adopt codes that are less stringent than the model energy codes. *See Guidance Surrounding Department of Energy Support of Building Energy Code Compliance Software*, 52 Fed. Reg. 15112

(Mar. 18, 2014). Thus, there will be no “updated” version of the NC-specific REScheck or COMcheck.

- It may be difficult for building code officials to tell whether builders are using the correct version of REScheck or COMcheck, and the NC Energy Conservation Code should be more specific as to which version of the program complies with the code.

The easiest solution, and the one most consistent with the intent of the Council’s adoption of the 2018 NC Energy Conservation Code, would be to reference the most recent version of REScheck, keyed to the 2015 or 2018 IECC. The program allows users to select from a number of different codes, but the code currently supported and maintained by U.S. DOE is the 2018 IECC.

We note that the NC Department of Insurance issued a clarification in its February 2019 *Engineering Newsletter*, that recommended a similar outcome:

Clarification for Item #4. As many have heard, there will not be a NC-Specific ResCheck for the 2018 NC energy code. Please refer to footnote and its associated link for further information on the topic.

Since there will not be a NC-specific ResCheck, many designers have asked if it is acceptable to use the IECC 2015 Residential tab for demonstrating compliance. As an alternate method, the answer is “yes”, they can use the 2015 IECC (Residential) ResCheck for the building envelope values, and then follow the installation standards in the 2018 NC Energy code, such as the required air sealing and duct performance measures.

Please note there are some elements of the 2015 IECC that are more stringent than the 2018 NC Energy Code, so the user should familiarize themselves with the requirements before committing to it. The code official would still be looking for the envelope to “pass” under the 2015 IECC guidelines, and there is not a way to provide a work around for something other than a “pass” at this time.

See NC Department of Insurance, Office of State Fire Marshal, Engineering Newsletter at 7-8 (February 2019). Although the newsletter suggested that the 2015 IECC would be an acceptable alternative, we believe either the 2015 or 2018 IECC would produce a similar result.

What is missing from this guidance, however, is clarification that the outdated version of REScheck based on the 2012 NC Energy Conservation Code is no longer acceptable for compliance. This is an important clarification that should be made with the code change above and additional trainings and/or NC DOI publications. This code change will improve the consistency of code compliance across the state and will help ensure a level playing field for all builders and design professionals.

Fiscal Impact

There is no fiscal impact associated with this proposal. Because this proposal is eliminating a potential loophole that conflicts with the code adopted by the NC Building Code Council, there is no additional “cost” to consider.