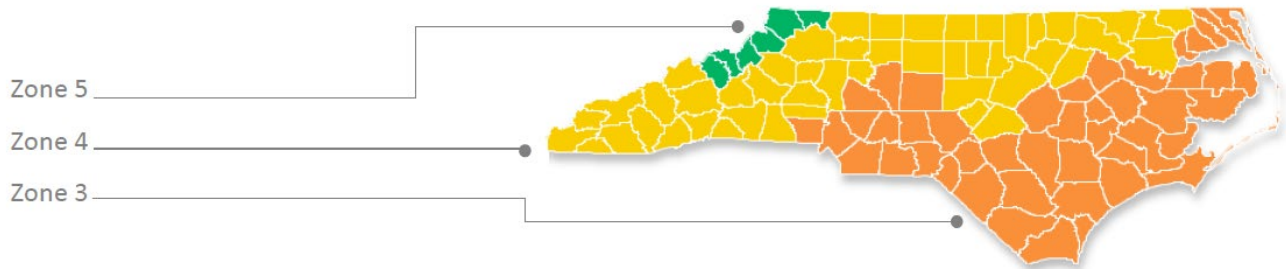


NC Energy Code Compliance Pathways

The [2018 North Carolina Energy Conservation Code \(NCECC\)](#) was adopted on January 1st, 2019 and is currently in effect.

The good news is, by partnering with a [certified HERS Rater](#), you can demonstrate code compliance anytime you're not meeting code prescriptively. For example, if you don't have slab insulation in Climate Zone 4 or if you utilize R13 wall insulation in Climate Zone 3, or even if your spray foam insulation doesn't meet the R-Values specific to each zone, this collaboration allows you to ensure code compliance without causing several interruptions to your project.

North Carolina County Climate Zone Map



Compliance Pathways

The 2018 NC Residential Code allows three alternative pathways to compliance when prescriptive code requirements aren't met. All three options require energy modeling to be completed by a HERS Rater or Registered Design Professional.

1. **R402.1.5 Total UA Alternative**
2. **R405 Simulated Performance Alternative**
3. **R406 Energy Rating Index (ERI)**

1. R402.1.5 Total UA Alternative

This is the **only prescriptive pathway** of the three options, and is based on the same methodology as the REScheck. It only allows trade-offs to the building envelope, including: R-Values, framing factors, and window values (U-Factor & SHGC).

Being a prescriptive pathway, some code departments will allow you to submit reports per master set of plans vs. lot specific. Check with your local code official.

2. R405 Simulated Performance Alternative

This is a **performance pathway**. This option works by comparing the simulated energy cost of a code-built home to the simulated energy cost of the as-built home. If the simulation shows the as-built home will use the same or less energy as the code-built home, it passes.

This option is more flexible than the Total UA by considering all specifications that contribute to the energy cost. This report must be lot specific and signed off by a Registered Design Professional.

3. R406 Energy Rating Index (ERI)

This allows builders to use a [HERS Index Score](#) to demonstrate a home's compliance with the residential building code. Outlined in the 2018 code are climate zone specific HERS benchmarks.

So long as you meet or exceed these benchmark scores, you'll be allowed to use trade-offs from prescriptive code.

Table R406.4.1 Maximum ERI without calculation of on-site renewable energy

Climate Zone	1/1/2019 to 12/31/2022	1/23/2023 and Forward
3	65	61
4	67	63
5	67	63

Table R406.4.2 Maximum ERI including calculation of on-site renewable energy

Climate Zone	1/1/2019 to 12/31/2022	1/23/2023 and Forward
3	51	47
4	54	50
5	55	51

Reach out to your local HERS Raters for support, and check with your local code officials on any pertinent details. Each of these three options require various documentation to be completed by a HERS Rater and/or Registered Design Professional.




Check out these resources to learn more!


- [2018 North Carolina State Building Code: Energy Conservation Code](#)
- [Here's the Scoop on the 2018 North Carolina Energy Conservation Code](#)
- [ERI – The New REScheck?](#)


This guide is provided by **Southern Energy Management, a certified HERS Rater**



Southern Energy Management, headquartered in Raleigh, NC, is a team of building scientists, solar designers and installers, and entrepreneurs dedicated to improving the way the world makes and uses energy. Founded in 2001, we have specialized in green building consulting and verification, and solar energy design and construction for nearly two decades. We are passionate about helping builders and developers create, market, and sell high-quality, sustainable communities and buildings.

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