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Residential Energy Code Compliance Paths

Non Stretch Code Communities



2015 IRC Chapter 11 as amended by 780 CMR Chapter 11¹

Is your building type listed below?

- One- and two-family dwellings and townhouses
- Groups R-2, R-3, and R-4 three stories or less

Yes

No

See 2015 IECC [CE]

Is it new construction?

Yes

No

See IRC N1107
Existing Buildings

Mandatory requirements:

- Certificate (N1101.14)
- Air leakage (N1102.4)
- Controls (N1103.1)
- Duct sealing (N1103.3.2)
- Duct testing (N1103.3.3)
- Building cavities (N1103.3.5)
- Mechanical system pipe insulation (N1103.4)
- Heated water circulation and temperature maintenance systems (N1103.5.1)
- Mechanical ventilation (N1103.6)
- Equipment sizing and efficiency rating (N1103.7)
- Systems serving multiple dwelling units (N1103.8)
- Snow melt and ice system controls (N1103.9)
- Pools and permanent spas (N1103.10)
- Portable spas (N1103.11)
- Lighting equipment (N1104.1)



- One option to the right

Prescriptive

- Building Thermal Envelope (N1102)
- Systems (N1103)
- Electric Power & Lighting (N1104)

Prescriptive with Envelope Tradeoffs

- Same as above + Envelope tradeoffs in **REScheck**

Performance²

- Simulated Performance Alternative (N1105)
- Software modeling

Energy Rating Index³

- HERS Index
- or**
- ENERGY STAR v3.1
- or**
- Passive House space heat demand

¹ The provisions of IECC Chapter 4 [RE] are equivalent to IRC Chapter 11.

² For changes in space conditioning the annual energy cost of the proposed design is permitted to be 110% of the standard reference design.

A change in space conditioning is when a previously unconditioned space is converted to a conditioned space

³ See page 2 for more detail on each Energy Rating Index option.

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Residential Energy Code for Stretch Code Communities^{1,2}



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- Groups R-2, R-3, and R-4 three stories or less

Yes

No

See 2015 IECC [CE]

Is it new construction?

Yes

No

See IRC N1107 Existing Buildings

Mandatory requirements:

- Certificate (N1101.14)
- Air leakage (N1102.4)
- Max area-weighted fenestration U-factor/SHGC (N1102.5)
- Controls (N1103.1)
- Duct sealing (N1103.3.2)
- Duct testing (N1103.3.3)
- Building cavities (N1103.3.5)
- Mechanical system pipe insulation (N1103.4)
- Heated water circulation and temperature maintenance systems (N1103.5.1)
- Mechanical ventilation (N1103.6)
- Equipment sizing and efficiency rating (N1103.7)
- Systems serving multiple dwelling units (N1103.8)
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- Portable spas (N1103.11)
- Lighting equipment (N1104.1)



- One option to the right

HERS Index ≤ 55

- HERS Rating completed per the most recent version of ANSI/RESNET/ICC 301 by a RESNET-certified HERS Rater using RESNET-accredited software
- Permit application: Preliminary HERS Report
- Final inspection: Final HERS Report²

Certified ENERGY STAR Homes v3.1

- Permit application: Preliminary HERS Report
- Final inspection: ENERGY STAR Homes certificate, Final HERS Report, signed ENERGY STAR Thermal Enclosure Checklist

Passive House Specific Space Heat Demand

- Specific space heat demand of ≤ 10 kbtu/sqft
- Permit application: List of compliance features, statement of estimated specific space heat demand based on plans
- Final inspection: Copy of the final PHIUS or PHI software report

¹ The provisions of IECC Chapter 4 [RE] are equivalent to IRC Chapter 11.

² If onsite renewable energy is part of the design, the maximum HERS Index may be increased by 5 to 12 points in accordance with 780 CMR Table N1106.4.1