NEW JERSEY ENERGY SUBCODE

SUMMARY OF KEY RESIDENTIAL ENERGY CODE REQUIREMENTS

The 2021 IECC was adopted in New Jersey on **September 6, 2022** and went into effect on March 6, 2023. This document summarizes changes to the building envelope-related requirements in the updated code for New Jersey.

CODE CHANGE HIGHLIGHTS

- Wall and ceiling insulation levels increased in all climate zones.
- Fenestration U-factor is more stringent in Climate Zone 4.
- Visual inspection option is no longer allowed and air leakage testing is now required.
- ERI scores lowered in all climate zones.

BUILDING ENVELOPE AND DUCT REQUIREMENTS

PRESCRIPTIVE	CLIMATE ZONE 4	CLIMATE ZONE 5
Wood Frame Wall	R-30 or R-20+5 ci or R-13+10 ci or R-20 ci / U-0.045	
Ceilings	R-60 / U-0.024	
Crawl Space Walls	R-13 or R-10 ci / U-0.065	R-19 or R-15 ci / U-0.055
Fenestration	U-0.030 / SHGC-0.40	
Floor	R-19 / U-0.047	R-30 / U-0.033
Mass Wall[a]	R-8/13 / U-0.098	R-13/17 / U-0.082
Slab R-value	R-10ci / 4 ft.	
Basement Walls	R-13 or R-10 ci / U-0.059	R-19 or R-15 ci / U-0.050

DUCT LEAKAGE

MEASUREMENT	CFM25 / 100 SQ. FT.
Rough-in (installed air handler)	4
Rough-in (air handler not installed)	3
Post-construction	4
Ducts Within Thermal Envelope	8

DUCT R-VALUE

R-VALUE
R-8[b]

AIR LEAKAGE (IF TESTED)

CLIMATE ZONE	MEASUREMENT
ALL CLIMATE ZONES	3 ACH50

MAXIMUM ENERGY RATING INDEX (ERI)

CLIMATE ZONE 4	CLIMATE ZONE 5
54	55

a. The second R-value/U-factor applies where > 50% of the insulation is on the interior.

b. R-6 is allowed for ducts < 3 inches.

MORE INFORMATION ON THE NEW JERSEY ENERGY SUBCODE CAN BE FOUND HERE:
https://codes.iccsafe.org/content/IECC2021P2

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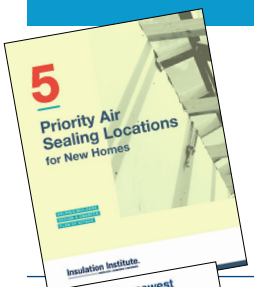
ENERGY-EFFICIENT, COST-EFFECTIVE CONSTRUCTION WITH FIBERGLASS AND MINERAL WOOL INSULATION

As code levels advance, **keep informed about innovative practices** to meet or exceed code requirements using cost-effective fiberglass and mineral wool insulation.

The following resources in the table below are just a subset of the many guides available from the **Insulation Institute** to help you achieve new performance requirements with proven approaches.

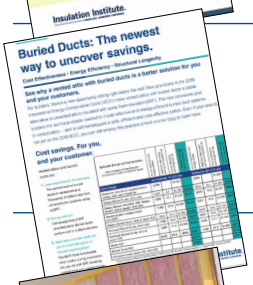
INSULATION INSTITUTE RESOURCES



Air Leakage

As states adopt more stringent energy codes, some builders may experience challenges meeting new mandatory air leakage requirements. Fiberglass and mineral wool insulation is the low-cost solution for homebuilders to meet or surpass code air leakage rate requirements of 3 or 5 air changes per hour depending on climate zone. For homeowners, an airtight building envelope results in energy savings and increased thermal comfort.

https://insulationinstitute.org/wp-content/uploads/2018/05/N090-5-Air-Sealing-Locations-for-New-Homes.pdf



Ducts Buried Within Ceiling Insulation

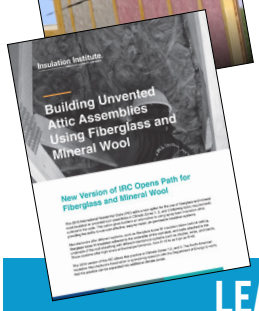
Deeply buried ducts in attics is an easy way to lower energy code compliance costs for builders using the simulated energy performance path. Homeowners can benefit from energy savings realized from lower-capacity, lower-cost HVAC systems.

https://insulationinstitute.org/wp-content/uploads/2019/03/N087-Buried-Ducts-The-newest-way-to-uncover-savings.pdf

Proper Installation of Insulation

Grade I installation delivers superior energy efficiency and is increasingly required by state energy codes. Insulation installation jobs that fail to meet Grade I criteria can mean construction delays due to callbacks, HERS rating penalties, and failed code inspections. Grade I installation is readily achievable by following basic guidelines as recommended by manufacturers. NAIMA offers free online training for installers.

www.grade1insulation.org



Unvented Attics Using Fiberglass and Mineral Wool Insulation

Unvented attics can be constructed by installing fiberglass or mineral wool insulation below the roof deck instead of using more costly materials like spray foam. In addition, fiberglass and mineral wool insulation products are green certified and do not carry recommended occupancy restrictions due to product off-gassing after installation. Starting with the 2018 IRC, this practice is outlined in detail within the code. Homeowners benefit from lower construction costs and the use of a safe product.

https://insulationinstitute.org/wp-content/uploads/2018/05/BuildingUnventedAtticAssemblies-N089.pdf

LEARN MORE TO SEE HOW THE ENERGY CODE SAVES YOU MONEY:

https://insulationinstitute.org/wp-content/uploads/2024/10/Modern-Energy-Codes-Save-Money-Infographic.pdf

Get the Facts for a Stronger Business

Learn more about fiberglass and mineral wool insulation at InsulationInstitute.org

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PUB.NO. N118 04/25