

SUMMARY OF KEY RESIDENTIAL ENERGY CODE REQUIREMENTS

The 2021 IECC was adopted with amendments in Nevada and went into effect on **July 28, 2021**. This document summarizes changes to the building enveloperelated requirements in the updated code for Nevada.

CODE CHANGE HIGHLIGHTS

- Increased ceiling insulation across all climate zones and increased wall insulation in Climate Zones 4 & 5.
- The 2021 IECC incorporated section R408 "Additional Efficiency Packages." This section requires each dwelling to comply with one of the additional packages listed.
- Pursuant to NRS 701.220, the Governor's Office of Energy (GOE) is required to adopt the most recent version of the IECC. Upon adoption by GOE, local municipalities shall follow suit and are authorized to adopt amendments and/or provisions which are more stringent than the standards published and adopted.



BUILDING ENVELOPE REQUIREMENTS

CODE PATH	2021 IECC CODE SECTION	CHANGE SUMMARY		
		CLIMATE ZONE 3	CLIMATE ZONE 4	CLIMATE ZONE 5
Prescriptive	R402.1.3 – Wood Frame Wall	R-20 or R-13+5 ci or R-0+15 ci / U-0.060	R-30 or R-20+5 ci or R-13+10 ci or R-0+20 ci / U-0.045	R-30 or R-20+5 ci or R-13+10 ci or R-0+20 ci / U-0.045
	R402.1.3 - Ceilings	R-49 / U-0.030	R-60 / U-0.024	R-60 / U-0.024
	R402.1.3 – Basement Walls	R-13 or R-5 ci / U-0.091	R-13 or R-10 ci / U-0.059	R-19 or R-13+5 ci or R-15 ci / U-0.050
	R402.1.3 – Crawl Space Walls	R-13 or R-5 ci / U-0.136	R-13 or R-10 ci / U-0.065	R-19 or R-13+5 ci or R-15 ci / U-0.055
	R402.1.3 – Fenestration	U-0.30 / SHGC-0.25	U-0.30 / SHGC-0.40	U-0.30 / SHGC-0.40

DUCT LEAKAGE AIR LEAKAGE

MEASUREMENT	CFM25 / 100 SQ. FT.	CLIMATE ZONE	MEASUREMENT
Rough-in (air handler not installed)	3		
Rough-in (air handler installed)	4	ALL CLIMATE ZONES	3 ACH50
Post-construction	8		

TABLE R406.4 MAXIMUM ENERGY RATING INDEX (ERI)

CLIMATE ZONE	MAXIMUM ERI
3	51
4	54
5	55

MORE INFORMATION ON THE NEVADA ENERGY CODE CAN BE FOUND HERE:

https://energy.nv.gov/Programs/TaskForces/2017/NAC_701_BuildingCodesRulemaking/





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

Priority Air Sealing Locations for New Homes

GRADE

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-Thenewest-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 ABOUT THE ERI COMPLIANCE PATH HERE:

https://www.energycodes.gov/technical-assistance/training/courses/ 2015-iecc-energy-rating-index-eri-compliance-alternative

Get the Facts for a Stronger Business

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

