

BOONE COUNTY AREA PLAN COMMISSION

116 West Washington Street – RM 101, Lebanon, IN 46052

Phone: 765-482-3821

Fax: 765-483-5241



2020 Energy Code

This code affects all homes permitted after January 1, 2020. The builder must choose the Prescriptive, Total UA or Performance Method of compliance. In addition to establishing compliance through one of those methods, the following items below **MUST** be completed for ALL paths and black items completed for Prescriptive and Total UA paths only. This information is based on interpretations provided by the State of Indiana as of December 26, 2019, and this information is subject to change until Indian supplies written interpretation.

Main Mandatory Requirements

- All insulation materials must be marked with R-Value or installer must post a certificate listing all insulation values in conspicuous location on job site---also, one thickness marker in attic for every 300sf.
- The builder or design professional must complete a certificate that lists the predominant R-Values of insulation for ceilings, walls, foundation, ductwork, U-factors for windows and efficiency levels of HVAC and water heating equipment. This certificate must be attached to the electric panel.
- Attic hatches from air conditioned to unconditioned spaces must be weather stripped and insulated to a level equivalent to the surrounding area. A “dam” equivalent must prevent attic insulation from spilling into living space.
- Air Leakage – The building thermal envelope shall be sealed to limit infiltration (see air sealing checklist). The checklist must be field verified by an approved party OR a blower door test can be performed after construction and must demonstrate the air leakage rate is below 7 ACH @ 50pa.
- All ducts, air handlers and filter boxes must be sealed. The duct tightness must be verified with a duct-blaster test. *Not required if all ducts and air handler are located within the conditioned space.
- Supply ducts located in the attic must be insulated to R-8. All other ducts must be insulated to R-6 (Note: Supply ducts insulated to R-6 if using the Performance Path)
Exceptions: Ducts within conditioned space

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January 1, 2020

Attention Builders and Remodelers:

We would like to inform and remind you that the 2020 Indiana Energy Code has been adopted and went into effect on December 26, 2019. We are putting it into effect now for all applications permitted after January 1, 2020.

There are three methods of compliance to choose from. You will be required to choose which type of compliance method at the time of permit application:

- Prescriptive (most restrictive)
- Total UA (allows building envelope trade-offs)
- Performance (most flexible-considers heating, cooling, and water heating costs only)

The state requires a design professional or builder to complete a Certificate of Compliance (see enclosed sample). This must be attached to the front of the electrical panel and is to be furnished by the builder or third-party agency.

Additionally, prior to the final inspection, builders are required to provide a 2020 Energy Code Certification with the permit placard. This certification includes building features, method used, and name of organization, signature, and date. (See enclosed example).

Please take a moment to review the enclosed information regarding the adoptions of the state code. Keep in mind that portions of this code could be amended at the state level, so any changes to this code will take place at the time those amendments are adopted.

To stay informed on any code changes, please visit in.gov/. Also, as many of you know, there are multiple education opportunities with IBA, BAGI or NAHB. These classes will continue to take place this spring/summer.

To retain a copy of the current Chapter 11:2020 Indiana Energy Efficiency Code, please visit the website below:
2018 IECC with Amendments effective 12/26/2019

We understand this will be an adjustment for all of us. In the future, it may be necessary to amend these procedures after these changes are in effect. If you have any questions, please do not hesitate to contact our office at 765-482-3821.

Regards,
Boone County Area Plan Commission

- New wood burning MASONRY fireplaces must have gasketed doors and outdoor combustion air.
- All recessed lights must be IC-rated, and the housing must be sealed with gasket or caulk to the drywall.
- At least one thermostat shall be installed that can be programmed. Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.
- Building cavities may not be used as supply ducts (returns ok—for now).
- Mechanical system piping capable of carrying fluids above 105 F or below 55 F shall be insulated to at least R-3. Also, all circulating hot water system piping shall be insulated to at least R-2 and shall include a switch that can turn off the hot water pump when the system is not in use.
- HVAC equipment must be sized according to ACCA Manual J eighth edition.
- Snow Melt Controls – Snow and ice melting systems, supplied through energy service to building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50 F and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40 F.
- Pools – Pool heaters shall be equipped with a readily accessible on-off switch to allow shutting off the heater without adjusting the thermostat setting.
- Pool heaters fired by natural gas shall not have continuously burning pilot lights. Time switches that can automatically turn off and on heaters and pumps according to a preset schedule shall be installed on swimming pool heaters and pumps.
- Heated pools shall be equipped with a vapor-retardant pool cover on or at the water surface. Pools heated to more than 90 F shall have a pool cover with a minimum insulation value of R-12.
- Lighting – A minimum of 50 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.
- All of Boone County is Climate Zone 5.

2020 Indiana Energy Code

CODE MEASURE:	Prescriptive Path	Total UA Path	Performance Path
1101.3 - Materials, systems and equipment shall be identified to allow determination of compliance	X	X	X
1101.4 - Insulation identified with R-value marked on product	X	X	X
1101.4.1 - Rulers, with R-value identified, every 300 sf in attic	X	X	X
1101.4.2 - Install insulation so R-value mark is readily observable	X	X	X
1101.5 - Fenestration products shall bear a label and certification (NFRCC100)	X	X	X
1101.6 - R-value determined in accordance with the 16 CFR 460	X	X	X
1101.7 - All materials, systems and equipment installed in accordance with manufacturers instruction. Also, exposed foundation insulation shall be protected	X	X	X
1101.8 - A permanent certificate must be posted on or in the electrical panel, listing the R-value of all insulation, fenestration u-factors, equipment efficiencies	X	X	X
1102.1 - Thermal envelope shall meet requirements of Table N1101.2	X		
1102.1.1 - R-value computation method	X	X	
1102.1.2 - U-factor alternative Table can be used	X	X	
1102.1.3 - Total UA Alternative Compliance		X	
1102.2.1 and 1102.2.2 - Attic Insulation R-value allowances	X		
1102.2.3 - Access hatches and doors weatherstripped and insulated	X	X	X
1102.2.4 and 1102.2.5 - Mass Wall and Steel frame requirements	X	X	
1102.2.6 - Floor insulation installed so permanent contact with subfloor decking	X	X	X
1102.2.7 - Conditioned basement walls FULLY insulated top to bottom	X	X	
1102.2.8 - Slab insulation according to Table N1102.1	X	X	
1102.2.9 - Crawl Space Walls insulating floors vs. walls	X	X	
1102.2.10 - Insulation not required on horizontal masonry support	X	X	X
1102.2.11 - Sunroom insulation requirements	X	X	
1102.3 - Fenestration requirements	X	X	
1102.4 - Air Leakage Requirements (1102.4.1 - 1102.4.5) This includes blower door testing (or air leakage checklist review), masonry fireplace requirements, Fenestration Air Leakage Section and IC Rated Can lights	X	X	X
1102.5 - Fenestration Trade-offs	X	X	
1103.1.1 - Programmable thermostat installed	X	X	
1103.1.2 - Heat pump controls to prevent unnecessary supplemental heat operation	X	X	
1103.2.1 - Supply ducts in attic R-8; all other R-6 outside conditioned space*	X	X	*
1103.2.2 - All ducts, air handlers, filter boxes shall be sealed and duct tightness must be tested with a duct blaster and may not exceed maximum amounts	X	X	X
1103.2.3 - Building cavities may not be used as supply ducts	X	X	
1103.3 - Refrigerant Lines insulated to R-3	X	X	
1103.4 - All circulating hot water piping shall be insulated to at least R-2	X	X	
1103.5 - Mechanical ventilation intakes shall have gravity dampers	X	X	
1103.6 - HVAC equipment must be sized according to M1401.3	X	X	
1103.7 - Snow melt system controls	X	X	
1103.8 - Pool requirements	X	X	
1104 - Lighting must be 50 percent high-efficacy lamps	X	X	
**Performance Path Requires R-6 on ALL ducts outside conditioned space			
This information is based on Indiana's latest interpretation as of 12-26-19 and all information is subject to change			

2020 INDIANA RESIDENTIAL CODE



SUMMARY OF KEY RESIDENTIAL ENERGY CODE REQUIREMENTS

The 2018 IECC with amendments was adopted in Indiana and became effective on **December 26, 2019**. This document summarizes changes to the building envelope-related requirements in the updated code for Indiana.



CODE CHANGE HIGHLIGHTS

- Indiana amended their energy code and moved to R-15 instead of R-13 for walls in climate zone 4.
- Building envelope air leakage can be visually inspected in accordance with Table N1102.4.1.1 – Air Barrier and Insulation Installation or tested and verified.
- Supply and return ducts must be insulated to an R-value not less than R-8 for ducts 3 inches or larger and R-6 for ducts smaller than 3 inches.

BUILDING ENVELOPE REQUIREMENTS

CODE PATH	2018 IECC CODE SECTION	CHANGE SUMMARY	
		CLIMATE ZONE 4	CLIMATE ZONE 5
Prescriptive	R402.1.2 – Wood Frame Wall	Does not Apply	R-20 or R-13 + 5 / U-0.067
	R402.1.2 – Ceilings		R-38 / U-0.030
	R402.1.2 – Basement Walls		R-13 or R-10 ci / U-0.059
	R402.1.2 – Crawl Space Walls		R-13 or R-10 ci / U-0.065
	R402.1.2 – Fenestration		U-0.35

DUCT LEAKAGE

MEASUREMENT	CFM25 / 100 SQ. FT.
Rough-in (total leakage)	4
Post-Construction (leakage to the outside)	4

AIR LEAKAGE

CLIMATE ZONE	MEASUREMENT
4	5 ACH50
5	5 ACH50

Note: All R-values are minimums and U-factors maximums.

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

www.in.gov/legislative/iac/T06750/A00140.pdf

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This summary is offered for informational purposes only. It does not purport to be an exhaustive analysis of code changes or provide advice that will ensure guaranteed compliance with any energy code provision. Please consult with local authorities before finalizing your installation plans.



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 ABOUT THE ERI COMPLIANCE PATH HERE:

www.energycodes.gov/resource-center/training-courses/2015-iecc-%E2%80%93-energy-rating-index-eri-compliance-alternative

Get the Facts for a Stronger Business

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

NAIMA
NORTH AMERICAN INSULATION
MANUFACTURERS ASSOCIATION

11 Canal Center Plaza, Suite #103 • Alexandria, VA 22314
InsulationInstitute.org • 703.684.0084

2020 Indiana Energy Code

Builder Name: _____

Property Address: _____

Conditioned Floor Area: _____sf Date: _____

Compliance Method Used: Prescriptive / Total UA / Performance (Circle One)

Builder or Registered Design Professional:

Signature

Printed

R-VALUES

Ceiling: Vaulted R-_____ Flat R-_____

Slab on Grade R-_____

Floors Over Unconditional Space R-_____

Walls: Above Grade Cavity R-_____ Sheathing R-_____

Below Grade Interior R-_____ Below Grade Ext. R-_____

If Not Full Wall Basement Insulation, # of ft from Top of Wall: _____

Are all HVAC Ducts within the Conditioned Space? Y / N (waive duct test, if yes)

R-Value of Ducts Outside Conditioned Space R-_____

Windows U-_____ SHGC: _____ Doors R-_____

Skylights U-_____ SHGC: _____

SYSTEMS

Heating System Type: _____ Efficiency: _____ (AFUE or HSPF)

Cooling System Type: _____ Efficiency: _____ (SEER)

Water Heater Type: _____ Efficiency: _____ (EF)

AIR LEAKAGE / DUCT LEAKAGE

Independent Inspecting Firm: Thermo-Scan Inspections, 317-846-4655

Air Leakage: _____ ACH50 (Maximum Allowable: 7 ACH50)

Duct Leakage To Exterior: _____ cfm25 (Maximum Allowable: _____ cfm25)

Air Leakage Test Pass? Y / N / NA Duct Leakage Test Pass? Y / N / NA

If Alternative Visual Option was Performed, Circle NA for Air Leakage Test and

Initial here that all Code Checklist Items were Met: _____

Testing Firm Signature: _____