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Room 101
Lebanon, Indiana 46052
765-482-3821
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Boone County Area Plan Commission

October 1, 2012

Attention Builders and Remodelers:

We would like to inform and remind you that the 2012 Indiana Energy Code has been adopted and went into effect in April 2012. We are putting it into effect now for all applications permitted after September 25, 2012.

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 2012 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/](http://www.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 11:2012 Indiana Energy Efficiency Code, please visit the link below:

: [://www.in.gov/legislative/iac/20120201-IR-675110084FRA.xml](http://www.in.gov/legislative/iac/20120201-IR-675110084FRA.xml).

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





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2012 Energy Code

This code affects all homes permitted after April 5, 2012. 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 red items 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 2-28-12 and this information is subject to change until Indiana supplies a 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 @ 50 pa.

*All ducts, air handlers and filter boxes must be sealed. The duct tightness must be verified with a duct-blast 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) Exception: Ducts within conditioned space.



*New wood burning MASONRY fireplaces must have gasketed doors and outdoor combustion air.

*All recessed lights must be IC-rated and the housings 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.

2012 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	
1102.2.1and 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 others 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			
<i>This information is based on Indiana's latest interpretation as of 2-28-12 and all information is subject to change</i>			

Example 1 (1,611 sf home on slab):

	<u>Prescriptive Requirements:</u>	<u>Total UA Requirements:</u>	<u>Performance Requirements:</u>
AG Walls:	R-20 cavity or R-13 w/ R-5 cont	R-13 Batt with R-3 Sheathing	R-15 Batt with OSB Sheathing
Windows:	U-0.35	U-0.30	U-0.30
Attic:	R-38	R-38	R-38
HVAC:	N/A	N/A	80%, 13 SEER AC
WH:	N/A	N/A	0.62 EF
Slab:	R-10, total 2'	R-10, 1' down, 2' in	R-10, 1' down 2'in
Duct Lkg:	<8 cfm/100sf of cond space	<8 cfm/100sf of cond space	<4 cfm/100sf of cond space
Air Lkg:	<7 ACH50	<7 ACH50	<5.5 ACH50

Example 2 (2,313 sf 2-story home on slab):

	<u>Prescriptive Requirements:</u>	<u>Total UA Requirements:</u>	<u>Performance Requirements:</u>
AG Walls:	R-20 cavity or R-13 w/ R-5 cont	R-15 Batt with R-3 Sheathing	R-13 Batt with R-3 Sheathing
Windows:	U-0.35	U-0.30	U-0.30
Attic:	R-38	R-38	* R-38
HVAC:	N/A	N/A	80% or 7.7 HSPF, 13 SEER AC
WH:	N/A	N/A	0.62 EF
Slab:	R-10, total 2'	R-10, 1' down, 2' in	R-10, 1' down 2'in
Duct Lkg:	<8 cfm/100sf of cond space	<8 cfm/100sf of cond space	<6 cfm/100sf of cond space
Air Lkg:	<7 ACH50	<7 ACH50	<5.5 ACH50

Example 3 (5,000 sf 2-story home on walk-out basement):

	<u>Prescriptive Requirements:</u>	<u>Total UA Requirements:</u>	<u>Performance Requirements:</u>
AG Walls:	R-20 cavity or R-13 w/ R-5 cont	R-15 Batt with OSB Sheathing	R-15 Batt with OSB Sheathing
BG Walls:	R-10 cont or R-13 framed	R-10 cont or R-13 framed	R-10 cont or R-13 framed
Windows:	U-0.35	U-0.30	U-0.30
Attic:	R-38	R-44	R-38
HVAC:	N/A	N/A	80%, 13 SEER AC
WH:	N/A	N/A	0.62 EF
Duct Lkg:	<8 cfm/100sf of cond space	<8 cfm/100sf of cond space	<4 cfm/100sf of cond space
Air Lkg:	<7 ACH50	<7 ACH50	<5.5 ACH50

Note: These are examples and different combinations can be used to achieve code for Total UA and Performance Methods.

HOME CERTIFIED TO MEET THE PROVISIONS OF THE 2012 INDIANA ENERGY CONSERVATION CODE

This Home Built At:

1234 S 400 W, Lebanon, IN. 46052

By Sample

Exceeds the minimum Requirements for the 2012 Indiana Energy Conservation Code

April 5, 2012

Building Features

Ceiling Flat: _____	Duct Leakage to Outside: _____
Vaulted Ceiling: _____	Total Duct Leakage: _____
Above Grade Walls: _____	Infiltration: _____
Foundation Walls: _____	Window: _____
Exposed Floor: _____	Heating: _____
Slab: _____	Cooling: _____
Duct: _____	Water Heating: _____

This organization below certifies that the proposed building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2012 Indiana Energy Conservation Code requirements in compliance with Chapter 11 based in Climate Zone 5A and with all mandatory requirements.

Name: _____ Signature: _____

Organization: _____ Date: _____

Example of electrical panel sticker to be provided by builder of third party

2012 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 Systems Type: _____ Efficiency: _____ (AFUE or HSPF)

Cooling Systems 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: _____ cfm 25)

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: _____