

## **Residential Energy Code Submittal Requirements**

The 2012 Indiana Energy Code contains specific design energy requirements for all residential projects. There are three (3) design paths to choose from:

- **Option #1:** Prescriptive path as outlined in IRC Chapter 11.
- **Option #2:** Total UA Alternative path as outlined in IRC section *N1102.1.3 & IECC 402.1.4*
- **Option #3:** Simulated Performance Alternative (Performance) path as outlined in IECC section 405.

**NOTE:** All three options have similar requirements for submittal documents to meet the code requirements including:

- Building envelope information
- A manual D duct design in accordance with the IRC section M16101.1.

### **Option #1: Prescriptive Path**

The Prescriptive Path requirements for the building envelope are found in **Chapter 11 of the 2009 IRC**. Putnam County is in Climate Zone 5, as shown in Figure & Table N1102.1. All prescriptive information shall be taken from the various tables using Zone 5 requirements.

The Prescriptive Building Envelope submittal shall include, at the minimum, the following information on the submitted plans:

- Site Address
- Define your Building Thermal Envelope
- Insulation materials:
  - R values denoted for each individual area (*wall, ceiling, floor over garage, etc.*)
- Crawl space insulation for structural floors and other crawl space areas.
  - *Specify whether the foundation wall or the structural floor system is to be insulated. See requirements of section N1102.2.9.*
- Fenestration U-factors *402.3*
- Duct sealing and insulation. *403.2*
- Manual D duct design, specific to the building
- Lighting equipment *404.1*
- Specific insulation *402.2*

**NOTE:** The prescriptive methods require **2x6 wall construction, and minimum R-Values of R13+5 or R21.**

## **Option #2: Total UA Alternative Path**

The total UA alternative path option of showing compliance is found in section **N1102.1.3 of the IRC and section 402.1.4 of the IECC**. This method is commonly known as **ResCheck**. The current version of [ResCheck](#) is available from the Department of Energy. (*Older versions cannot be used to show compliance with the 2009 IRC and IECC.*)

**NOTE:** The Building Plans must clearly define and delineate the building thermal envelope.

**ResCheck** submittal must include the following information:

- Site Address
- Conditioned floor area
- Insulation Type and R-value for all areas
  - Specify location where the insulation is being used (attic, floor over unconditioned space, walls, floors over air space, etc.) This information must be specific. Merely listing “Wall 1, Wall 2, etc.” will not provide sufficient information to the Building Department.
- Specify whether continuous or cavity insulation.
  - Using Orientation: “*unspecified*” is not an acceptable description of a wall, window, or door location. Please specify one of the following orientations: “Front, Back, Left, or Right” and include the square footage of the wall, window, or door on each orientation.
- Fenestration U-Factors
- Accurate square footage

### **Option #3: Simulated Performance Alternative (Performance) Path**

This path requires mandatory compliance with the following:

- Air leakage (402.4)
- Maximum fenestration U factor (402.5)
- SHGC (402.5)
- Systems (403) requirements.

The Performance Path method of compliance requires the submittal of energy compliance documents but has the additional task of on-site inspections to be performed by a ‘**ResNet Certified Rater,**’ and an **Energy Compliance Certificate** submitted prior to the Final building inspection.

The Building Envelope compliance document (*provided by ResNet Certified Rater*) shall provide, at the minimum, the following information on the submitted plans:

- Site Address
- The Energy Code Inspection checklist documents the building component characteristics of the proposed design.
  - This includes insulation type, values, and location; U-value and SHGC of fenestrations.
- Precise Square Footage
- All mechanical systems
- Name of the individual completing the compliance report
- Name and version of the compliance software tool
- Duct sealing & insulation.
- Manual D-duct design specific to the building

**NOTE:** It is especially important that the insulation values be detailed as to the specific area and the required R-value for that area.

### **General Information**

To ensure inspectors have all the required data, all product information, stickers, tags and labeling will be left in place until the inspection has been completed. (*Examples: window stickers, water heaters, exterior doors, insulation, etc.*)

**It is the responsibility of the homeowner/ contractor to be compliant to current code requirements.**