



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION



Introduction of the IC3 and Other Compliance Tools

Shirley Ellis

Energy Code Specialist



Agenda

- IC3 – What is it?
- IC3 – History
- Getting Started
- ERI Simulation Path
- Other Compliance Tools

IC3 – What is it?

- The International Code Compliant Calculator is a performance-based residential energy code compliance tool
- Publicly accessible energy code compliance software
- Based on the Texas Building Energy Performance Standards
- RESNET certified
 - Verification Procedures No. 07-003
- Satisfies the EPA guidelines
 - Demonstrates air quality improvements/emission reductions with adequate certainty

IC3 – History

- Created in response to the 77th Texas Legislature's Senate Bill 5 (2001)
- Assigned the ESL responsibilities
 - Calculation of emissions reduction
 - Energy efficiency
 - Renewable energy programs
 - Providing state-wide technical assistance
- Web-based energy efficiency and emissions reduction calculators
 - Texas Climate Vision (Austin, TX)
 - Legacy calculators
 - eCalc
 - AIM



User Login



User Login

This is the publicly accessible energy code compliance software based on the Texas Building Energy Performance Standards. You must register a username and password in order to continue. If you are already registered in IC3 version 3.x, you must register again in the new system.

Username:

Password:

Login

Register New User [Forgot Password](#)





Project List

Logout		New Project		Edit User Information		Import Project from IC3 version 3.x	
Search		Search					
	Project Name	Street address	City	County	Last Updated On		
Select	000 2015 Qinbo Li_FLA test_IRC-2F	Test	PEARLAND	HARRIS	8/18/2016 11:30:47 AM	Delete	Copy
Select	000 2015 Qinbo Li_FLA test_IRC-3F	Test	ADDISON	DALLAS	11/28/2016 3:40:57 PM	Delete	Copy
Select	00_2016_Qinbo_FSEC_2000_2015IECC_NG_Elec DHW	Test	PEARLAND	HARRIS	8/31/2016 12:13:24 PM	Delete	Copy
Select	00_2016_Qinbo_FSEC_2000_2015IECC_NG_EP	TEST	PEARLAND	HARRIS	11/18/2016 8:36:55 AM	Delete	Copy
Select	000 2015 Qinbo Li	1000 Balcones Dr	BELLVILLE	AUSTIN	12/15/2016 1:38:07 PM	Delete	Copy
Select	000 2015 Qinbo Li_FLA test_IRC	test	PEARLAND	HARRIS	8/23/2016 2:18:26 PM	Delete	Copy
Select	000 2015 Qinbo Li_FLA test_IRC-1F-Balanced	Balanced	PEARLAND	HARRIS	3/23/2016 11:48:21 AM	Delete	Copy
Select	000 2015 Qinbo Li_FLA test_IRC-2F-Balanced	Balanced	PEARLAND	HARRIS	9/9/2016 5:15:16 PM	Delete	Copy
Select	000 2015 Qinbo Li_FLA test_IRC-3F-Balanced	Balanced	PEARLAND	HARRIS	10/11/2016 10:56:56 AM	Delete	Copy
Select	000 2015 Roof Test_HP	HP System	PEARLAND	HARRIS	9/7/2016 3:42:50 PM	Delete	Copy
Select	000 2015 Roof Test_NG	NG System	GRAND PRAIRIE	TARRANT	8/30/2016 4:11:10 PM	Delete	Copy
Select	000 2015 SPEER Test	test	WAYSIDE	ARMSTRONG	10/5/2016 6:11:11 PM	Delete	Copy
Select	000 2015 SPEER Test_SJO	test	AMARILLO	POTTER	9/1/2016 3:29:03 PM	Delete	Copy
Select	000 2015 SPEER Test_SJO_21hours	test	AMARILLO	POTTER	4/11/2016 6:53:15 PM	Delete	Copy
Select	000 2015 SPEER Test_SJO_22hours	test	AMARILLO	POTTER	8/29/2016 2:40:42 PM	Delete	Copy

1 2 3 4 5 6 7 8 9 10 ...

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[Credits](#) [Help/FAQ](#) [Manual](#) [IC3 v4.2.0](#)



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION



ERI SIMULATION PATH



Return to Project List

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

When downloading the energy report, there are issues with browser plug-ins converting the .pdf to HTML5. See the link for details. [Help/FAQ](#)

Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type

Window

Insulation

Studs

Ducts Ducts in Conditioned Space

Supply Duct Insulation

Return Duct Insulation

Front Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side

Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Right Side

Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Back Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="50"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Conditioned Floor Area (sq ft)

Displayed Floor

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Testing

[Return to Project List](#)

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

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Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type Displayed Floor 1

Window

SHGC

U-Factor

Insulation

Wall Cavity

Insulation

Wall Continuous

Insulation

Studs

Stud Type

Ducts

Ducts in Conditioned Space

Supply Duct

Insulation

Return Duct

Insulation

Front Side

Length of Wall (ft)

Window Area (sq ft)

Horizontal Shading (in)

Height of Wall (ft)

Left Side

Length of Wall (ft)

Right Side

Length of Wall (ft)

Window Area (sq ft)

Horizontal Shading (in)

Height of Wall (ft)

Testing

Duct Leakage (CFM25, post-construction test)

Duct Leakage Test Value

Fraction of Duct Area Outside of Conditioned Space

Mechanical Ventilation Type

Ventilation Rate (CFM)

Ventilation Operation (hrs/day)

Ventilation Fan Power(Watts)

Blower Door Test (ACH50)

Blower Door Test Value

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[Credits Help/FAQ Manual IC3 v4.2.0](#) **IC3**



Roof

[Return to Project List](#)

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

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Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type Displayed Floor

Window

SHGC

U-Factor

Insulation

Wall Cavity

Insulation

Wall Continuous Insulation

Studs

Stud Type

Ducts

Ducts in Conditioned Space

Supply Duct

Insulation

Return Duct

Insulation

Front Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side

Length of Wall (ft)	<input type="text" value="50"/>
---------------------	---------------------------------

Right Side

Length of Wall (ft)	<input type="text" value="50"/>
<input type="text" value="20"/>	<input type="text" value="20"/>
<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="text" value="10"/>	<input type="text" value="10"/>

Roof

Roof Covering Material

Radiant Barrier

Sealed Attic

Roof Insulation:

Ceiling Area

Attic Floor Area (sq ft)

Flat Roof Area (sq ft)

Cathedral Ceiling Area (sq ft)

Area of Wall Adjacent to Unconditioned Attic Space (sq ft)

The total entered roof area is 2800 sq. ft. The largest floor area is 2800.0000 sq. ft.



Foundation

[Return to Project List](#)

Project Name:

Simulation Mode:
 Performance Path
 ERI Simulation Path

Street Address:

County:

City:

Zip:

Builder Name:

Builder Email:

Builder Phone:

Notes:

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Global Parameters

Number of Floors:

Number of Bedrooms:

Orientation of Unit Front Side:

Exterior Finish Type: Displayed Floor 1 ▾

Window SHGC: U-Factor:

Insulation Wall Cavity: Insulation Wall Continuous: Studs Stud Type: Ducts Ducts in Conditioned Space: Supply Duct Insulation: Return Duct Insulation:

Front Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side

Length of Wall (ft)	<input type="text" value="50"/>
---------------------	---------------------------------

Right Side

Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Back Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="50"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Foundation

Type of Foundation:

Foundation Insulation:

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Credits Help/FAQ Manual IC3 v4.2.0 **IC3** International COMPLIANCE CALCULATOR



Heating

[Return to Project List](#)

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

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Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type **Displayed Floor**

Window
SHGC
U-Factor

Insulation
Wall Cavity Insulation
Wall Continuous Insulation
Studs
Stud Type

Ducts
Ducts in Conditioned Space
Supply Duct Insulation
Return Duct Insulation

Front Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side

Length of Wall (ft)	<input type="text" value="50"/>
---------------------	---------------------------------

Right Side

Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Back Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="50"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Heating

Heating Type:

Heating Efficiency (HSPF):

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A/C

Return to Project List

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

When downloading the energy report, there are issues with browser plug-ins converting the .pdf to HTML5. See the link for details. [Help/FAQ](#)

Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type

Window

SHGC

U-Factor

Insulation

Wall Cavity Insulation

Wall Continuous Insulation

Studs Stud Type

Ducts

Ducts in Conditioned Space

Front Side	
Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side	
Length of Wall (ft)	<input type="text" value="50"/>

Right Side	
Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Back Side	
Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="50"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

A/C

SEER:

Tonnage:

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Water Heater

[Return to Project List](#)

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

When downloading the energy report, there are issues with browser plug-ins converting the .pdf to HTML5. See the link for details. [Help/FAQ](#)

Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type Displayed Floor

Window

SHGC

U-Factor

Insulation

Wall Cavity

Insulation

Wall Continuous

Insulation

Studs

Stud Type

Ducts

Ducts in Conditioned Space

Supply Duct

Insulation

Return Duct

Insulation

Front Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="300"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Left Side

Length of Wall (ft)	<input type="text" value="50"/>
---------------------	---------------------------------

Right Side

Length of Wall (ft)	<input type="text" value="50"/>
Window Area (sq ft)	<input type="text" value="20"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Back Side

Length of Wall (ft)	<input type="text" value="200"/>
Window Area (sq ft)	<input type="text" value="50"/>
Horizontal Shading (in)	<input type="text" value="0"/>
Height of Wall (ft)	<input type="text" value="10"/>

Water Heater

Type of Water Heater

Energy Factor

Use detailed DHW input

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Appliance

[Return to Project List](#)

Project Name

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address

County

City

Zip

Builder Name

Builder Email

Builder Phone

Notes

When downloading the energy report, there are issues with browser plug-ins converting the .pdf to HTML5. See the link for details. [Help/FAQ](#)

Global Parameters

Number of Floors

Number of Bedrooms

Orientation of Unit Front Side

Exterior Finish Type **Displayed Floor**

Window

SHGC

U-Factor

Front Side

Length of Wall (ft)

Window Area (sq ft)

Horizontal Shading (in)

Height of Wall

Lighting

Percent High-Efficiency Interior Lighting

Percent High-Efficiency Exterior Lighting

Dishwasher

Dishwasher Capacity (# of settings)

Dishwasher Energy Factor

Range/Oven

Fuel Type

Electricity
 Natural Gas
 Induction Range
 Convection Oven

Clothes Dryer

Fuel Type of Dryer

Electric
 Natural Gas

Type of Dryer

Timer
 Moisture Sensor

Dryer Electric Energy Efficiency

Refrigerator

Annual Energy Use (kWh/ yr)

Clothes Washer

Labeled Energy Rating (kWh/yr)

Electric Rate (\$/kWh)

Annual Gas Cost (\$/yr)

Natural Gas Rate (\$/therm)

Washer Capacity (ft^3)

Modified Energy Factor (MEF)

Other

Has Programmable Thermostat

Right Side

Length of Wall (ft)

Window Area (sq ft)

Horizontal Shading (in)

Height of Wall (ft)

Testing

Heating

Appliance

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[Credits Help/FAQ Manual IC3 v4.2.0](#) **IC3** International CODE COMPLIANCE CALCULATOR



Project Results

[Return to Project List](#)

Project Name CATEE ERI

Simulation Mode
 Performance Path
 ERI Simulation Path

Street Address 123 4th street

County BRAZOS

City COLLEGE STATION

Zip 77840

Builder Name test test

Builder Email esl_e2calc_support@tee

Builder Phone 123-456-7890

Notes

[Submit Project](#)

Project Passes
ERI:65

[Print Certificate](#) [Print Energy Report](#) [Inspection Form](#)

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Global Parameters

Number of Floors 2

Number of Bedrooms 4

Orientation of Unit Front Side North

Exterior Finish Type Brick

Window SHGC 0.2

U-Factor 0.25

Insulation

Wall Cavity R-20

Insulation Wall Continuous R-5

Studs Stud Type 2 x 4

Ducts

Ducts in Conditioned Space

Supply Duct Insulation R-8

Return Duct Insulation R-8

Testing Roof Foundation

Heating A/C Water Heater

Appliance

Front Side

Length of Wall (ft) 200

Window Area (sq ft) 300

Horizontal Shading (in) 0

Height of Wall (ft) 10

Left Side

Length of Wall (ft) 50

Window Area (sq ft) 20

Horizontal Shading (in) 0

Height of Wall (ft) 10

Right Side

Length of Wall (ft) 50

Window Area (sq ft) 20

Horizontal Shading (in) 0

Height of Wall (ft) 10

Back Side

Length of Wall (ft) 200

Window Area (sq ft) 50

Horizontal Shading (in) 0

Height of Wall (ft) 10

Displayed Floor 1

Conditioned Floor Area (sq ft) 2800

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Certificate

Residential Energy Efficiency Certificate



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Window U-Value	U- 0.25	Duct Tightness (in CFM25)	3
Window SHGC	0.2	Cooling Efficiency	SEER 17
Wall Cavity Insulation	R - 20	Heating Efficiency	12.2 HSPF
Roof/Ceiling Insulation	R - 38	Water Heater Efficiency	Heat Pump EF 2.2
Floor/Foundation Insulation	R - 5	Builder Email	esl_e2calc_support@tees.tamus.ed
Supply Duct Insulation	R - 8	Builder Phone	123-456-7890
Return Duct Insulation	R - 8	Date Issued	12/15/2016
Blower Door (in ACH50)	4	Certificate Number	1,018,168



Builder or Registered Design Professional _____

This certificate was generated by IC3 in compliance with ERI



Energy Report



Single Family House Energy Report

Project Details

Project Name: CATEE ERI
 Builder Name: test test
 Builder Phone: 123-456-7890
 Builder Email: esl_e2calc_support@tees.
 Address: 123 4th street
 City: COLLEGE STATION
 County: BRAZOS
 Zip: 77840
 Certificate #: 1018168
 Date Issued: 12/15/2016

Notes:

Emissions Reduction

NOx: 15 lbs.
 SOx: 53 lbs.
 CO2: 28,658 lbs.



65
ERI

This single family residential project was found to be in compliance with the performance measures described in the 2015 IECC as calculated by the Energy Systems Laboratory, a division of the Texas A&M Engineering Experiment Station using IC3 version 4.2.0



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The values produced are generated by the DOE-2 building energy analysis program. These values do not constitute a guarantee of actual energy usage by ESL or TEES.

Authorized Signature:



Energy Report – Page 2

Project Information

General	Structural	Floor 1	
Number of Bedrooms: 4	Exterior Finish: Brick	Floor Area: 2800 sq. ft.	
Wall Cavity Insulation: R- 20	Stud Type: 2 x 4	Floor Wall Height: 10 ft.	
Wall Continuous Insulation: R- 5	Stud Spacing: 16 in.	Front Side Length: 200 ft	Right Side Length: 50 ft
Orientation: North		Front Side Window Area: 300 sq. ft.	Right Side Window Area: 20 sq. ft.
	Mechanical	Front Side Shading: 0 in	Right Side Shading: 0 in
Windows	Blower Door Test: 4 @ACH50	Back Side Length: 200 ft	Left Side Length: 50 ft
SHGC: 0.2	Ventilation Type: Balanced	Back Side Window Area: 50 sq. ft.	Left Side Window Area: 20 sq. ft.
U-Factor: 0.25	Ventilation Rate: 220 CFM	Back Side Shading: 0 in	Left Side Shading: 0 in
	Ventilation Operation: 12 hrs.		
	Fan Power: 5 Watts	Floor 2	
Roof	Fraction Outside: 1	Floor Area: 2000 sq. ft.	Area over Unconditioned: 0 sq. ft.
Cladding Type: Composite Shingle	Ducts in Conditioned Space: No	Floor Wall Height: 10 ft.	
Radiant Barrier: Yes	Duct Tightness Test: 3 @CFM25	Front Side Length: 200 ft	Right Side Length: 50 ft
Sealed Attic: No	Supply Duct Insulation: R - 8	Front Side Window Area: 300 sq. ft.	Right Side Window Area: 30 sq. ft.
Roof Insulation: R - 38	Return Duct Insulation: R - 8	Front Side Shading: 0 in	Right Side Shading: 0 in
Attic Area: 2800 sq. ft.		Back Side Length: 200 ft	Left Side Length: 50 ft
Cathedral Ceiling Area: 0 sq. ft.	Heating	Back Side Window Area: 100 sq. ft.	Left Side Window Area: 30 sq. ft.
Flat Roof Area: 0 sq. ft.	Heating Type: Heat Pump	Back Side Shading: 0 in	Left Side Shading: 0 in
Wall Area Next to Attic: 0 sq. ft.	Heating Efficiency: 12.2 HSPF		
Foundation	Water Heater		
Foundation Type: Slab on Grade	Water Heater Type: Heat Pump		
Foundation Insulation: R- 5	Energy Factor: 2.2		
A/C	Size: N/A		
SEER: 17	Burner Capacity: N/A		
Tonnage: 3			



Energy Report – Page 3

Appliances

Lighting: % indoor High-Efficiency: 75 %

Lighting: % outdoor High-Efficiency: 75 %

Dishwasher Capacity: 12 settings

Dishwasher Energy Factor: 0.46

Range Fuel Type: Electric

Induction Range: No

Convection Oven: No

Clothes Dryer Fuel Type: Electric

Clothes Dryer Type: Timer

Clothes Dryer Energy Efficiency: 3.01

Refrigerator: Annual Energy Use: 709 kWh/yr

Clothes Washer Energy Rating: 704 kWh/yr

Clothes Washer Electric Rate: 0.085/kWh

Clothes Washer Annual Gas Cost: 23 \$/yr

Clothes Washer Natural Gas Rate: 0.585\$/therm

Clothes Washer Capacity: 2.874ft³

Clothes Washer MEF: 0.817

Programmable Thermostat: No



Inspection Report

Residential Data Collection Checklist
2009 International Energy Conservation Code
Climate Zone 2

Building ID: _____ Date: _____ Name of Evaluator(s): _____
 Building Contact: Name: _____ Phone: _____ Email: _____
 Building Name & Address: _____
 Subdivision: _____ Lot #: _____ Conditioned Floor Area: _____ ft²
 State: _____ County: _____ Jurisdiction: _____
 Compliance Approach (check all that apply): Prescriptive Trade-Off Performance
 Compliance Software Used: _____ Green Building/Above-Code Program: _____
 Building Type: 1- and 2-Family, Detached: Single Family Modular Townhouse
 Multifamily: Apartment Condominium
 Project Type: New Building Existing Building Addition Existing Building Renovation

IECC Section #	Pre-Inspection/Plan Review	Code Value	Verified Value	Complies				Comments/Assumptions ¹
				Y	N	N/O	N/A	
103.2 [PR1]	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.6 [RC2]	HVAC loads calculations: Heating system size(s): _____ Cooling system size(s): _____		kBtu: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments/Assumptions: _____

¹ Use Comments/Assumptions to document code requirements that pass due to exceptions, and specify the exception. Also use Comments/Assumptions to document multiple values observed for a given code requirement, such as multiple equipment efficiencies. 6/9/2011

General building information only required if different than above Building ID: _____
 Date: _____ Name of Evaluator(s): _____
 Building Name & Address: _____ Conditioned Floor Area: _____ ft²
 Building Contact: Name: _____ Phone: _____ Email: _____
 Compliance Approach (check all that apply): Prescriptive Trade-Off Performance
 Compliance Software Used: _____ Green Building/Above-Code Program: _____

IECC Section #	Foundation Inspection	Code Value	Verified Value	Complies				Comments/Assumptions
				Y	N	N/O	N/A	
402.1.1 [FO1]	Slab edge insulation R-value.	Unheated: R-0 Heated: R-5	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2, 402.2.8 [FO2]	Slab edge insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1 [FO3]	Slab edge insulation depth/length.	Heated: 2 ft.	____ ft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1 [FO4]	Basement wall exterior insulation R-value ²	R-0	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [FO5]	Basement wall exterior insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.7 [FO6]	Basement wall exterior insulation depth.	N/A	____ ft.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.9 [FO7]	Crawl space wall insulation R-value.	R-0	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [FO8]	Crawl space wall insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.9 [FO9]	Crawl space continuous vapor retarder installed with joints overlapped by 6 inches and sealed, and extending at least 6" up the stem wall.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2.1 [FO10]	Exposed foundation insulation protection.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.8 [FO11]	Snow melt controls.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments/Assumptions: _____

² Basement insulation is not required in warm-humid locations. 6/9/2011



Inspection Report

General building information only required if different than above Building ID: _____

Date: _____ Name of Evaluator(s): _____

Building Name & Address: _____ Conditioned Floor Area: _____ ft²

Building Contact: Name: _____ Phone: _____ Email: _____

Compliance Approach (check all that apply): Prescriptive Trade-Off Performance

Compliance Software Used: _____ Green Building/Above-Code Program: _____

IECC Section #	Framing / Rough-In Inspection	Code Value	Verified Value	Complies				Comments/Assumptions
				Y	N	N/O	N/A	
402.1.1, 402.3.4 [FR1]	Door U-factor. ³	U-0.65	U-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.1, 402.3.3 [FR2]	Glazing U-factor (area-weighted average). ³	U-0.65 Impact Rated: U-0.75	U-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.2, 402.3.3, 402.5 [FR3]	Glazing SHGC value, including sunrooms (area-weighted average). ⁴	SHGC: 0.3 (0.5 max) ⁵	SHGC: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.1.3 [FR4]	Glazing labeled for U-factor and SHGC (or default values used).			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.3 [FR5]	Skylight U-factor. ⁴	U-0.75	U-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.3, 402.5 [FR6]	Skylight SHGC value, including sunrooms. ⁴	SHGC: 0.3 (0.5 max) ⁵	SHGC: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.1.3 [FR7]	Skylights labeled for U-factor and SHGC (or default values used).			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.5 [FR8]	Sunroom glazing U-factor.	U-0.65 Impact Rated: U-0.75	U-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1, 402.3.5 [FR9]	Sunroom skylight U-factor.	U-0.75	U-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1 [FR10]	Mass wall exterior insulation R-value.	R-4 ⁶	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [FR11]	Mass wall exterior insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.2.1 [FR12]	Duct insulation.	Attic Supply: R-8 Other: R-6	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.2.2 [FR13]	Duct sealing complies with listed sealing methods.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.2.2 [FR14]	Duct tightness via rough-in test. If applicable, verification via post-construction test should be marked N/A.	Across System: 6 cfm No Air Handler: 4 cfm	____ cfm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.2.3 [FR15]	Building cavities NOT used for supply ducts.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

402.4.5 [FR16]	IC-rated recessed lighting fixtures meet infiltration criteria.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
403.3 [FR17]	HVAC piping insulation.	R-3	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
403.4 [FR18]	Circulating hot-water piping insulation.	R-2	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
403.5 [FR19]	Dampers installed on all outdoor intake and exhaust openings.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
402.4.4 [FR20]	Glazed fenestration air leakage.	0.3 cfm/ft ²	____ cfm/ft ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
402.4.4 [FR21]	Swinging door air leakage.	0.5 cfm/ft ²	____ cfm/ft ²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
402.4.4 [FR22]	Fenestration and doors labeled for air leakage.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments/Assumptions: _____

¹ One side-hinged door up to 24 ft² can be exempted from the prescriptive door U-factor requirements.
² Up to 16 ft² of glazed fenestration, including skylights, may be exempted from U-factor and SHGC requirements under the prescriptive approach.
³ SHGC mandatory maximum using trade-offs.
⁴ If more than 1/2 the insulation is on the interior, mass wall interior insulation requirement applies (R-6).
 6/9/2011



Inspection Report

General building information only required if different than above Building ID: _____
 Date: _____ Name of Evaluator(s): _____
 Building Name & Address: _____ Conditioned Floor Area: _____ ft²
 Building Contact: Name: _____ Phone: _____ Email: _____
 Compliance Approach (check all that apply): Prescriptive Trade-Off Performance
 Compliance Software Used: _____ Green Building/Above-Code Program: _____

IECC Section #	Insulation Inspection	Code Value	Verified Value	Complies			Comments/Assumptions
				Y	N	N/A	
402.1.1, 402.2.5, 402.2.6 [N17]	Floor insulation R-value.	Wood: R-13 Steel: ⁷ See footnote	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [N2]	Floor insulation installed per manufacturer's instructions, and in substantial contact with the subfloor.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1 402.2.5 402.2.4 [N3]	Wall insulation R-value.	Wood: R-13 Mass: ⁸ R-6 Steel: ⁸ See footnote	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [N4]	Wall insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.1.1 [N5]	Basement wall interior insulation R-value.	R-0	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [N6]	Basement wall interior insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.7 [N7]	Basement wall interior insulation depth.	N/A	____ ft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.11 [N8]	Sunroom wall insulation R-value.	R-13	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [N9]	Sunroom wall insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.11 [N10]	Sunroom ceiling insulation R-value.	R-19	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.2 [N11]	Sunroom ceiling insulation installed per manufacturer's instructions.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.4.2, 402.4.2.1 [N12]	Air sealing complies with sealing requirements via blower door test. If applicable, verification via visual inspection should be marked N/A.	ACH 50 ≤ 7	ACH 50 = ____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.1 [N13]	All installed insulation labeled or installed R-value provided.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.4.1, 402.4.2 [N14]	Air sealing of all openings and penetrations via visual inspection: • Site-built fenestration • Window/door openings • Utility penetrations • Attic access openings If applicable, verification via blower door should be marked N/A.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

402.4.1, 402.4.2 [N15]	Air sealing of all envelope joints and seams via visual inspection: • Dropped ceilings • Knee walls • Assemblies separating garage • Tubs and showers • Common walls between units • Rtn joint junctions If applicable, verification via blower door should be marked N/A.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.4.1, 402.4.2 [N16]	Air sealing of all other sources of infiltration, including air barrier, via visual inspection. If applicable, verification via blower door should be marked N/A.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments/Assumptions: _____

⁷ Floor steel frame equivalent: R-19 in 2x6 or R-19+R-6 in 2x6 or 2x10
⁸ If more than 1/2 the insulation is on the exterior, mass wall exterior insulation requirement applies (R-4).
⁹ Wall steel frame equivalent: R-13+R-6; R-15+R-4; R-21+R-3; R-4+R-10
 6/9/2011



Inspection Report

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 Building Name & Address: _____ Conditioned Floor Area: _____ ft.²
 Building Contact: Name: _____ Phone: _____ Email: _____
 Compliance Approach (check all that apply): Prescriptive Trade-Off Performance
 Compliance Software Used: _____ Green Building/Above-Code Program: _____

IECC Section #	Final Inspection Provisions	Code Value	Verified Value	Complies				Comments/Assumptions
				Y	N	N/A	N/A	
402.1.1 402.2.1 402.2.2 [F7.2]	Ceiling insulation R-value.	Wood: R-30 Steel Truss ¹⁰ Steel Joist ¹¹	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
303.1.1.1, 303.2 [F7.2]	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft. ² .			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.2.3 [F13]	Attic access hatch and door insulation.	R-30	R-____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.2.2 [F14]	Duct tightness via post-construction test. If applicable, verification via rough-in test should be marked N/A.	To Outdoors: 8 cfm Access System: 12 cfm	____ cfm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.6 [F15]	Heating and cooling equipment type and capacity as per plans.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
404.1 [F16]	Lighting - 50% of lamps are high efficacy.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
401.3 [F17]	Certificate posted.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
402.4.3 [F18]	Wood burning fireplace - gasketed doors and outdoor air for combustion.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.1.1 [F19]	Programmable thermostats installed on forced air furnaces.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.1.2 [F110]	Heat pump thermostat installed on heat pumps.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.4 [F111]	Circulating service hot water systems have automatic or accessible manual controls.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
403.9 [F112]	Pool heaters, covers, and automatic or accessible manual controls.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Additional Comments/Assumptions: _____

KEY ¹ High Impact (Tier 1) ² Medium Impact (Tier 2) ³ Low Impact (Tier 3)

¹⁰ Steel truss equivalent: R-38; R-30+R-3; R-26+R-5.
¹¹ Steel joist equivalent: R-38 in 2x4 or 2x6 or 2x8; R-49 in any framing.
 6/9/2011

Other Software Tools – ERI

- Accredited Rating Software
 - ANSI/RESNET/ICC 301-2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index
 - First published March 2014
 - Repudiated January 2015
- Software Providers
 - National Registry of Accredited Rating Software Programs
www.resnet.us
 - EnergyGauge, REM/Rate, Right-Energy HERS, Ekotrope, HERS Module, ICF International Beacon Residential



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION



Thank You

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