

# **Federal Tax Incentives for Building Energy Efficiency**

**DOE Building Energy Codes Conference  
Denver, Colorado**

**Steve Baden - RESNET  
[www.resnet.us](http://www.resnet.us)**

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*Residential Energy Services Network*

*Setting the STANDARD  
for QUALITY*

## **RESNET's Key Services**

**Maintain National Home Energy Rating Standards**

**Accredit Rating Providers, Rating Software Programs, & Rater Training Providers**

**Work with the Mortgage Industry in Developing and Promoting New Energy Mortgage Products**

# **National Home Energy Rating Standards**

**Rating Program Administration**

**Technical Guidelines**

**Rater Training and Certification**

# **What Are Ratings Used For?**

**Energy Efficient Mortgages**

**ENERGY STAR Home labeling**

**Performance option for energy code compliance in 16 states**

**Federal tax credit**

## **2005 Energy Policy Act**

- + Signed Into Law by President Bush in August 2005**
- + First Comprehensive Energy Legislation since 1992**
- + Among Provisions is Tax Incentives for Building Energy Efficiency**

## **2005 Energy Policy Act**

### **Key Building Tax Incentives**

- + New Energy Efficient Homes Tax Credit**
- + Existing Homes Tax Credit**
- + Commercial Building Tax Deduction**

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# **Federal Tax Incentives for Building Energy Efficiency**

**RESNET Web Site**

**[www.resnet.us/taxcredits](http://www.resnet.us/taxcredits)**

## Federal Tax Credit for New Homes

### Site Built Homes

**\$2,000 to builder for each home whose performance is calculated to exceed Heating and Cooling Use of Section 404 of 2004 Supplement of the IECC by 50% (Does not count water heating/renewable energy production – covered by other incentives)**

# **Federal Tax Credit for New Homes**

## **Effective Dates**

**Homes built after August 2005 and purchased between January 1, 2006 and January 1, 2008**

## **Federal Tax Credit for New Homes**

### **IRS Rule – IRS 2006-27**

- + 3<sup>rd</sup> Party Inspection Required –  
Certified by RESNET or Equivalent  
Rating Certification Organization**
- + Software Tool Must Comply with  
RESNET Software Test Specifications**

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**Procedures for Certifying  
Residential Energy Efficiency  
Tax Credits For New Homes**

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**Residential Energy Services Network, Inc.**  
P.O. Box 4561  
Oceanside, CA 92052-4561  
<http://resnet.us/>

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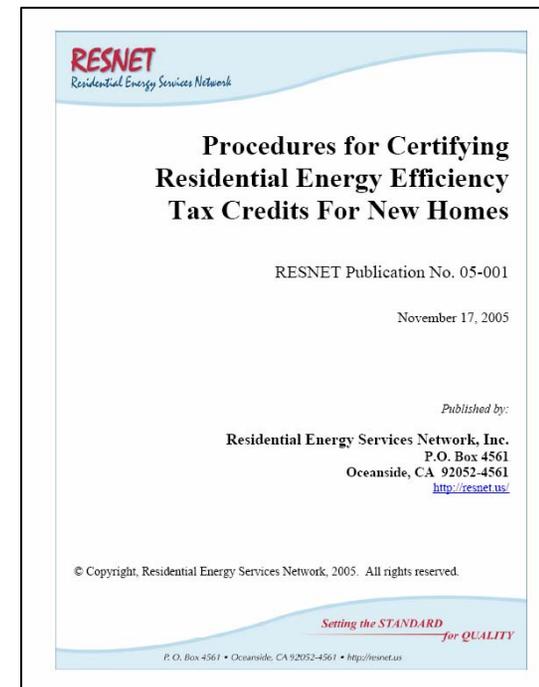
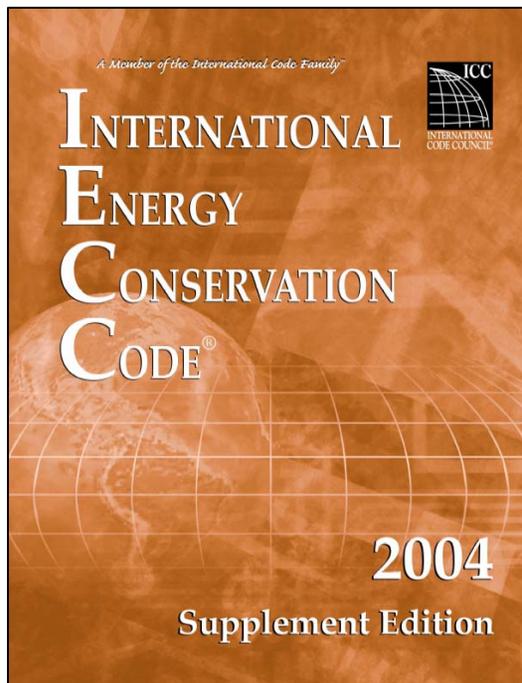
P. O. Box 4561 • Oceanside, CA 92052-4561 • <http://resnet.us>

[www.resnet.us/standards/tax\\_credits/procedures](http://www.resnet.us/standards/tax_credits/procedures)

# Difference Between Tax Credit and IECC

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- Rules are different for Tax Credits than IECC. Water heating removed



## **RESNET Federal Tax Credit Software Specifications**

- + Auto-Generation of the Reference Homes (2004 Supplement to IECC)**
- + HERS BESTEST**
- + RESNET HVAC Tests**
- + Duct Distribution System Efficiencies Tests**

## **Federal Tax Credit Software Tools Accredited by RESNET**

- + Energy Gauge USA (Florida Solar Energy Center)**
- + Micropas (Enercomp, Inc.)**
- + REM/Rate (Architectural Energy Corporation)**
- + Builder Energy Solutions (ICF Resources)**

## **RESNET Federal Tax Credit Inspection Specifications**

- + Homes Shall be Independently Field Tested (Sampling Allowed)**
- + Field Verification Shall Follow RESNET's Home Energy Rating Procedures**
- + Person Who Certify Home's Qualification for Tax Credit Shall be Trained and Certified in Accordance with RESNET's National Home Energy Rating Procedures**

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## IRS Form that Contractor Files

<p>Form <b>8908</b></p> <p>Department of the Treasury Internal Revenue Service</p>	<p><b>Energy Efficient Home Credit</b></p> <p>▶ Attach to your tax return.</p>	<p>OMB No. 1545-1979</p> <p><b>2005</b></p> <p>Attachment Sequence No. 153</p>																						
Name(s) as shown on return		Identifying number																						
<p><b>Caution:</b> This form may only be filed for fiscal years ending in 2006.</p>																								
<p><b>1a</b> Enter the total number of qualified energy efficient homes meeting the 50% standard that were substantially completed after August 8, 2005, and sold after December 31, 2005 (see instructions) . . . . . 1a _____ b Multiply line 1a by \$2,000 . . . . .</p> <p><b>2a</b> Enter the total number of qualified energy efficient manufactured homes meeting the 30% standard that were substantially completed after August 8, 2005, and sold after December 31, 2005 (see instructions) . . . . . 2a _____ b Multiply line 2a by \$1,000 . . . . .</p> <p><b>3</b> Form 8908 credits from pass-through entities:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="border-top: 1px solid black; border-bottom: 1px solid black;">If you are a—</td> <td style="border-top: 1px solid black; border-bottom: 1px solid black;">Then enter the Form 8908 credits from—</td> <td style="width: 10%;"></td> </tr> <tr> <td style="border-right: 1px solid black;">a Shareholder . . . . .</td> <td style="border-right: 1px solid black;"></td> <td>Schedule K-1 (Form 1120S) box 13, code U . . . . .</td> <td rowspan="2" style="font-size: 2em; vertical-align: middle;">}</td> </tr> <tr> <td style="border-right: 1px solid black;">b Partner. . . . .</td> <td style="border-right: 1px solid black;"></td> <td>Schedule K-1 (Form 1065) box 15, code U . . . . .</td> </tr> </table> <p><b>4</b> <b>Current year credit.</b> Add lines 1b, 2b, and 3. Enter the total here and on line 1t of Form 3800. <b>Exception:</b> S corporations and partnerships, see instructions.</p>		If you are a—	Then enter the Form 8908 credits from—		a Shareholder . . . . .		Schedule K-1 (Form 1120S) box 13, code U . . . . .	}	b Partner. . . . .		Schedule K-1 (Form 1065) box 15, code U . . . . .	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;"><b>1b</b></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;"><b>2b</b></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"><b>3</b></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;"><b>4</b></td> <td></td> <td></td> </tr> </table>	<b>1b</b>			<b>2b</b>			<b>3</b>			<b>4</b>		
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<b>4</b>																								

## Florida Solar Energy Center Study

- + Simulations and calculations performed using EnergyGauge® USA – qualified through software test
- + Only one of many possible solutions provided for each climate (best orientation)
- + No mechanical ventilation – all homes with natural infiltration at 0.35 ach
- + All insulation is assumed installation Grade I
- + Results indicate that many new homes, in all parts of the country, may ultimately qualify for federal tax credits.

## Conclusions ...

- + Qualification not difficult in very mild climates
- + Window selection is important, with changes in SHGC making a significant difference, even in northern climates
- + Efficient lighting and appliances provide significant benefit in cooling dominated climates
- + Relatively “standard” envelope features can make the goal with only “moderate” increases in HVAC efficiencies if ducts are good
- + Tight ducts located in conditioned space provide significant benefit for both heating and cooling.

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# **FAQs On New Homes Credit**

**Raters – Builders**

**[www.resnet.us/taxcredits](http://www.resnet.us/taxcredits)**

# **Federal Tax Credit for Commercial Buildings**

**Offers businesses a deduction of \$1.80 per square foot for commercial buildings that achieve a 50% reduction in annual energy, compared to ASHRAE/IESNA 90.1-2001**

**IRS Rule 2006-52**

## Federal Tax Credit for Existing Homes

**10% tax credit to homeowner of up to a maximum credit of \$500 to improve the energy efficiency of existing homes.**

### **Covers:**

- + Insulation**
- + Windows**
- + Doors**
- + ENERGY STAR labeled roofs**

## Federal Tax Credit for Existing Homes

### In Addition Includes:

- + Advanced Main Air Circulating Fan (\$50)
- + High Efficiency Furnaces and Water Heaters (\$150)
- + High Efficiency Heat Pumps (\$300)

Maximum credit is \$500, however

# **Federal Tax Credit for Existing Homes**

## **Effective Dates**

**Improvements need to be made between January 1, 2006 and January 1, 2008**

# **Federal Tax Credit for Existing Homes**

## **IRS Rule – IRS 2006-26**

- + Products Must Meet Criteria in 2000 IECC**

## **Legislation to Extend Federal Building Energy Efficiency Tax Incentives**

### **Grassley-Baucus Bill (S 2401)**

- + Extends New Homes Builder Credit to December 31, 2010**
- + Extends Commercial Building Deduction to December 31, 2010**

## **Legislation to Extend Federal Building Energy Efficiency Tax Incentives**

### **Snowe – Feinstein Bill (S 3628)**

- + Extends New Homes Builder Credit to December 31, 2010**
- + Modifies and Extends Commercial Building Deduction to December 31, 2010**
- + Creates Performance Based Tax Credit for Existing Homes of Up to \$4,000**

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# **2007 RESNET Building Performance Conference**

**February 19 – 21 – San Diego, CA**

**Comprehensive Review of Enhancements to  
ENERGY STAR & Rating Standards**

**Federal Tax Credits**

**[www.resnet.us/conference](http://www.resnet.us/conference)**

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# **Become Part of the RESNET Network**

**Join RESNET**

**[www.resnet.us/membership/become](http://www.resnet.us/membership/become)**

# Home Characteristics

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<b>City</b>	<b>Area</b>	<b>Home Description</b>
Miami	2,000	1-story, block, slab-on-grade
Houston	2,000	1-story, frame, slab-on-grade
Dallas	2,400	2-story, frame, slab-on-grade
Atlanta	2,400	2-story, frame, on crawl space
Las Vegas	2,000	1-story, frame, slab-on-grade
Long Beach*	2,400	2-story, frame, slab-on-grade
Sacramento*	2,400	2-story, frame, slab-on-grade
Baltimore	2,000	1-story, frame, on crawl space
Burlington	2,400	2-story, frame, w/cond. basement

\* Very similar to examples provided by Micropas

# Envelope Characteristics

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<b>City</b>	<b>Floor</b>	<b>Roof</b>	<b>Ceiling</b>	<b>Walls</b>
Miami	R-0	Tile*, RBS	R-30	R-7.6
Houston	R-0	Comp, RBS	R-32	R-13
Dallas	R-0	Comp, RBS	R-32	R-13
Atlanta	R-30	Comp, RBS	R-38	R-11+3
Las Vegas	R-0	Comp, RBS	R-32	R-13
Long Beach	R-0	Comp, RBS	R-30	R-13
Sacramento	R-0	Comp, RBS	R-30	R-13
Baltimore	R-32	Comp	R-48	R-13+5
Burlington	R-0	Comp	R-48	R-19, 19+3

\* Light in color

# Window Characteristics

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<b>City</b>	<b>Type</b>	<b>Frame</b>	<b>WFA%</b>	<b>U-Fact</b>	<b>SHGC</b>
Miami	Low-e	Metal	18	0.57	0.28
Houston	Low-e	Metal	18	0.57	0.28
Dallas	Low-e	Vinyl	18	0.47	0.40
Atlanta	Low-e	Vinyl	18	0.47	0.40
Las Vegas	Low-e	Vinyl	18	0.47	0.40
Long Beach	Low-e	Vinyl	16.5 *	0.47	0.40
Sacramento	Low-e	Vinyl	16.5 *	0.47	0.45
Baltimore	Low-e	Vinyl	18	0.47	0.55
Burlington	Low-e	Vinyl	18	0.33	0.55

\* To follow Micropas example

# Lighting & Appliances

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City	Fl_lights*	Frig	dWash	cFans
Miami	22/32	eStar	eStar	eStar
Houston	20/32	eStar	eStar	---
Dallas	20/32	eStar	eStar	---
Atlanta	std	std	std	---
Las Vegas	20/32	eStar	eStar	---
Long Beach	std	std	std	---
Sacramento	std	std	std	---
Baltimore	std	std	std	---
Burlington	std	std	std	---

\* high-efficiency fixtures / qualifying fixture locations

# HVAC Equipment

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<b>City</b>	<b>Ducts</b>	<b>Heating</b>	<b>Cooling</b>
Miami	Interior, tight*	COP 1	SEER 15
Houston	Interior, tight*	HSPF 8.0	SEER 14
Dallas	Interior, tight*	HSPF 8.0	SEER 14
Atlanta	Interior, tight*	HSPF 8.0	SEER 14
Las Vegas	Interior, tight*	HSPF 7.8	SEER 14.5
Long Beach	R-6 attic, tight*	AFUE 80	SEER 13
Sacramento	R-6 attic, tight*	AFUE 92	SEER 13
Baltimore	Interior, tight*	AFUE 94	SEER 13
Burlington	Interior, tight*	AFUE 94	SEER 13

\* tight = tested to 3 cfm<sub>25,out</sub> per 100 ft<sup>2</sup> conditioned area