



FLORIDA SOLAR ENERGY CENTER

Creating Energy Independence Since 1975

Energy Tax and Rebate Incentives

Rob Vieira
Director, Buildings Research

Presented by Muthusamy Swami
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A Research Institute of the University of Central Florida





Tax Credits and Deductions



\$1000 as a

❖ Credit = \$1000

❖ Deduction = \$1000 x tax rate

➤ assume 28% tax rate=> $\$1000 \times 0.28 = \280





Federal Commercial Tax Credit - Status



Notice 2006-52

- ❖ This notice sets forth **interim guidance**, pending the issuance of regulations, relating to the deduction for energy efficient commercial buildings under § 179D of the Internal Revenue Code.





Federal Commercial Tax Credit - Time Frame



- ❖ Sections 179D(d)(1) and 179D(f) allow a deduction to a taxpayer for part or all of the cost of certain partially qualifying commercial **building property that the taxpayer places in service after December 31, 2005, and before January 1, 2008.**
- ❖ [*Legislators are considering extending credit until 2015*]





Federal Commercial Tax Credit -

Whole Building Qualifications



It is certified that the interior lighting systems, heating, cooling, ventilation, and hot water systems, and building envelope that are incorporated into the building, **will reduce the total annual energy and power costs** with respect to combined usage of the building's heating, cooling, ventilation, hot water, and interior lighting systems **by 50 percent** or more as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001.





Federal Commercial Tax Credit -

Whole Building Qualifications



The required 50-percent reduction must be accomplished solely through energy and power cost reductions for the heating, cooling, ventilation, hot water, and interior lighting systems. **Reductions in any other energy uses**, such as receptacles, process loads, refrigeration, cooking, and elevators, **are not taken into account** in determining whether the 50- percent reduction is achieved.





Federal Commercial Tax Credit - Whole Building Tax Deduction



- ❖ Shall not exceed the excess (if any) of--
- ❖ (i) $\$1.80 \times$ the square footage of the building, over
- ❖ (ii) the aggregate amount of the § 179D deductions allowed with respect to the building for all prior taxable years.





Federal Commercial Tax Credit -

Partial Property Qualification



- ❖ Lighting will meet either a or b
 - a. **will reduce the total annual energy and power costs** with respect to combined usage of the building's heating, cooling, ventilation, hot water, and interior lighting systems **by 16²/₃ %** or more as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001.





Federal Commercial Tax Credit -

Partial Property Qualification



- ❖ Lighting will meet either a or b. **Method b:**
 - (i) Achieve **a reduction in lighting power density of at least 25 percent (50 percent in the case of a warehouse)** of the minimum requirements in Table 9.3.1.1 or Table 9.3.1.2 (not including additional interior lighting power allowances) of Standard 90.1-2001;
 - (ii) Have controls and circuiting that comply fully with the mandatory and prescriptive requirements of Standard 90.1-2001;
 - (iii) Include provision for bi-level switching in all occupancies except hotel and motel guest rooms, store rooms, restrooms, and public lobbies; and
 - (iv) Meet the minimum requirements for calculated lighting levels as set forth in the IESNA Lighting Handbook, Performance and Application, Ninth Edition, 2000.





Federal Commercial Tax Credit -

Partial Property Qualification



- ❖ Heating, Cooling, Ventilation and Hot Water
 - **will reduce the total annual energy and power costs** with respect to combined usage of the building's heating, cooling, ventilation, hot water, and interior lighting systems **by 16²/₃%** or more as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001.





Federal Commercial Tax Credit -

Partial Property Qualification



- ❖ Energy Efficient Building Envelope Property
 - **will reduce the total annual energy and power costs** with respect to combined usage of the building's heating, cooling, ventilation, hot water, and interior lighting systems **by 16²/₃%** or more as compared to a Reference Building that meets the minimum requirements of Standard 90.1-2001.





Federal Commercial Tax Credit -

Partial Property Tax Deduction



- ❖ Shall not exceed the excess (if any) of--
 - (i) **\$0.60 x the square footage of the building** for each partial property element, over
 - (ii) the aggregate amount of the § 179D deductions allowed with respect to the building for all prior taxable years.





Federal Commercial Tax Credit - Notice 2006-52 Other Info



- ❖ **Certificate** – certificate must include ten item list of information from address to a list identifying the energy components
- ❖ **Software** – must be listed by DOE and must pass (ANSI/ASHRAE) Standard 140-2004 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs – [*Florida's EnergyGauge will be modified and tested*]
- ❖ **Tax Payer** - does not need to send in certificate but should keep it on file





Residential





Residential Tax Credits -

New Home Qualifications



- ❖ 2006 and 2007 time frame
- ❖ **Homes must reduce energy use for heating and cooling only (not hot water) by 50%** compared to the national model code – the 2004 IECC Supplement (assuming an SEER-13 air conditioner)
- ❖ Must use approved software to determine compliance [*EnergyGauge USA is approved*]





Residential Tax Credits -

Sample Miami Qualifying Home



- ❖ Windows SHGC 0.28
- ❖ White barrel tile roof, R30 ceiling insulation
- ❖ Block with R7.6 insulation
- ❖ Sealed and Tested Duct System
- ❖ SEER 15 Air Conditioning
- ❖ Programmable Thermostat
- ❖ Energy Star Ceiling Fans, Refrigerator
- ❖ 72% Fluorescent lighting





Residential Tax Credits -

Sample Tampa Qualifying Home



- ❖ Windows SHGC 0.28
- ❖ White barrel tile roof, R30 ceiling insulation
- ❖ Block with R7.6 wall insulation
- ❖ Sealed and Tested Duct System
- ❖ SEER 16 HSPF 9 Heat Pump
- ❖ Programmable Thermostat
- ❖ Energy Star Ceiling Fans, Refrigerator
- ❖ 72% Fluorescent lighting





Residential Tax Credits -

Sample Dallas Qualifying Home



- ❖ Windows SHGC 0.40, U-value 0.47
- ❖ Wood frame walls with R-13 in cavity
- ❖ White shingle with R30 ceiling insulation
- ❖ Sealed and Tested Duct System
- ❖ SEER 14 HSPF 7.8 Heat Pump
- ❖ Programmable Thermostat
- ❖ Energy Star Refrigerator and Dishwasher
- ❖ 70% Fluorescent lighting





Residential Tax Credits -

Sample Houston Qualifying Home



- ❖ Windows SHGC 0.28, U-value 0.57
- ❖ Wood frame walls with R-13 in cavity
- ❖ White shingle with R30 ceiling insulation
- ❖ Sealed and Tested Duct System
- ❖ SEER 14 HSPF 7.8 Heat Pump
- ❖ Programmable Thermostat
- ❖ Energy Star Refrigerator and Dishwasher
- ❖ 70% Fluorescent lighting





Residential Tax Credits -

Sample Baltimore Qualifying Home



- ❖ Windows SHGC 0.55, U-value 0.47
- ❖ Wood frame walls w R-13 in cavity +R5 sheathing
- ❖ R30 crawlspace, R48 ceilings
- ❖ Sealed and Tested Duct System
- ❖ SEER 13, Natural Gas 0.94 AFUE furnace
- ❖ Programmable Thermostat
- ❖ Default appliances and lighting





Residential Tax Credits -

Sample Burlington Qualifying Home



- ❖ Windows SHGC 0.55, U-value 0.33
- ❖ Wood frame walls w R-13 in cavity +R5 sheathing
- ❖ R48 attic insulation with dark roof
- ❖ Basement -- R15 walls and R19 ceiling of basement
- ❖ Sealed and Tested Duct System
- ❖ SEER 13, Natural Gas 0.94 AFUE furnace
- ❖ Programmable Thermostat
- ❖ Default appliances and lighting





Residential Tax Credits - New Home Tax Credit



- ❖ Goes to HomeBuilder
- ❖ \$2000 per home





Residential Tax Credits – Site Inspections



- ❖ Certifier inspects dwelling and confirms all features affecting heating and cooling energy consumption comply with the design specifications provided.
- ❖ With respect to builders who build at least 85 homes a year or build subdivisions with the same floor plan using the same subcontractors, the eligible certifier may use the sampling protocol found in the current ENERGY STAR® for Homes Sampling Protocol Guidelines instead of inspecting all of the homes. The protocol guidelines can be found at:
- ❖ http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.pt_homes_policies#SamplingProtocol





New Manufactured Home - Qualifications



- ❖ 30% reduction in home energy use





New Manufactured Home - Tax Credit



- ❖ Goes to HomeBuilder
- ❖ \$1000 per home





Existing Home Tax Credit



- ❖ Credit is for Qualifying Energy-Efficient Property and Improvements





Existing home Tax Credit -

Qualifying Efficiency Improvements



- ❖ Any insulation material or system specifically designed to reduce heat loss or gain
- ❖ Exterior windows (including skylights)
- ❖ Exterior doors
- ❖ Any metal roof having pigmented coatings specifically designed to reduce heat gain which meet Energy Star program requirements.





Existing home Tax Credit -

Tax Credit for Efficiency Improvements



- ❖ 10% of the amount expended
- ❖ up to a maximum existing home credit limit of \$500





Existing home Tax Credit -

Qualifying Energy Property



- ❖ Electric heat pump water heater with EF of 2.0 or greater
- ❖ Electric air source heat pumps with HSPF of 9.0 or greater
- ❖ Geothermal heat pumps (EER varies with type)
- ❖ Central air conditioner that receives the highest efficiency tier established by the Consortium of Energy Efficiency
- ❖ Gas or oil water heater with EF or 0.80 or greater
- ❖ Gas or oil furnace or boiler with AFUE of 95% or greater
- ❖ Advanced main air circulating fan used in gas or oil furnace that uses no more than 2% of the total annual energy use of the furnace.





Existing home Tax Credit -

Tax Credit for Energy Property



- ❖ \$50 for any advanced main air circulating fan
- ❖ \$150 for any qualified natural gas, propane, or oil furnace or hot water boiler
- ❖ \$300 for any other item of qualified energy property
- ❖ up to a maximum existing home credit limit of \$500





Existing home Tax Credit - Taxpayer responsibility



- ❖ *Taxpayer Reliance.* Except as provided in section 4.02(3) and (6) of this notice, a taxpayer may rely on a manufacturer's certification that a building envelope component is an Eligible Building Envelope Component. A taxpayer is not required to attach the certification statement to the return on which the credit is claimed.
- ❖ However, 1.6001-1(a) of the Income Tax Regulations requires that taxpayers maintain such books and records as are sufficient to establish the entitlement to, and amount of, any credit claimed by the taxpayer. Accordingly, a taxpayer claiming a credit for an Eligible Building Envelope Component should retain the certification statement as part of the taxpayer's records





Existing home Tax Credit -

Manufacturer Certification Statement



- ❖ (a) The name and address of the manufacturer;
- ❖ (b) Identification of the component as an insulation material or system, an exterior window or skylight, an exterior door, or a metal roof;
- ❖ (c) The make, model number, and any other appropriate identifiers of the component;
- ❖ (d) A statement that the component is an Eligible Building Envelope Component that qualifies for the credit allowed under § 25C;
- ❖ (e) In the case of an exterior window, skylight, or door (other than a storm window or storm door), the climate zone or zones for which the applicable prescriptive criteria are satisfied;
- ❖ (f) In the case of a storm window- the applicable window and climate type
- ❖ (g) A declaration, signed by authorized person to bind the manufacturer:
- ❖ “Under penalties of perjury, I declare that I have examined this certification statement, and to the best of my knowledge and belief the facts are true, correct, and complete.”





Federal Residential Solar Tax Credits



- ❖ For **solar hot water systems**, the allowable **tax credit is 30%** of the qualified solar system expenditures up to a maximum tax credit limitation of \$2,000.





Federal Residential Solar Tax Credits



- ❖ For **solar electric (photovoltaic) systems**, the allowable **tax credit is 30%** of the qualified solar system expenditures up to a maximum tax credit limitation of \$2,000.





Federal Business Investment Tax Credit



- ❖ Increases from 10% (pre-2006) to **30% for investments in solar thermal and solar photovoltaic.**
- ❖ No dollar limit.





My Questions -Federal Tax Credits



- ❖ What is the most I can get for retrofitting my home (non-solar)?
- ❖ ..
- ❖ \$500





My Questions -Federal Tax Credits



- ❖ Who gets the new home tax credit (Site-built) and how much is it worth?
- ❖ ..
- ❖ The builder and \$2000





My Questions -Federal Tax Credits



- ❖ What energy level must be achieved to qualify for the new home tax credit (Site-built)?
- ❖ ..
- ❖ 50% heating and cooling with at least 10% from the envelope





My Questions -Federal Tax Credits



- ❖ What is the most I can get for my commercial building improvements (non-solar)?
- ❖ ..
- ❖ \$1.80/square-foot





My Questions -Federal Tax Credits



- ❖ What is the most I can get for a residential solar hot water system?
- ❖ ..
- ❖ 30% not to exceed \$2000

