

Energy-Efficiency Home and Vehicle Tax Credits

The American Recovery and Reinvestment Act of 2009 (ARRA) extends, expands, and simplifies the federal income tax credits for homeowners who make energy efficiency home improvements. The law extends the consumer tax benefits for another year, through 2010; triples the total available tax credit from \$500 to \$1,500; and increases the tax credit to 30 percent of the cost of each qualified energy efficiency improvement. The law also removes the cap on geothermal heat pumps and solar water heaters through 2016.

Energy Efficiency Can Lower Your Federal Tax Bill as Well as Your Energy Bills

1. Introduction to Tax Credits

This document provides details on valuable federal income tax credits for consumers who purchase fuel-efficient hybrid-electric or diesel vehicles and who make certain, specified energy-efficiency upgrades to their homes. These credits, which started in 2006, were changed most recently in the "stimulus" bill in February 2009.

Consumers who employ energy-efficient products in their homes or drive fuel-efficient vehicles enjoy multiple benefits. At home, these benefits include lower home energy bills, increased indoor comfort, and reduced air pollution. On the road, consumers will increase their gas mileage so they lower their gasoline costs, and they will dramatically reduce the amount of air pollution from their vehicles.

In addition to helping savvy consumers lower their energy bills at home and on the road, the energy-efficient products eligible for the new federal tax credits actually lower the amount of federal income taxes that these taxpayers must pay Uncle Sam.

What is a tax credit? You don't receive an income tax credit when you buy the product, like an instant rebate. You claim the credit on your federal income tax form at the end of the year. The credit then increases the tax refund you receive or decreases the amount you have to pay.

Tax credits vs. tax deductions: In general, a *tax credit* is more valuable than a similar *tax deduction*. A tax credit reduces the tax you pay, dollar-for-dollar. Tax deductions – such as those for home mortgages and charitable giving – lower your taxable income. If you are in the highest 35-percent tax bracket, the income tax you pay is reduced by 35 percent of the value of a tax deduction. But a tax credit reduces your federal income tax by 100 percent of the amount of the credit.

Please note: We at the Alliance to Save Energy are experts on energy efficiency, not taxes, and we do not provide tax advice; you may want to consult a tax professional.

2. Consumer Tax Credit Information

Details on the tax credits for hybrid vehicles and for home improvements are located in Section 3 and Section 4 of this document. In addition, there is a consumer tax credit for geothermal heat pumps, solar energy and fuel cells (see [Section 5](#)).

The credit for home improvements has been extended through 2010. The hybrid vehicle tax credit phases out at a different time for each manufacturer.

Here is how much you could save on your taxes if you took advantage of some of these tax credits. But remember that your energy savings each year may be greater than the one-time tax savings:

Selected Tax Credits

Purchase	Tax savings	Notes
Hybrid car or SUV	\$250 to \$3,150	Credit depends on fuel economy and weight.
Home improvements: <ul style="list-style-type: none"> Central air conditioner, heat pump, furnace or boiler Windows, insulation and sealing 	30% of cost up to \$1,500	Only some Energy Star products (or levels of insulation) qualify.
Ground-source heat pump	30% of cost	Only Energy Star products qualify.

In some areas of the country, consumers also will be eligible for utility or state rebates or state tax incentives for the same homes, vehicles, and equipment. See the [DSIRE database of state incentives](#) for more information on state and utility incentives, or contact your state energy office or local utility for more information.

Tax Credits Available to Businesses

Businesses (and, indirectly, governments and nonprofit groups) also can get the tax credit for purchasing hybrid and diesel vehicles. Businesses have similar credits for geothermal heat pumps, solar equipment, and fuel cells. Tax deductions for efficient commercial buildings and for combined heat and power systems are available to businesses as well.

Businesses that sell certain other energy-efficient consumer products (see below) also are eligible for federal income tax credits. While these credits do not go directly to consumers, they could reduce the cost to consumers of:

- New energy-efficient homes through 2010;
- Energy-efficient refrigerators, clothes washers, and dishwashers through 2010.

Note: Additional tax credit information (for businesses, builders, consumers and more) is available at the [Tax Incentives Assistance Project \(TIAP\) Web site](#), including the latest information from IRS on the home energy efficiency tax credits.

3. Hybrid and Diesel Vehicle Tax Credit

You can get an income tax credit of \$250 – \$3,400 for buying or leasing a new hybrid gas-electric or diesel automobile. When it comes time to replace your old, fuel-inefficient vehicle for a new efficient hybrid or low-emissions vehicle, please consider [converting your old vehicle into a tax-deductible donation to the Alliance](#). Through our vehicle recycle service, we ensure that your old, fuel-inefficient vehicle will be permanently and responsibly taken off the roads through proper scrapping and recycling.

Who gets it? Individuals and businesses that buy a new hybrid or diesel car or truck. If a tax-exempt organization buys such a vehicle, the retailer may take the credit. For leased vehicles, the lesser may claim the credit.

What vehicles qualify? Hybrid vehicles that use less gasoline than the average vehicle of similar weight and that meet an emissions standard. “Lean-burn” diesel vehicles also qualify, but only a few diesel

vehicles meet the emissions standard (see below). There is a similar credit for plug-in hybrid or pure electric vehicles (which you can power by plugging them into a wall socket), alternative-fuel vehicles and fuel-cell vehicles, but these are not widely available. The vehicle must be in the United States.

How much is the credit? The tax credit amount could range from \$250 to \$3,400 depending on the fuel economy and the weight. If you buy more than one eligible vehicle, you can get a tax credit for each vehicle.

So far the following hybrid vehicles and credit amounts have been officially certified:

Vehicle Make & Model		Full Credit Effective:	50% Effective:	25% Effective:	No Credit Effective:
Chrysler and Dodge		Jan. 1, 2006	TBD	TBD	TBD
2009 Chrysler Aspen & Dodge Durango Hybrids		\$2,200	--	--	--
Ford Motor Company		Jan. 1, 2006 - Mar. 31, 2009	Apr. 1 – Sep. 30, 2009	Oct. 1 – Mar. 31, 2009	Apr. 1, 2010
2010 Ford Fusion and Mercury Milan Hybrids**		\$3,400	\$1,700	\$850	\$0
2009 Ford Escape and Mercury Mariner Hybrid	2W D	\$3,000	\$1,500	\$750	\$0
	4W D	\$1,950	\$975	\$487.50	\$0
2008 Ford Escape, Mercury Mariner	2W D	\$3,000	\$1,500	\$750	\$0
	4W D	\$2,200	\$1,100	\$550	\$0
2005 – 2007 Ford Escape Hybrid	2W D	\$2,600	\$1,300	\$650	\$0
	4W D	\$1,950	\$975	\$487.50	\$0

2006 – 2007 Mercury Mariner Hybrid	4W D	\$1,950	\$975	\$487.50	\$0
Mazda		Jan. 1, 2006	TBD	TBD	TBD
2009 Mazda Tribute Hybrid	2W D	\$3,000	--	--	--
	4W D	\$1,950	--	--	--
2008 Mazda Tribute Hybrid	2W D	\$3,000	--	--	--
	4W D	\$2,200	--	--	--
General Motors		Jan. 1, 2006	TBD	TBD	TBD
2009 Chevrolet Malibu Hybrid		\$1,500	--	--	--
2008 Chevrolet Malibu Hybrid		\$1,300	--	--	--
2008 – 09 Chevrolet Tahoe and GMC Yukon 1500 Hybrid (2WD & 4WD)		\$2,200	--	--	--
2008 – 09 Saturn Vue / Vue Green Line		\$1,550	--	--	--
2007 Saturn Vue Green Line		\$650	--	--	--
2009 Saturn Aura Green Line		\$1,500	--	--	--
2007 – 08 Saturn Aura Green Line		\$1,300	--	--	--
2006 – 2007 Chevrolet Silverado and GMC Sierra	2W D	\$250	--	--	--

Hybrid	4WD	\$650	--	--	--
2009 Chevrolet Silverado and GMC Sierra Hybrid (2WD & 4WD)		\$2,200	--	--	--
2009 Cadillac Escalade Hybrid	2WD	\$2,200	--	--	--
	4WD	\$1,800	--	--	--
Honda		Jan 1, 2006 - Dec 31, 2007	Jan. 1 – Jun. 30, 2008	July 1 – Dec. 31, 2008	Jan. 1, 2009
2006 – 2009 Civic Hybrid CVT		\$2,100	\$1,050	\$525	\$0
2006 – 2007 Accord Hybrid AT & Navi AT* (2006 w/ updated control calibration)		\$1,300	\$650	\$325	\$0
2006 Accord Hybrid AT & Navi AT* (w/o updated control calibration)		\$650	\$325	\$162.50	\$0
2005 – 2006 Insight CVT*		\$1,450	\$725	\$362.50	\$0
2005 Accord Hybrid AT & Navi AT*		\$650	\$325	\$162.50	\$0
2005 Civic Hybrid (SULEV) MT & CVT*		\$1,700	\$850	\$425	\$0
Nissan		Jan. 1, 2006	TBD	TBD	TBD
2007 – 2009 Altima Hybrid		\$2,350	--	--	--
Toyota		Jan. 1 – Sep. 30, 2006	Oct. 1, 2006 – Mar. 31, 2007	Apr. 1 – Sep. 30, 2007	Oct. 1, 2007

2005 – 2008 Prius	\$3,150	\$1,575	\$787.50	\$0
2007 – 2008 Camry Hybrid	\$2,600	\$1,300	\$650	\$0
2006 – 2008 Highlander Hybrid (2WD & 4WD)	\$2,600	\$1,300	\$650	\$0
2006 – 2008 Lexus RX400h (2WD & 4WD)	\$2,200	\$1,100	\$550	\$0
2008 Lexus LS 600h	--	--	\$450	\$0
2007 Lexus GS 450h	\$1,550	\$775	\$387.50	\$0

Tax credits for 2008 Toyota hybrids were phased out on Oct. 1, 2007

* Honda Hybrid AT = automatic transmission; CVT = continuously variable transmission; MT = manual transmission; SULEV = Super Ultra Low Emission Vehicle emissions rating.

** The Ford Fusion and Mercury Milan hybrid models are not expected to be commercially available until after the 50% phase-out reduction date. It is not certain whether a pre-order of a vehicle would qualify as a 'purchase' under IRS regulations.

Information Source: IRS (<http://www.irs.gov/businesses/corporations/article/0,,id=203122,00.html>). Updated March 24, 2009. The list of eligible vehicles is available at http://www.fueleconomy.gov/feg/tax_hybrid.shtml. Certain heavy hybrid vehicles, for commercial purposes, are also eligible for tax credits. The IRS maintains a list of such qualified vehicles at <http://www.irs.gov/businesses/article/0,,id=175456,00.html>.

You can check for updates on eligible vehicles at the [IRS website](#). The [actual formula for calculating the credits](#) is available below, in Section 6.1 of this document. Manufacturers should certify to buyers of a qualifying vehicle the amount of the credit for that vehicle. Also, companies that buy heavy-duty hybrid trucks can get a larger tax credit.

A 'patch' to the Alternative Minimum Tax for tax years 2008 and 2009 allows this credit to be claimed by those paying the AMT. It is uncertain if this will be extended to 2010 and beyond.

When is it available? The tax credit is for vehicles "placed in service" after December 31, 2006 and purchased on or before December 31, 2010. The vehicle tax credit is phased out for each manufacturer once that company has sold 60,000 eligible vehicles. At that point, the tax credit for that company's vehicles will be gradually reduced over the course of another year. The [phase-out schedule](#) is available in Section 6.2 of this document.

What do I need to do to get the vehicle tax credit? You will need to file [IRS Form 8910](#) with your taxes. In addition, you will need the certification from the manufacturer and need to keep at least receipts proving that you purchased an eligible vehicle. [Taxpayer qualification requirements](#) are available from the IRS web site. Accountants and tax advisors should also be able to provide more guidance. Very detailed information on the tax credit is available in the [IRS partial interim guidance for hybrid vehicle tax credit](#).

Wasn't there a tax incentive for hybrid vehicles purchased in 2005? Yes, there was a \$2,000 [tax deduction for hybrid vehicles through the end of 2005](#). This was generally worth less than the new tax credit.

Are there any other tax incentives available? Some state and local governments also provide incentives for hybrids. To see if you are eligible for a state or local government tax credit, you can view the U.S. Department of Energy's list of [State & Federal Incentives & Laws](#) or the [DSIRE database of state incentives](#).

Is there a credit for diesel or natural gas vehicles? Certain 'lean-burn' diesel vehicles also are eligible for the tax credit, and a few 2009 models have now been certified.

Vehicle Make & Model	Full Credit Effective:	50% Effective:	25% Effective:	No Credit Effective:
Audi	Jan. 1, 2006	TBD	TBD	TBD
2009 Audi Q7 3.0L TDI	\$1,150	--	--	--
BMW	Jan. 1, 2006	TBD	TBD	TBD
2009 335d Sedan	\$900	--	--	--
2009 x5xDrive35dSports Activity Vehicle	\$1,800	--	--	--
Mercedes	Jan. 1, 2006	TBD	TBD	TBD
2009 Mercedes GL320 BlueTEC	\$1,800	--	--	--
2009 Mercedes ML320 BlueTEC	\$900	--	--	--
2009 Mercedes R320 BlueTEC	\$1,550	--	--	--
Volkswagen	Jan. 1, 2006	TBD	TBD	TBD
2009 Jetta 2.0L TDI Sedan or SportWagen	\$1,300	--	--	--
2009 Touareg 3.0L TDI	\$1,150	--	--	--

Source: IRS (<http://www.irs.gov/businesses/corporations/article/0,,id=203912.00.html>). Updated April 9, 2009.

Alternative Fuel Vehicles (AFV's) are eligible for a federal income tax credit of up to \$4,000. To be eligible for this tax credit, the vehicle must only be capable of operating on any of the following alternative fuels: compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG), hydrogen, and any liquid at least 85% methanol by volume. The only *stock* AFV car certified so far is the:

Vehicle Make & Model	Fuel	Credit Amount
2005-09 Honda Civic GX	CNG	\$4,000

Information Source: IRS (<http://www.irs.gov/businesses/article/0,,id=201018,00.html>), updated December 8, 2008.

4. Home Energy-Efficiency Improvement

Beginning in 2009, you can get an income tax credit of up to a lifetime total cap of \$1,500 for installing efficient new windows, insulation, doors, roofs, and heating and cooling equipment in your home. However, efficiency criteria will vary dependant on when these items are "placed in service" (installed).

Who gets it? Individuals who install specific energy-efficient home improvements.

What energy-efficient home improvements are eligible? The overall \$1,500 cap can be reached in several ways with the purchase and installation of energy-efficient products that meet certain efficiency criteria:

- **Exterior windows:** Includes skylights and storm windows.
- **Insulation, exterior doors, or roofs:** Includes seals to limit air infiltration, such as caulk, weather stripping, and foam sealants, as well as storm doors.
- **Central air conditioner, heat pump, furnace, boiler, water heater, or bio gas (e.g. corn) stove:** Starting in 2009, geothermal heat pumps are instead eligible for a separate tax credit—see Section 5 below.

Section 6.4 of this document contains the [detailed criteria](#) for the products and effective dates (in general only some Energy Star products qualify). Individuals can also [search for qualifying heating and cooling products](#) on the Consortium for Energy Efficiency's web site.

In addition, to be eligible for the federal tax credits:

Windows, doors, insulation, and roofs must be expected to last at least five years (a two-year warranty is sufficient to demonstrate this).

Manufacturers can certify (in packaging or on the company's web site) which of their products qualify for the tax credit. Retailers, contractors, and manufacturers should be able to help you determine what levels of insulation and what other products qualify.

All the improvements must be installed in or on the taxpayer's principal residence in the United States. Condo and co-op improvements are apportioned to the owners.

A 'patch' to the Alternative Minimum Tax for tax year 2008 and 2009 allows this credit to be claimed by those paying the AMT. It is uncertain if this will be extended to 2010 and beyond.

How much is the credit? The tax credit amount is now 30 percent of the cost of the measures, including installation costs for heating and cooling equipment, but only product costs for windows, insulation, and other parts of the building "shell." There is a total lifetime cap on the credit amount of \$1,500; thus the

credit applies to up to \$5,000 in total costs.

When is it available? The home improvements tax credit applies for improvements “placed in service” from January 1, 2009, through December 31, 2010. However, modifications to the criteria were made on products placed in service after February 17, 2009. For exterior windows and skylights purchased before June 1, 2009, existing manufacturer certifications and Energy Star labels will be accepted, pending updates to criteria based on ARRA. The credits were not available in 2008, but an earlier credit, with different criteria and credit amounts, was available in 2006 and 2007. The IRS defines “placed in service” as when the products or materials are ready and available for use – this would generally refer to the installation, not the purchase.

What do I need to do to get the tax credit? You will need to file [IRS Form 5695](#) with your taxes. In addition, you will need to keep at least receipts proving that you purchased the improvements and a copy of the manufacturer’s certification. Accountants and tax advisors should also be able to provide more guidance.

5. Geothermal Heat Pumps, Solar Energy, Wind Energy and Fuel Cells

There are also tax credits for geothermal heat pumps solar photovoltaic cells, solar water heaters, and fuel cells, also modified starting in 2009.

Geothermal (or ground-source) heat pumps placed in service starting in 2009 are now eligible for a tax credit for 30 percent of the cost, with no maximum. These credits are effective through December 21, 2016. In order to be eligible for the tax credit, geothermal heat pumps must meet Energy Star criteria (specified in Section 6.4 below). In 2006-2007 geothermal heat pumps were eligible for a smaller credit as part of the home improvements credit described above.

Solar hot water heating and photovoltaic power systems placed in service by December 31, 2016 are also eligible for the 30 percent credit, as are small wind systems. [More information on renewable tax credits](#) is available from the Energy Star website.

Though available, residential fuel cell systems are rare in application. Some systems may be eligible for credits, subject to [certain criteria](#).

6. ADDITIONAL INFORMATION

6.0 Tax credit laws

The tax credits were first enacted in the Energy Policy Act of 2005 (P.L. 109-58), signed on August 8, 2005. The home improvement credit was extended, and other credits were added in the Energy Improvement and Extension Act of 2008, attached to the Emergency Economic Stabilization Act of 2008 (P.L. 110-343), signed on October 3, 2008. Further modifications and extensions were included in H.R. 1, the American Recovery and Reinvestment Act of 2009, signed on February 17, 2009.

The home improvements credit (formally called the “nonbusiness energy property” credit) is in section 25C of the tax code. The hybrid vehicle credit is part of the “alternative motor vehicle” credit in section 30B of the tax code. The new geothermal heat pump credit, along with the credits for solar equipment and fuel cells, are called the “residential energy efficient property” credit and are in section 25D of the tax code

6.1. Hybrid vehicle tax credit amount

Auto manufacturers calculate the tax credit for qualifying hybrid and diesel models and submit certifications on qualifying models, including the credit amount, to the IRS. The American Council for an

Energy-Efficient Economy (ACEEE) makes [preliminary estimates](#) of the credit amount for upcoming vehicles as well.

If you really want to know how the credit is calculated, read on – it’s complicated. For cars and light trucks (SUV’s, minivans, and pickup trucks up to 8,500 pounds) the tax credit is the sum of a “fuel economy credit” and a “conservation credit,” both of which depend on the vehicle’s fuel economy compared to the baseline “2002 model year city fuel economy” of a vehicle in the same weight class.

The fuel economy credit depends on the improvement of the fuel economy over the baseline. The credit is as follows, based on the vehicle fuel economy as a percentage of the baseline fuel economy:

Percent of Baseline	Credit Amount
125 to 150 percent	\$400
150 to 175 percent	\$800
175 to 200 percent	\$1,200
200 to 225 percent	\$1,600
225 to 250 percent	\$2,000
250 percent or more	\$2,400

The conservation credit depends on the estimated lifetime fuel savings, expressed in gallons of gasoline. The credit is:

Fuel Savings (gallons)	Credit Amount
1,200 to 1,800	\$250
1,800 to 2,400	\$500
2,400 to 3,000	\$750
3,000 or more	\$1,000

Fuel savings are calculated as (120,000 miles divided by baseline mpg) minus (120,000 miles divided by vehicle mpg).

6.2. Phase-out of the hybrid tax credit

Once a manufacturer has sold 60,000 hybrid and/or diesel vehicles that qualify for the tax credit, the

credit amount for vehicles made by that company is phased out according to the following schedule:

Calendar Quarter	Percentage of Full Credit
When sales reach 60,000	100 percent
1st quarter after	100 percent
2nd quarter	50 percent
3rd quarter	50 percent
4th quarter	25 percent
5th quarter	25 percent
6th quarter and beyond	No credit

As of October 1, 2007 purchasers of Toyota or Lexus hybrid vehicles are no longer eligible for any tax credit, as a result of Toyota having sold 60,000 qualified hybrid cars and SUV's as of October 1, 2006.

Tax credits for Honda hybrids are now in the process of being phased out. Currently, buyers of Honda hybrid vehicles are eligible for a 25% tax credit until December 31, 2008, after which the tax credit will no longer be available.

The hybrid and diesel tax credits expire for all cars and light trucks on December 31, 2010, whether or not the manufacturer has sold 60,000 vehicles or reached the end of the phase-out period. Auto manufacturers must report their sales to the IRS quarterly and should change the certification they provide to buyers as the amount of the credit diminishes.

6.3. 2005 tax deduction for hybrid vehicles

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The new tax credit for hybrid vehicles is available only for vehicles placed in service starting January 1, 2006, but buyers who purchased hybrids before that date are eligible for an older tax deduction. Individuals and businesses that bought new hybrid vehicles in 2005 can claim a tax deduction of \$2,000.

For tax year 2005, that deduction applies to these models: Toyota Prius, Toyota Highlander Hybrid, Honda Insight, Honda Civic Hybrid, Honda Accord Hybrid, Ford Escape Hybrid, or Lexus RX 400h.

6.4. Criteria for heating and cooling equipment

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In order to be eligible for the tax credit, heating and cooling equipment must meet specified measures of energy efficiency. Individuals can [search for qualifying products](#) on the Consortium for Energy Efficiency's Web site.

Product	Placed in Service between Jan. 1, 2009 and Feb. 17, 2009	Placed in Service between Feb. 18, 2009 and Dec. 31, 2010	Notes
Exterior Windows (includes skylights and storm windows) and doors	<ul style="list-style-type: none"> Must meet the requirements for your region of the 2001 or 2004 International Energy Conservation Code, a model energy code for buildings. All ENERGY STAR windows qualify. 	<ul style="list-style-type: none"> Must meet the requirements for your region of the 2001 or 2004 International Energy Conservation Code, a model energy code for buildings. Must be equal to or below a U factor of .30 and SHGC of .30. 	Only some Energy Star windows will qualify; however, for exterior windows and skylights purchased before June 1, 2009, the IRS and US Treasury announced grace period during which existing manufacturer certifications and Energy Star labels <i>will</i> be accepted. From June 1 onwards, the new, more stringent, criteria apply. See the IRS guidance and press release .
Insulation and roofs	<ul style="list-style-type: none"> Insulation must meet the 2001 or 2004 International Energy Conservation Code. Roofs must be metal roofs with pigmented coatings or asphalt roofs with cooling granules that meet ENERGY STAR requirements. 	<ul style="list-style-type: none"> Insulation must meet the 2009 International Energy Conservation Code. Roofs must be metal roofs with pigmented coatings or asphalt roofs with cooling granules that meet ENERGY STAR requirements. 	Required insulation levels will vary by region and will include insulation that is already installed in your home.
Central AC and heat pumps	<ul style="list-style-type: none"> Central AC must meet the highest efficiency tier set by the Consortium for Energy Efficiency for 2006- seasonal energy efficiency ratio (SEER) of at least 15 <i>and</i> an energy efficiency ratio (EER) of at least 12.5 for most air conditioners. Electric heat pumps must be SEER of at least 15 and an EER of at least 13 and must have a heating seasonal performance factor (HSPF) of at least 9. 	<ul style="list-style-type: none"> Central AC must meet the highest efficiency tier set by the Consortium for Energy Efficiency for 2009- SEER of at least 16 and an EER of at least 13 for most air conditioners. Electric heat pumps must meet the highest efficiency tier set by the Consortium for Energy Efficiency for 2009- SEER of at least 15, an EER of at least 12.5, and an HSPF of at least 	This is about 15-25 percent more efficient than the federal standard that went into effect in January 2006.

		8.5.	
Furnaces and Boilers	<ul style="list-style-type: none"> Natural gas, propane, or oil furnaces and boilers must have at least a 95 percent annual fuel utilization efficiency (AFUE) 	<ul style="list-style-type: none"> Natural gas or propane furnaces must have at least a 95 percent AFUE Oil furnaces must have at least a 90 percent AFUE Natural gas, propane, or oil boilers must have at least a 90 percent AFUE 	
Water heaters	<ul style="list-style-type: none"> Electric heat pump water heaters must have an Energy Factor (EF) of 2.0. Natural gas, propane, or oil water heaters must have an EF of at least .80 or a thermal efficiency rating of at least 90%. 	<ul style="list-style-type: none"> Electric heat pump water heaters must have an EF of 2.0. Natural gas, propane, or oil water heaters must have an EF of at least .82 or a thermal efficiency rating of at least 90%. 	<ul style="list-style-type: none"> This is more than twice as efficient as the current federal standard. There is no credit for other kinds of electric water heaters. Only some tankless water heaters and “condensing” or other advanced water heaters currently reach this efficiency level.
Biomass (eg corn) stoves	<ul style="list-style-type: none"> Biomass stoves for space or water heating can run on crops, wood, plants, etc., but must have a thermal efficiency rating of at least 75%. 	<ul style="list-style-type: none"> Biomass stoves for space or water heating can run on crops, wood, plants, etc., but must have a thermal efficiency rating using a lower heating value of at least 75%. 	

Currently, the criteria for Energy Star geothermal heat pumps are: for a closed-loop system, 14.1 EER and a coefficient of performance (COP) of at least 3.3. For an open-loop system, 16.2 EER and 3.6 COP. For a direct expansion system, 15 EER and 3.5 COP. In addition, the geothermal heat pumps must include a desuperheater, which helps heat water, or an integrated water heating system.