

## Residential Renewable Energy Tax Credit

**Incentive Type:** Personal Tax Credit

**Eligible Renewable/Other Technologies:** Solar Water Heat, Photovoltaics, Wind, Fuel Cells, Geothermal Heat Pumps, Other Solar Electric Technologies

**Applicable Sectors:** Residential

**Amount:** 30%

**Maximum Incentive:** Solar electric: \$2,000 for systems placed in service on or before 12/31/08; no maximum limit beginning in 2009.  
Solar water heating: \$2,000.  
Fuel cells: \$500 per 0.5 kW.  
Small wind: \$500 per 0.5 kW, up to \$4,000.  
Geothermal heat pumps: \$2,000.

**Carryover Provisions:** Excess credit may be carried forward to succeeding tax year.

**Eligible System Size:** 0.5 kW minimum for fuel cells.

**Equipment/Installation Requirements:** Solar water heating property must be certified by SRCC or by comparable entity endorsed by the state in which the system is installed. At least half the energy used to heat the dwelling's water must be from solar.  
Geothermal heat pumps must meet the requirements of the Energy Star program.  
Fuel cells must have an electricity-only generation efficiency greater than 30%.

**Authority 1:** [26 USC § 25D](#)

**Date Enacted:** 8/8/2005 (amended 2006, 2008)

**Effective Date:** 1/1/2006

**Expiration Date:** 12/31/2016

**Authority 2:** H.R. 1424: Div. B, Sec. 106 (The Energy Improvement and Extension Act of 2008)

**Date Enacted:** 10/3/2008

**Effective Date:** 1/1/2008; elimination of the solar-electric credit cap effective 1/1/2009

**Expiration Date:** 12/31/2016

**Authority 3:** IRS Form 5695 & Instructions: Residential Energy Credits

### Summary:

Established by the Energy Policy Act of 2005, the federal tax credit for residential energy property initially applied to solar electric systems, solar water heating systems and fuel cells. The Energy Improvement and Extension Act of 2008 (H.R. 1424, Division B) extended the tax credit to small wind energy systems and geothermal heat pumps, effective January 1, 2008. Other key revisions included an eight-year extension of the credit to December 31, 2016, the ability to take the credit against the alternative minimum tax, and the removal of the \$2,000 credit limit for solar electric systems beginning in 2009.

Click [here](#) for a four-page Q&A on the revised federal solar tax incentives, prepared by Solar Energy Industries Association.

A taxpayer may claim a credit of 30% of qualified expenditures for a system that serves a dwelling unit located in the U.S. used as a residence by the taxpayer. Expenditures with respect to the equipment are treated as made when the installation is completed. If the installation is on a new home, the "placed in service" date is the date of occupancy by the homeowner. Expenditures include labor costs for onsite preparation, assembly, or original system installation and for piping or wiring to interconnect a system to the home. If the federal tax credit exceeds tax liability, the excess amount may be carried forward to the succeeding taxable year.

The credit is calculated based on the individual's expenditures excluding subsidized energy financing, which is defined as "financing provided under a Federal, State, or local program a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy." Consumers who receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.

The maximum allowable credit, equipment requirements, and other details vary by technology as outlined below.

### Solar electric property

- Maximum credit of \$2,000 for systems placed in service from January 1, 2006, through December 31, 2008.
- No maximum credit limit for systems placed in service from January 1, 2009, through December 31, 2016.
- In case of joint occupancy, the maximum qualifying cost that can be taken into account by all occupants for figuring the credit is \$6,667. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.

- The home served by the system does not have to be the taxpayer's *principal* residence.

### **Solar water heating property**

- Maximum credit of \$2,000.
- Systems must be placed in service from January 1, 2006, through December 31, 2016.
- Equipment must be certified for performance by the Solar Rating Certification Corporation (SRCC) or a comparable entity endorsed by the government of the state in which the property is installed.
- At least half the energy used to heat the dwelling's water must be from solar in order for the solar water-heating property expenditures to be eligible.
- The tax credit does not apply to solar water heating property for swimming pools or hot tubs.
- In case of joint occupancy, the maximum qualifying costs that can be taken into account by all occupants for figuring the credit is \$6,667. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.
- The home served by the system does not have to be the taxpayer's *principal* residence.

### **Fuel cell property**

- Maximum credit of \$500 per half kilowatt (kW).
- Systems must be placed in service from January 1, 2006, through December 31, 2016.
- The fuel cell must have a nameplate capacity of at least 0.5 kW of electricity using an electrochemical process and an electricity-only generation efficiency greater than 30%.
- In case of joint occupancy, the maximum qualifying costs that can be taken into account by all occupants for figuring the credit is \$1,667 per half kilowatt. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.
- The home served by the system *must be* the taxpayer's *principal* residence.

### **Small wind energy property**

- Maximum credit of \$500 per half kilowatt, not to exceed \$4,000.
- Systems must be placed in service from January 1, 2008, through December 31, 2016.
- In case of joint occupancy, the maximum qualifying costs that can be taken into account by all occupants for figuring the credit is \$1,667 per half kilowatt, not to exceed \$13,333. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.
- The home served by the system does not have to be the taxpayer's *principal* residence.

### **Geothermal heat pumps**

- Maximum credit of \$2,000.
- Systems must be placed in service from January 1, 2008, through December 31, 2016.
- The geothermal heat pump must meet the requirements of the Energy Star program which are in effect that the time the installation is completed.
- In case of joint occupancy, the maximum qualifying costs that can be taken into account by all occupants for figuring the credit is \$6,667. This does not apply to married individuals filing a joint return. The credit that may be claimed by each individual is proportional to the costs he or she paid.
- The home served by the system does not have to be the taxpayer's *principal* residence.

### **History**

The [Energy Policy Act of 2005](#) (Section 1335) established a 30% tax credit up to \$2,000 for the purchase and installation of residential solar electric and solar water heating property and a 30% tax credit up to \$500 per 0.5 kilowatt for fuels cells. Initially scheduled to expire at the end of 2007, the tax credits were extended through December 31, 2008 by Section 206 of the [Tax Relief and Health Care Act of 2006](#).

In October 2008, through the [Energy Improvement and Extension Act of 2008](#) (Division B, Section 106), the tax credits were extended once again -- until December 31, 2016 -- and a new tax credit for small wind energy systems and geothermal heat pump systems was created.

### **Contact:**

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