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**Federal Incentives for Renewables and Efficiency**

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**Business Energy Investment Tax Credit (ITC)**

Last DSIRE Review: 02/18/2009

**Incentive Type:** Corporate Tax Credit

**Eligible Renewable/Other Technologies:** Solar Water Heat, Solar Space Heat, Solar Thermal Electric, Solar Thermal Process Heat, Photovoltaics, Wind, Biomass, Geothermal Electric, Fuel Cells, Geothermal Heat Pumps, CHP/Cogeneration, Solar Hybrid Lighting, Direct Use Geothermal, Microturbines

**Applicable Sectors:** Commercial, Industrial, Utility

**Amount:** 30% for solar, fuel cells and small wind;  
10% for geothermal, microturbines and CHP

**Maximum Incentive:** Fuel cells: \$1,500 per 0.5 kW  
Microturbines: \$200 per kW  
Small wind turbines placed in service 10/4/08 - 12/31/08: \$4,000  
Small wind turbines placed in service after 12/31/08: no limit  
All other eligible technologies: no limit

**Eligible System Size:** Small wind turbines: 100 kW or less  
Fuel cells: 0.5 kW or greater  
Microturbines: 2 MW or less  
CHP: 50 MW or less

**Equipment/Installation**

**Requirements:** Fuel cells, microturbines and CHP systems must meet specific energy-efficiency criteria

**Authority 1:** [26 USC § 48](#)

**Authority 2:** [H.R. 1424: Div. B \(The Energy Improvement and Extension Act of 2008\)](#)

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

**Effective Date:** 10/3/2008

**Authority 3:** [H.R. 1: Div. B, Sec. 1103 \(The American Recovery and Reinvestment Act of 2009\)](#)

**Date Enacted:** 2/17/2009

**Effective Date:** 1/1/2009

**Summary:**

**Note:** *The American Recovery and Reinvestment Act of 2009 (H.R. 1) allows taxpayers eligible for the federal **renewable electricity production tax credit (PTC)** to take the federal business energy investment tax credit (ITC) **or to receive a grant from the U.S. Treasury Department instead of taking the PTC for new installations.** The new law also allows taxpayers eligible for the business ITC to receive a **grant from the U.S. Treasury Department instead of taking the business ITC for new installations.***

The federal business energy investment tax credit available under 26 USC § 48 was expanded significantly by the *Energy Improvement and Extension Act of 2008* (H.R. 1424), enacted in October 2008. This law extended the duration -- by eight years -- of the existing credits for solar energy, fuel cells and microturbines; increased the credit amount for fuel cells; established new credits for small wind-energy systems, geothermal heat pumps, and combined heat and power (CHP) systems; extended eligibility for the credits to utilities; and allowed taxpayers to take the credit against the alternative minimum tax (AMT), subject to certain limitations. The credit was further expanded by *The American Recovery and Reinvestment Act of 2009*, enacted in February 2009.

In general, credits are available for eligible systems placed in service on or before December 31, 2016:\*

- **Solar.** The credit is equal to 30% of expenditures, with no maximum credit limit stated. Eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. (Passive solar systems and solar pool-heating systems are *not* eligible.) Hybrid solar lighting systems are those that use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

Click [here](#) for a four-page Q&A on federal solar tax incentives, prepared by the Solar Energy Industries Association. (Note that this document was published in October 2008.)

- **Fuel Cells.** The credit is equal to 30% of expenditures, with no maximum credit limit. The credit for fuel cells is capped at \$1,500 per 0.5 kilowatt (kW) of capacity. Eligible property includes fuel cells with a minimum capacity of 0.5 kW that have an electricity-only generation efficiency of 30% or higher. (Note that the credit for property placed in service before October 4, 2008, is capped at \$500 per 0.5 kW.)
- **Small Wind Turbines.** The credit is equal to 30% of expenditures, with no maximum credit limit for small wind turbines placed in service after December 31, 2008. Eligible small wind property includes wind turbines up to 100 kW in capacity. (In general, the maximum credit is \$4,000 for eligible property placed in service after October 3, 2008, and before January 1, 2009. *The American Recovery and Reinvestment Act of 2009* removed the \$4,000 maximum credit limit for small wind turbines.)
- **Geothermal Systems.** The credit is equal to 10% of expenditures, with no maximum credit limit stated. Eligible geothermal energy property includes geothermal heat pumps and equipment used to produce, distribute or use energy derived from a geothermal deposit. For electricity produced by geothermal power, equipment qualifies only up to, but not including, the electric transmission stage. For geothermal heat pumps, this credit applies to eligible property placed in service after October 3, 2008.
- **Microturbines.** The credit is equal to 10% of expenditures, with no maximum credit limit stated (explicitly). The credit for microturbines is capped at \$200 per kW of capacity. Eligible property includes microturbines up to two megawatts (MW) in capacity that have an electricity-only generation efficiency of 26% or higher.
- **Combined Heat and Power (CHP).** The credit is equal to 10% of expenditures, with no maximum credit limit stated. Eligible CHP property generally includes systems up to 50 MW in capacity that exceed 60% energy efficiency, subject to certain limitations and reductions for large systems. The efficiency requirement does not apply to CHP systems that use biomass for at least 90% of the system's energy source, but the credit may be reduced for less-efficient systems. This credit applies to eligible property placed in service after October 3, 2008.

In general, the original use of the equipment must begin with the taxpayer, or the system must be constructed by the taxpayer. The equipment must also meet any performance and quality standards in effect at the time the equipment is acquired. The energy property must be operational in the year in which the credit is first taken.

Significantly, *The American Recovery and Reinvestment Act of 2009* repealed a previous limitation on the use of the credit for eligible projects also supported by "subsidized energy financing." For projects placed in service after December 31, 2008, this limitation no longer applies. Businesses who receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.

### **History**

The federal [Energy Policy Act of 2005](#) (EPAAct 2005) expanded the existing federal business energy tax credit for solar and geothermal energy property to include fuel cells, microturbines and hybrid solar lighting systems installed on or after January 1, 2006, and raised the credit for solar to 30%. Prior to the provisions of EPAAct 2005, a 10% credit was available to businesses that invested in or purchased solar or geothermal energy property.

*\* Note that the credit for geothermal property, with the exception of geothermal heat pumps, has no stated expiration date. The credit for solar energy property reverts to 10% after December 31, 2016.*

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### **Contact:**

#### **Public Information - IRS**

Internal Revenue Service  
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Washington, DC 20224  
**Phone:** (800) 829-1040  
**Web site:** <http://www.irs.gov>

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