



# Tax Incentives for Geothermal

New federal legislation includes tax incentives for renewable-energy heat pumps

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By classifying geothermal heat pumps with wind and solar technology under federal renewable-energy provisions, Congress has recognized the crucial role technology can play in reshaping our energy future.

**W**ith the current national emphasis on renewable-energy systems, we find ourselves on the brink of great opportunity, yet frustrated by the constraints of economic turmoil. There never has been a confluence of support so broadly aimed at improving building energy systems, long-term energy savings, and the overburdened electricity grid while encouraging economic and environmental growth. “Green” tax incentives for commercial geothermal and water-source heat-pump equipment—technology that does not consume fossil fuels—are a key component of two new federal stimulus plans.

## EMERGENCY ECONOMIC STABILIZATION ACT

Even before the Obama administration was sworn in, Congress passed the Emergency Economic Stabilization Act of 2008, which created federal tax credits for the installation of this type of equipment. The Act added geothermal heat pumps to the definition of “energy property” in Section 48(a) of the Internal Revenue Code, allowing a tax credit for 10 percent of the total cost—including installation—of geothermal equipment placed in service before the end of 2016. The credit also can be claimed for equipment that uses the ground or groundwater as a thermal-energy source/sink to heat or cool a U.S. structure.

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**Placed in service.** Equipment is considered “placed in service” when it has been fully installed and is capable of being used for its intended purpose. Minor tasks, such as fixing punch-list items, may remain, but the taxpayer must have legal title of the equipment and all of the licenses and permits needed for its operation.

**Energy property.** Energy property is classified as five-year depreciable property in Section 168(e)(3)(B)(vi)(I) of the Internal Revenue Code, meaning the cost of the property can be deducted on an accelerated Modified Accelerated Cost Recovery System (MACRS) basis. For depreciation purposes, the basis must be reduced by one-half of the tax credit. For a corporation in a 35-percent tax bracket, the MACRS depreciation provides additional tax savings equal to 33.25 percent of the energy-property spending within the first five years, which is largely front-loaded. As a rule, conventional heating and cooling systems are depreciated on a 39-year straight-line basis, providing 4.5-percent tax savings during the first five years.

Energy property placed in service during 2008 and 2009 is eligible for a special first-year “bonus” depreciation allowance of 50 percent of the basis. The remaining basis then is depreciated in accordance with the five-year MACRS schedules. Conventional heating and cooling systems usually are not eligible for bonus depreciation. Internal Revenue Service Publication 946 provides guidance on how to depreciate property.

**Excluded property.** The credit cannot be claimed for spending on equipment used solely for a purpose other than heating or cooling a structure, previously used equipment, or equipment that is used by an entity not subject to U.S. income taxes, such as schools, government agencies, charities, and other tax-exempt organizations. This precludes these entities from leasing energy property. The solar industry traditionally has used energy-purchase contracts to provide financing to these groups.

**Maximum cap.** The credit can be used to offset

regular income taxes and the alternative minimum tax. If the credit exceeds the income-tax liability, any losses can be attributed to the two taxable years prior to the loss (five years for businesses that earn less than \$15 million in annual sales), and any remaining balances can be carried forward into future years.

**Ownership considerations.** Geothermal-heat-pump tax credits and depreciation deductions can be claimed only by the owner of the eligible property. This includes regulated utilities that own energy property.

An owner who cannot utilize tax credits can explore other options, such as sale leasebacks, partnership “flip” structures, or energy-purchase contracts. However, passive loss and at-risk restrictions make it difficult for individuals, S corporations, or closely held C corporations to act as sources for the required capital in those arrangements. Widely held corporations are not subject to those restrictions and are the most appropriate source of financing.

**Indirect tax incentives.** Another provision of the Act indirectly supports geothermal and water-source heat pumps by extending the energy-efficient commercial-buildings tax deduction through 2013. Section 179D of the Internal Revenue Code permits taxpayers to deduct the cost of energy-efficient property installed in commercial buildings. Allowable deductions can total up to \$1.80 per square foot of floor area for buildings achieving 50-percent energy savings compared with a reference building that meets the minimum requirements of ASHRAE Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. The energy savings must be accomplished through energy and power cost reductions for a building’s heating, cooling, ventilation, hot-water, and interior-lighting systems. If the full savings is not possible, a partial deduction of up to 60 cents per square foot can be taken for a heating, cooling, and hot-water system that provides at least one-

third of the required 50-percent annual savings. The energy-consumption reduction must be certified by a qualified professional using qualified software.

#### **AMERICAN RECOVERY AND REINVESTMENT ACT**

One of the Obama administration’s first moves was to sign the American Recovery and Reinvestment Act of 2009 (ARRA), which was designed to jump-start the ailing U.S. economy. Among other things, the policy was crafted to create or save at least 3 million jobs and fuel long-term growth. Additionally, substantial tax incentives were designed to help stimulate the development, manufacture, installation, and use of energy-efficient technology, specifically benefiting the energy and infrastructure industries.

Section 1603 of the ARRA provides a 10-percent grant in lieu of the Stabi-

lization Act’s 10-percent tax credit for eligible geothermal-heat-pump energy property placed in service during 2009 and 2010. (Property placed in service after 2010 can be eligible if the project in question began in 2009 or 2010.)

#### **CONCLUSION**

By classifying geothermal heat pumps with wind and solar technology under federal renewable-energy provisions, Congress has recognized the crucial role technology can play in reshaping our energy future. Provisions for long-term installation incentives raise public awareness, enhance financial appeal, and create a foundation for new jobs and investments in the renewable-energy industry. These kinds of “green” initiatives motivate business owners to invest in technology that can pay for itself through utility-bill savings while cultivating locally available energy alternatives.