



Commercial Geothermal Tax Incentives Guide



The reinstatement of federal income tax credits and accelerated depreciation related to the installation of energy property for commercial buildings represents a tremendous opportunity for the geothermal heat pump industry. These tax incentives can be cumbersome and difficult to understand. This document is designed to help guide you through the process of understanding the terminology related to the business energy investment tax credit, the depreciation of energy property and how to claim the credit. Also included are business credit examples that can be used to in the preparation of proposals to specifying engineers, commercial building owners, and purchase decision makers.

Federal Income Tax Credit:

- 10% of total system cost
- No limit to total credit amount
- Can be used to offset AMT tax
- Can be used in more than one year
- Can be combined with solar and wind tax credits

Accelerated Depreciation:

- 5 year MACRS depreciation on total system and cost basis
- Eligible for 100% first-year special depreciation

Eligibility:

- Building located in U.S.
- Original use begins with taxpayer
- Construction commenced before 1/1/2022

BUSINESS ENERGY INVESTMENT TAX CREDIT

The federal business energy investment tax credit was expanded significantly by the Energy Improvement and Extension Act of 2008, further expanded by the American Recovery and Reinvestment Act of 2009, and again expanded and extended by the Bipartisan Budget Act of 2018. Through this legislation geothermal heat pumps were added to the definition of energy property under section 48(a) of the Internal Revenue Code, which provides a 10% investment tax credit for spending on property, the construction of which begins prior to 1/1/2022.

DEPRECIATION OF ENERGY PROPERTY

Energy property is classified as a 5-year property in section 168(e)(3)(B)(vi) of the Internal Revenue Code, meaning the cost of the property can be deducted on an accelerated MACRS basis. For depreciation purposes, the cost basis must be reduced by one half of the energy tax credit. In the example of a C-corporation in a 26% overall tax bracket, the MACRS depreciation provides additional tax savings equal to 24.7% of the energy property basis over the first 5 years, or optionally all within the first year. By comparison, conventional heating and cooling systems are generally depreciated on a 39-year straight line basis and would provide only 3.33% of the basis in tax savings over the first 5 years. The tax benefits for pass-through entities such as S-corporations could be much higher due to the higher marginal tax rates for individuals.

ELIGIBLE GEOTHERMAL HEAT PUMP ENERGY PROPERTY

The tax credit may be claimed for spending on equipment which uses the ground or ground water as a thermal energy source to

heat a structure or as a thermal energy sink to cool a structure. The structure must be located in the United States. Spending includes costs of installation.

EXCLUDED PROPERTY

The credit cannot be claimed for spending on equipment used solely for a purpose other than heating or cooling a structure, on previously used equipment, or on equipment that is used by an entity not subject to U.S. income taxes. These entities include schools, government agencies, charities, and other tax-exempt organizations. This also precludes taxable lessors from utilizing the credit when leasing energy property to tax-exempt entities. However, energy purchase contracts are a mechanism that has been used to provide financing to these groups by the solar industry.

CONSTRUCTION COMMENCED REQUIREMENT

The credit can be claimed on spending for equipment on which construction has commenced prior to January 1st, 2022. There is no time limit on when the construction must be completed. See IRS Notice 2018-59 for methods of establishing the commencement of construction.

SYSTEM COST BASIS

The cost basis includes the direct costs associated with the purchase and installation of the system as well as any indirect costs that may be partly or fully allocable to its construction (including taxes). The basis therefore generally includes those portions of the electrical, plumbing, design and GC fees that are associated with the geothermal system. Utility rebates usually reduce basis. See the uniform capitalization rules of IRS section 263A.

SPECIAL DEPRECIATION

Energy property is eligible for the 100% first year special depreciation allowance. Refer to IRS Publication 946 for more information regarding how to depreciate property.

TAX CREDIT AMOUNT AND MAXIMUM LIMIT

A business can claim a tax credit equal to 10% of its spending on eligible geothermal heat pump property without a maximum credit limit. The tax credit can be used to offset both regular income taxes and alternative minimum taxes (AMT). If the tax credit exceeds the income tax liability, the loss can be carried forward indefinitely into future years.

OWNERSHIP CONSIDERATIONS

Geothermal heat pump tax credits and depreciation deductions can only be claimed by the owner of the eligible property, including utilities that own energy property. An owner that cannot use the tax credits can explore other options such as sale-leasebacks, partnership "flip" structures, or energy purchase contracts. However, passive loss and at-risk restrictions may apply in some third-party ownership structures. In general, passive losses may only be immediately used to offset the tax liability from passive activities. Consult your tax advisor.

CLAIMING THE CREDIT

IRS Form 3468 is used to claim the Energy Credit. Visit www.irs.gov to download the latest tax form and instructions.

BUSINESS CREDIT EXAMPLES

New Construction Example with 100% Special or 5 year MACRS Depreciation:

A corporation installs a geothermal heat pump system in its new office building that has a total cost basis of \$1,000,000. They moved into the building during the 4th quarter of 2019. the corporation is in a 26% tax bracket when stat income tax is included.

2019 Tax Credit:	$\$1,000,000 \times 10\%$	= \$100,000
Depreciable Basis:	$\$1,000,000 - (\$100,000 / 2)$	= \$950,000
2019 Depreciation Benefit:	$\$950,000 \times 100\% \text{ special} \times 26\% \text{ tax rate}$	= \$247,000

Total Tax Savings in 2019: \$347,000

Alternate election of 5 year MACRS instead of 100% special depreciation:

2019 MACRS Tax Benefit:	$\$950,000 \times 5\% \text{ Q4 MACRS} \times 26\% \text{ tax rate}$	= \$12,350
2020 " " "	$\$950,000 \times 38\% \text{ MACRS} \times 26\% \text{ tax rate}$	= \$93,860
2021 " " "	$\$950,000 \times 22.80\% \text{ MACRS} \times 26\% \text{ tax rate}$	= \$56,316
2022 " " "	$\$950,000 \times 13.68\% \text{ MACRS} \times 26\% \text{ tax rate}$	= \$33,790
2023 " " "	$\$950,000 \times 10.94\% \text{ MACRS} \times 26\% \text{ tax rate}$	= \$27,022
2024 " " "	$\$950,000 \times 9.58\% \text{ MACRS} \times 26\% \text{ tax rate}$	= <u>\$23,662</u>
		\$247,000

Total Tax Savings over 5 Years: \$347,000 (\$112,350 in 2019)

Retrofit Example with 100% Special or 5 year MACRS Depreciation:

An S-corporation has an existing building that uses a water-loop heat pump system with a boiler and cooling tower. They remove the boilers, install a geothermal heat exchange loop and upgrade their heat pumps to high-efficiency geothermal models with a total cost basis for the system of \$500,000. They start the project in 2021 and it becomes operational in the 1st quarter of 2022. The S-corporation owners are in a 40% marginal tax bracket when state income tax is included.

2022 Tax Credit:	$\$500,000 \times 10\%$	= \$50,000
Depreciable Basis:	$\$500,000 - (\$50,000 / 2)$	= \$475,000
2022 Depreciation Benefit:	$\$475,000 \times 100\% \text{ special} \times 40\% \text{ tax rate}$	= \$190,000

Total Tax Savings in 2022: \$240,000

Alternate election of 5 year MACRS instead of 100% special depreciation:

2022 MACRS Tax Benefit:	$\$475,500 \times 35\% \text{ Q1 MACRS} \times 40\% \text{ tax rate}$	= \$66,500
2023 " " "	$\$475,500 \times 26\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$49,400
2024 " " "	$\$475,500 \times 15.60\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$29,640
2025 " " "	$\$475,500 \times 11.01\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$20,919
2026 " " "	$\$475,500 \times 11.01\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$20,919
2027 " " "	$\$475,500 \times 1.38\% \text{ MACRS} \times 40\% \text{ tax rate}$	= <u>\$2,622</u>
		\$190,000

Total Tax Savings over 5 Years: \$240,000 (\$116,500 in 2022)

Replacement Units Example with 100% Special or 5 year MACRS Depreciation:

An LLC spends \$100,000 to install new geothermal heat pumps in its existing building. The geothermal heat pumps are replacing older geothermal heat pumps that were originally installed in 1992. The project is completed in the 3rd quarter of 2020. The LLC owners are in a 40% marginal tax bracket when state income tax is included

2020 Tax Credit:	$\$100,000 \times 10\%$	= \$10,000
Depreciable Basis:	$\$100,000 - (\$10,000 / 2)$	= \$95,000

2013 Depreciation Benefit:	$\$95,000 \times 100\% \text{ special} \times 40\% \text{ tax rate}$	= \$38,000
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Total Tax Savings in 2020: \$48,000

Alternate election of 5 year MACRS instead of 100% special depreciation:

2013 MACRS Tax Benefit:	$\$95,000 \times 15\% \text{ Q3 MACRS} \times 40\% \text{ tax rate}$	= \$5,700
2014 " " "	$\$95,000 \times 34\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$12,920
2015 " " "	$\$95,000 \times 20.40\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$7,752
2016 " " "	$\$95,000 \times 12.24\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$4,652
2017 " " "	$\$95,000 \times 11.30\% \text{ MACRS} \times 40\% \text{ tax rate}$	= \$4,294
2018 " " "	$\$95,000 \times 7.06\% \text{ MACRS} \times 40\% \text{ tax rate}$	= <u>\$2,682</u>
		\$95,000

Total Tax Savings over 5 Years: \$48,000 (\$15,700 in 2022)

These examples help illustrate the financial advantages currently available to commercial building owners. The tax advantages combined with the energy savings and environmental benefits create a compelling business case to include geothermal heat pumps in new and existing commercial buildings. For additional information please contact your ClimateMaster sales professional.



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