

# FEDERAL TAX INCENTIVES

FOR COMMERCIAL GEOTHERMAL HEAT PUMPS



## BENEFITS OF TAX INCENTIVES:

30% bonus rate

10% bonus rate for domestic content

Up to \$5 per square foot tax deduction

5-year accelerated depreciation and a 1-year bonus depreciation



# FEDERAL TAX INCENTIVES EFFECTIVE IN 2023

## THIRTY PERCENT BONUS RATE

The Section 48 energy investment tax credit (ITC) allows owners to claim a tax credit for the cost of energy property. Upon election, tax-exempt entities and state, local and tribal governments are also eligible for direct payments of the ITC. The ITC was extended with a 6% base credit rate and 30% bonus rate for geothermal heat pump property that begins construction before Jan. 1, 2035 and was put in use after Jan. 1, 2023. Projects under 1 MW (approx. 284 tons) qualify for the bonus rate, and projects over 1 MW must meet prevailing wage and apprenticeship requirements.

## TEN PERCENT BONUS RATE FOR DOMESTIC CONTENT PROJECTS

To qualify for an additional 10% bonus rate, the owner must prove that the manufactured product within the completed project was made in the U.S. Projects under 1 MW (approx. 284 tons) qualify for the 10% bonus rate. Projects over 1 MW must meet prevailing wage and apprenticeship requirements for the 10% bonus, otherwise, it's a 2% bonus. The adjusted percentage of the total cost of the components and subcomponents of the project must be attributable to components that are mined, produced or manufactured in the U.S. The adjusted percentage is 40% for projects that begin construction before 2025 and 55% for projects that begin construction after 2026. GeoStar products meet the domestic content requirements and are proudly manufactured in the Midwest. Tax-exempt entities and state, local and tribal governments are also eligible for direct payments of the ITC.

## ACCELERATED DEPRECIATION OF ENERGY PROPERTY

Qualified 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 addition to accelerated depreciation, a one-time bonus depreciation is available. In 2023, the taxpayer can depreciate 80% of the cost in the first year with the one-time bonus depreciation. In 2024, the rate goes to 60% and gets reduced each year until eventually 0% in 2027. By comparison, to accelerated depreciation, conventional commercial heating and cooling systems are generally depreciated on a 39-year straight-line basis.

## EPACT 179D

This energy efficiency commercial building tax deduction applies to new and existing buildings that have been completed since Jan. 1, 2006. The energy efficient commercial building property needs to be placed in service in the taxable year. It allows for a tax deduction in the year the property is placed in service. The deduction can be up to \$5 per square foot for projects meeting prevailing wage and apprenticeship labor requirements with the amount depending on reduction of total annual energy and power costs for the building.

## WHO'S ELIGIBLE

Equipment that uses the ground or ground water as an energy source for heating and cooling a building is eligible for the tax credit. The system must be in the United States and only its owner can claim tax credits or depreciation deductions.<sup>1</sup> After equipment is installed, the taxpayer must take legal title of the equipment and have all necessary licenses and permits needed for its operation. Starting in 2023, section 6418 allows for commercial taxpayers to transfer the credit to other taxpayers.

## HOW TO CLAIM THESE TAX ADVANTAGES

Use IRS Form 3468 to claim the ITC. The tax credit can be used to offset both regular income taxes and individual alternative minimum taxes (AMT). If the tax credit exceeds the income tax liability, the loss can be carried back one taxable year and the remaining balance can be carried into future years. Use IRS Form 4562 to claim the 5-year and the one-time bonus depreciation. Commercial building owners can take the 179D for building projects completed since Jan 1, 2006. A standard form for 179D will be available within IRS Form 7205. To claim a 179D deduction, use the "Other" deduction line. IRS Form 3115 is used for catch-up on all prior year unclaimed EPAct 179D deductions. Designers of government projects must amend prior year returns and can only adjust the prior 3 years.



With the Inflation Reduction Act<sup>2</sup>, projects completed in 2023 with a geothermal loop and heat pumps may qualify for:

- 30% bonus rate
- 10% bonus rate for domestic content
- Up to \$5 per square foot tax deduction
- 5-year accelerated depreciation and a 1-year bonus depreciation

## NEW CONSTRUCTION EXAMPLE

A corporation in a 30% tax bracket builds a new office building for \$2,000,000 and installs a geothermal heat pump system. They moved into the building during the 4th quarter of 2023.

Project Cost	GSHP Cost	Building Sq Ft	Tax Rate	EPAct 179D	Disc Rate
\$2,000,000	\$975,000	200,000 sq ft	30%	\$5.00 sq ft	4%

	Year								
	0	1	2	3	4	5	6	39	
<b>WITH TAX INCENTIVES<sup>3</sup></b>									
Project Cost	\$(2,000,000)								
30% Tax Credit		\$292,500							
10% Domestic Content		\$97,500							
Value of 80% Bonus		\$187,200							
Value of 5 Yr MACRS		\$21,060	\$33,696	\$20,218	\$12,110	\$12,110	\$6,107		
Value of 39 Year Depreciation		\$192	\$192	\$192	\$192	\$192	\$192	\$192	\$192
Value of EPAct 179D Deduction		\$300,000							
Total Tax Incentive	\$(2,000,000)	<b>\$898,452</b>	<b>\$33,888</b>	<b>\$20,410</b>	<b>\$12,302</b>	<b>\$12,302</b>	<b>\$6,299</b>	<b>\$192</b>	
<b>% paid for by Tax Incentives in 1st yr</b>		<b>45%</b>							
<b>NPV of Benefits</b>		<b>\$905,516</b>							

<b>WITHOUT TAX INCENTIVES</b>									
	0	1	2	3	4	5	6	39	
Project Cost	\$(2,000,000)								
39 Year Depreciation		\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385
39 Year After Tax (30%)	\$(2,000,000)	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385	\$15,385
NPV of Benefits		\$289,711							
Added NPV of Tax Incentives		\$615,804							

1. For the EPAAct 179D tax deduction, the commercial building owner can take the deduction and for not for profit, government, or tribal government buildings, the designer can take the deduction. 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, but only with respect to property the construction of which begins before January 1, 2035.
2. Additional benefits are available under the Inflation Reduction Act and are not covered in this brochure. The Federal tax credits may be combined with utility rebates and other tax incentives.
3. Project meets the requirements for prevailing wage, apprenticeship and domestic content.

Statements in this document are being finalized by the federal government and are subject to change and interpretation. To understand what you qualify for, please consult your tax professional.

Sources: Energy Tax Savers, Inc., Geothermal Exchange Organization, and the Inflation Reduction Act of 2022.

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