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FISCAL IMPACT REPORT

SPONSOR	<u>Soules</u>	LAST UPDATED	<u>1/31/23</u>
		ORIGINAL DATE	<u>1/24/23</u>
SHORT TITLE	<u>Geothermal Ground-Coupled Heat Pump Credit</u>	BILL NUMBER	<u>Senate Bill 45</u>
		ANALYST	<u>Graeser</u>

REVENUE* (dollars in thousands)

Estimated Revenue					Recurring or Nonrecurring	Fund Affected
FY23	FY24	FY25	FY26	FY27		
	Up to (16,000.0)	Up to (16,000.0)	Up to (16,000.0)	Up to (16,000.0)	Recurring	General Fund (PIT & CIT)

Parenthesis () indicate revenue decreases.

*Amounts reflect most recent version of this legislation.

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY23	FY24	FY25	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		\$16.7	--	\$16.7	Nonrecurring	TRD Operating ITD
		\$90.0	\$90.0	\$180.0	Recurring	EMNRD Operating

Sources of Information

LFC Files

Responses Received From

Taxation & Revenue Department (TRD)

Energy, Minerals & Natural Resources (EMNRD)

SUMMARY

Synopsis of Senate Bill 45

Senate Bill 45 reinstates the geothermal ground-coupled heat pump tax credits in the Personal Income Tax Act and Corporate Income and Franchise Tax Act through December 31, 2033. The credit rate remains at 30 percent of costs, with a maximum of \$9,000 tax credit per installation. The cap for the credit in each of the acts is also increased from \$2 million to \$16 million. The bill also removes the carry-forward for the credit and makes any credit in excess of PIT liability refundable with respect to the credit in the Income Tax Act only. The heat pumps are certified by the Energy, Minerals and Natural Resources Department (EMNRD).

This bill does not contain an effective date, and as a result, would go into effect June 16, 2023, (90 days after the Legislature adjourns) if signed. Applicable to taxable years beginning on or after January 1, 2023. Delayed repeal for heat pumps installed after December 31, 2033.

FISCAL IMPLICATIONS

This bill reinstates and expands a tax expenditure with a cost that is difficult to determine but likely significant. LFC has serious concerns about the significant risk to state revenues from tax expenditures and the increase in revenue volatility from erosion of the revenue base. The committee recommends the bill adhere to the LFC tax expenditure policy principles for vetting, targeting, and reporting or action be postponed until the implications can be more fully studied.

Estimating the cost of tax expenditures is difficult. Confidentiality requirements surrounding certain taxpayer information create uncertainty, and analysts must frequently interpret third-party data sources. Once a tax expenditure has been approved, information constraints continue to create challenges in tracking the real costs (and benefits) of tax expenditures.

TRD has provided an estimate of the fiscal impact as follows:

Estimated Revenue Impact*					R or NR**	Fund(s) Affected
FY2023	FY2024	FY2025	FY2026	FY2027		
--	(\$1,140)	(\$1,150)	(\$1,160)	(\$1,170)	R	General Fund

* In thousands of dollars. Parentheses () indicate a revenue loss. ** Recurring (R) or Non-Recurring (NR).

TRD provided the following description of the methodology for estimated revenue impact:

To estimate the fiscal impact, the Taxation and Revenue Department (TRD) used internal data from applications for the recently expired Geothermal Income Tax Credit. TRD used a 5-year average of applications for the credit as the base amount, excluding Tax Years 2020 and 2021 due to impacts from the Covid-19 pandemic. First, the fiscal impact takes the base amount and grows it by 1 percent year-over-year based on market analysis conducted by Grand View Research¹, as their market analysis published in 2020, estimates a 7.2 percent growth in the geothermal heat pump market between 2020 and 2027. Additionally, TRD applied an 83 percent growth rate between FY22 and FY23 to account for the new refundability of the credit using the amount of credit claimed between fiscal years 2009 and 2010 from the Renewable Energy Production Tax Credit.

EMNRD has provided the following discussion:

The maximum potential annual revenue impact to the general fund is \$16 million. Historically, however, the amount certified by EMNRD has not reached the cap in any year. Therefore, we estimate that the cap of \$16 million is unlikely to be reached. For the last three years of the credit, the value and number of tax credit certificates issued have been:

2020	\$ 680,495	78
2019	\$ 1,037,732	123

¹ [Geothermal Heat Pumps Market Size Report, 2020-2027 \(grandviewresearch.com\)](https://www.grandviewresearch.com/insights/reports/geothermal-heat-pumps-market-size-report-2020-2027)

2018	\$ 561,552	65
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Each of these systems cost close to or more than the \$30 thousand creditable cost maximum. In order to reach the \$16 million cap, approximately 1,800 installations per year would have to be installed with each installation costing \$30 thousand. Even with new technology being developed at LANL and several private companies, it is unlikely that this level of installations will be achieved. However, because the text of the bill indicates a total of \$16 million per year would be creditable or refundable, LFC staff show that maximum in the revenue table.

SIGNIFICANT ISSUES

The increased cap on this reinstated credit indicates that there may be improvements in technology to justify an expectation that the credit maximum might be reached. TRD fiscal estimate has been derived from the expectation that the “geothermal ground source heat pump” technology uses relatively shallow wells that tap into approximately 50 degree Fahrenheit water. The expectation of the increase in credit indicates that the technology may tap very deep, truly geothermal sources, also known as “hot rocks” technology. LANL has traditionally conducted research into this deep well technology and there are reports that this research has been restarted.

TRD provided the following policy discussion:

While TRD understands the use of tax incentives to support particular industries or to encourage specific actions, there has been an increase of these incentives in the tax code over the years. Adding more tax incentives: (1) creates special treatment and exceptions to the code, growing tax expenditures and/or narrowing the tax base, with a negative impact on the general fund; and, (2) increases the burden of compliance on taxpayers and TRD. Adding complexity and exceptions to the tax code does not comport with the best tax policy.

The credit extension continues to include a sunset date and a cap on the total amount of credit that can be claimed in a taxable year, although it increases that cap from \$2 million to \$16 million. TRD supports sunset dates for policymakers to review the impact of a credit before extending it, if a sufficient timeframe is allotted for tax incentives to be measured. Given the expansion of this credit and the additional cost to the state, a sunset date would force an examination of the benefit of this credit versus the cost.

EMNRD provides a more technical perspective:

Integration of geothermal ground-sourced heat pumps into the 2021 Sustainable Buildings Tax Credit.

In 2021, the Sustainable Buildings Tax Credit program was updated and revamped. As part of the revisions to that statute, a credit for ground-source heat pumps was added to the list of eligible systems, products, and building techniques that qualify for the Sustainable Buildings Tax Credit. If SB45 were to pass, applicants could apply for a tax credit for the same heat pump from the Sustainable Buildings Tax Credit and the credit re-instituted by SB45. This would allow for a double issuance of credits. EMNRD believes that the updated Sustainable Buildings Tax Credit has absorbed the need for a separate tax credit for ground-source heat pumps, as a results SB45 is arguably duplicative of an existing program. If enacted, SB45 should be amended to preclude applicants from applying under both credits.

System eligibility requirements.

Geothermal heat pumps are used for space heating and cooling, as well as water heating. The great advantage of the technology is that it works by concentrating naturally existing heat, rather than by producing heat through combustion of fossil fuels. However, SB45 changes the definition of a geothermal ground-coupled heat pump by removing the condition that a heat pump provide both heating and cooling. This definitional change is a disadvantage to consumers, as a system which only heats or only cools are not, in fact, heat pumps. SB45 would allow for both heating-only systems and cooling-only systems to be eligible for the credit, undermining the consumer benefit of this technology.

EMNRD recommends that SB45 use the latest definition of a heat pump as defined by the American Society of Heating, Refrigerating and Air-Conditioning, and that only systems that are certified under EPA’s Energy Star program be eligible for the tax credit. *See Technical Issues below.*

EMNRD further recommends certification of the heating and cooling equipment used for geothermal ground source heat pump systems by an independent nationally recognized testing laboratory and suggests that this certification be required for successful application to the proposed tax credit program. Tax credit eligibility should be limited to Air Conditioning, Heating and Refrigeration Institute (AHRI) – a third-party, nationally recognized testing organization – certified systems that deliver both heating and cooling and provide a de-superheating coil for supplemental hot water heating during space cooling operations. In addition, ground loops should be designed for both the summer cooling and winter heating capacity of the heat pump.

The previous iteration of this tax credit law failed to specify these requirements, and their lack resulted in the installation of self-certified systems that do not provide adequate benefits to the consumer. The 2021 Sustainable Building Tax Credit requires EPA Energy Star certified products.

The service territory of El Paso Electric (EPE) is the source of more than 95 percent of all geothermal ground source heat pump tax credit applications that were certified under the expired program. EPE does not recognize ground source heat pump systems as eligible for their rebates if the systems are not AHRI certified. EPE’s requirements can be found at [Refrigerated Cooling - EPE \(epesaver.com\)](#). In short, all systems must be certified by the AHRI [Quick Search \(ahridirectory.org\)](#).

Failure of the previous program to develop an industry.

During the final three years in which the previous program was operative (2018-2020), EMNRD received a total of 266 tax credit applications. All these applications were sent by one vendor, save a single application from a different vendor in 2019. This data indicates that the credit has not incentivized additional providers of geothermal ground-coupled heat pumps to locate in New Mexico.

PERFORMANCE IMPLICATIONS

The LFC tax policy of accountability is not met since TRD is not **required** to report annually to

an interim legislative committee regarding data compiled from the reports from taxpayers taking the credit and other information to determine whether the credit is meeting its purpose. However, since at least 2013, TRD has accumulated and published the annual Tax Expenditure Report, which contains information on this, and many other exemptions, deductions and credits.

ADMINISTRATIVE IMPLICATIONS

TRD provided the following information about administrative and compliance impact:

The proposal will have a low impact on the TRD's Information Technology Division (ITD) of approximately 300 hours or about 2 months of development work at approximately \$16,662. TRD will update forms, instructions, and associated publications. These updates will be incorporated into annual tax program revisions.

EMNRD has provided an estimate of fiscal side of the administrative impacts:

The renewal of the heat pump tax credit by SB45 will also have a fiscal impact on EMNRD, as staff support will be required to reinstitute the tax credit program which has expired. Since the existing tax credit expired on December 31, 2020, the staff who provided the technical review and certification for this program have been reassigned to other programs. The estimated fiscal impact for EMNRD includes staff resources to revise rules for the program, reflecting the new requirements, and to develop an electronic submission process for applications. Administering the program would cost approximately \$90 thousand, of which \$60 thousand represents one new FTE (including benefits) and \$30 thousand represents funds for program design and administrative, legal and information technology staff. Ongoing staff resources are required to effectively manage, provide system reviews, certify systems for tax credit eligibility, collect data, and maintain a database.

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

EMNRD notes that SB45 is duplicative of the 2021 Sustainable Building Tax Credit.

TECHNICAL ISSUES

TRD made the following recommendation:

As this credit already sunset as of December 31, 2020, TRD recommends that instead of amending this credit, that a "new" credit be created as was done recently with the Solar Market and Sustainable Building credits. This will allow smoother administration by TRD. The current credit permits the taxpayer to carryforward their credit amounts up to 10 years. A new credit adds complexity in needing to separately track credits that are refundable and nonrefundable. Taxpayers who have carryforwards under the existing law would not be permitted to claim a refund. There are approximately \$1.3 million in pending carryforwards for the recently expired credit in the GenTax system. However, the language of the carryforward provision is repealed under this proposal. The repeal could create legal issues for TRD should taxpayers who installed a system between 2010 and 2020 submit a credit claim and expect to carry it forward to future tax years. These claims may be invalid with the proposed repeal. It would also be preferable to have two separate credits for purposes of reporting to the Legislature on TRD's annual Tax Expenditure Report.

There is no language in Section 2 to make the credit refundable on par with Section 1. TRD recommends consistent language for personal income tax and corporate income tax filers.

EMNRD requests further definitional assistance:

Without further clarification of definitions in this statute, EMNRD will continue to face issues implementing this tax credit program. The agency is regularly challenged in the interpretation of this statute as it pertains to heat pump definitions.

Additionally, EMNRD has received challenges on the number of heat pump systems that can be installed per property address and/or applicant. Some applicants have applied for, but have not received, multiple tax credits for multiple systems at one address, e.g., main house and guest house. The revised credit does not clarify whether such installations would be eligible.

EMNRD recommends that only systems that are certified under EPA's Energy Star program be eligible for the tax credit, consistent with the 2021 Sustainable Building Tax Credit.

OTHER SUBSTANTIVE ISSUES

The provisions of this bill are potentially duplicated for residential scale ground source heat pumps and the main application of the proposal is for large-scale, commercial or industrial scale projects.

Ground source heat pumps are more expensive and complex than air-source heat pumps (mini-splits) with minimal improvements in overall efficiency. Thus, the market acceptability is quite apparent. Even with this credit, the cost differential will probably not be overcome.

According to a solar company² "...installing a ground source heat pump is a large project, so you may pay between \$10 thousand- \$30 thousand on a system. For smaller homes with lower heating and cooling loads, expect to be on the lower end of this spectrum. For example, a 2,000 square foot home will cost between \$3,000 to \$5,000 to install."

For less expensive option mentioned above, the 30 percent credit would be between \$1,000 and \$2,000. Ground source heat pumps are mentioned in the 2021 Sustainable Building Tax Credit (7-2.18.33 NMSA 1978). PIT and CIT credits are equal to \$1,000 or \$2,000.

However, the current technology which applies to the 2018, 2019 and 2020 installations included in the EMNRD data indicate an average cost in excess of \$30 thousand per installation.

TRD discusses the difficulty of splitting administrative authority between two agencies.

Paragraph H on page 4, line 4 through line 11 requires TRD report approved tax credits.

Certification of tax credits is done by the Energy, Minerals and Natural Resources

² <https://www.energysage.com/clean-heating-cooling/geothermal-heat-pumps/costs-benefits-geothermal-heat-pumps>

Department (EMNRD). To have all relevant information, it is important to receive timely taxpayer certification data. TRD recommends adding language to require electronic information sharing of certificates awarded by EMNRD with TRD.

ALTERNATIVES

See TRD’s suggestion above to enact a new credit rather than reinstating the old credit with somewhat different administrative provisions.

POSSIBLE QUESTIONS

Does the bill meet the Legislative Finance Committee tax policy principles?

1. **Adequacy:** Revenue should be adequate to fund needed government services.
2. **Efficiency:** Tax base should be as broad as possible and avoid excess reliance on one tax.
3. **Equity:** Different taxpayers should be treated fairly.
4. **Simplicity:** Collection should be simple and easily understood.
5. **Accountability:** Preferences should be easy to monitor and evaluate

Does the bill meet the Legislative Finance Committee tax expenditure policy principles?

1. **Vetted:** The proposed new or expanded tax expenditure was vetted through interim legislative committees, such as LFC and the Revenue Stabilization and Tax Policy Committee, to review fiscal, legal, and general policy parameters.
2. **Targeted:** The tax expenditure has a clearly stated purpose, long-term goals, and measurable annual targets designed to mark progress toward the goals.
3. **Transparent:** The tax expenditure requires at least annual reporting by the recipients, the Taxation and Revenue Department, and other relevant agencies.
4. **Accountable:** The required reporting allows for analysis by members of the public to determine progress toward annual targets and determination of effectiveness and efficiency. The tax expenditure is set to expire unless legislative action is taken to review the tax expenditure and extend the expiration date.
5. **Effective:** The tax expenditure fulfills the stated purpose. If the tax expenditure is designed to alter behavior – for example, economic development incentives intended to increase economic growth – there are indicators the recipients would not have performed the desired actions “but for” the existence of the tax expenditure.
6. **Efficient:** The tax expenditure is the most cost-effective way to achieve the desired results.

LFC Tax Expenditure Policy Principle	Met?	Comments
Vetted	✓	Reinstates expired credit
Targeted		
Clearly stated purpose	✗	
Long-term goals	✗	
Measurable targets	✗	

Transparent	✓	
Accountable		
Public analysis	✗	
Expiration date	✓	
Effective		
Fulfills stated purpose	✗	No purpose or goals stated
Passes “but for” test	?	
Efficient	✗	
Key: ✓ Met ✗ Not Met ? Unclear		

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